



**U.S. Department of Housing and Urban
Development**

San Francisco Regional Office - Region IX
600 Harrison Street
San Francisco, California 94107-1387
www.hud.gov
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**Environmental Assessment
for HUD-funded Proposals**

Recommended format per 24 CFR 58.36, revised March 2005

Project Identification: Powerhouse Science Center
400 Jibboom Street
Sacramento, CA

Preparer: Design, Community & Environment
1625 Shattuck Avenue, Suite 300
Berkeley, CA 94709

Responsible Entity: Sacramento Housing & Redevelopment Agency
801 12th Street
Sacramento, CA 95814

Month/Year: July 2010

Powerhouse Final Environmental Assessment

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**Section 1:
A. Final EA
B. Final EA Comment Letters and Responses**

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Environmental Assessment

Responsible Entity: Sacramento Housing & Redevelopment Agency
[24 CFR 58.2(a)(7)]

Certifying Officer: LaShelle Dozier
[24 CFR 58.2(a)(2)]

Project Name: Powerhouse Science Center

Project Location: The Project Site is approximately 6.35 acres in size, is located northwest of downtown Sacramento, California between the Sacramento River and Interstate 5, and includes 922 feet of frontage along Jibboom Street in the City of Sacramento. It is immediately east of the Sacramento River and immediately north of the Robert T. Matsui Waterfront Park and the Sacramento River Water Intake Structure. The Sacramento River Parkway Trail is located immediately west of the project site. The proposed project site is comprised of 7 parcels (001-0190-005, 001-0190-004, 001-0190-011, 001-0190-016, 001-0190-015, portion of 001-0190-006, portion of 001-0190-009). See Figure 1 – Project Location Map and Figure 2 – Project Boundary Map.

Estimated Total Project Cost: \$300,000 for infrastructure improvements; \$45 million for total project

Grant Recipient: Sacramento Housing & Redevelopment Agency
[24 CFR 58.2(a)(5)]

Recipient Address: 801 12th Street, Sacramento, CA 95814

Subrecipient: City of Sacramento

Subrecipient Address: 915 I Street, Sacramento, CA 95814

Project Representative: Rochelle Amrhein

Telephone Number: (916) 440-1312

Conditions for Approval: (List all mitigation measures adopted by the responsible entity to eliminate or minimize adverse environmental impacts. These conditions must be included in project contracts and other relevant documents as requirements). [24 CFR 58.40(d), 40 CFR 1505.2(c)]

Mitigation Measure #1: Cultural Resources

In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the Applicant shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, representatives of the Applicant and the qualified archeologist shall coordinate to determine the appropriate course of action. In addition, a report shall be prepared by the qualified archeologist according to current professional standards.

If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.

In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.

If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. Currently it is presumed that members of the SSR are the Most Likely Descendants; therefore, the SSR shall be contacted in the event that remains are found. The Most Likely Descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.

Mitigation Measure #2: Cultural Resources

Prior to the approval of any grading permits or any groundbreaking activity, a Cultural Resources Treatment and Monitoring Agreement (Agreement) shall be prepared in consultation with the Shingle Springs Band of Miwok Indians. This Agreement shall set protocols for procedures to be followed in the event of the discovery of archaeological and human remains during construction. This Agreement shall include a stated policy of avoidance and reburial.

Mitigation Measure #3: Wetlands

a) Prior to any groundbreaking activities on the project site, the project Applicant(s) shall obtain all required permits, including CWA Section 404 permit from the USACE for the placement of fill within waters of the United States and Section 401 certification from the Central Valley Regional Water Quality Control Board (RWQCB), as applicable.

b) All conditions that are attached to the USACE permit and/or RWQCB certification shall be implemented as part of the proposed project. The conditions shall be clearly identified in construction plans and specifications and monitored during and after construction to ensure compliance.

c) The Applicant(s) shall compensate for permanent impacts to waters of the United States (including wetlands) and waters of the state to ensure there is no net loss of functions and values. The compensation will be determined as part of State (RWQCB) and federal (USACE) processes and may be a combination of onsite retention of function and value, offsite restoration/creation, and mitigation credits. Compensation ratios will be a minimum of 1:1 (1 acre of mitigation for every 1 acre of impact), as determined by USACE and/or RWQCB. Ratios will be based on site-specific information and determined through coordination with State and federal agencies as part of the permitting process

Mitigation Measure #4: Valley Elderberry Longhorn Beetle

The Applicant shall comply with the requirements of the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:

Compensatory Mitigation:**Transplant Directly Affected Elderberry Shrubs**

- a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation.
- b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.
- c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.

Compensate for Direct Impacts on Elderberry Shrubs

According to the USFWS VELB Guidelines, adversely affected shrubs that are "transplanted or destroyed" should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate

for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.

Mitigation Measure #5: Vibration

Vibratory rollers shall be limited to no closer than 25 feet from the former PG&E Power Station building.

Mitigation Measure #6: Encroachment Permit

The Applicant shall be required to coordinate with the Central Valley Flood Protection Board (CVFPB). An encroachment permit may be required by the CVFPB. This encroachment permit application process would include consultation with the U.S. Army Corps of Engineers (USACE) to determine if project features or construction would pose any risk to levee integrity, and whether any additional geotechnical reports would be required.

Mitigation Measure #7: Groundwater

All new groundwater discharges to the City of Sacramento's Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (refer City Council Resolution #92-439) Groundwater discharges to the City's sewer system are defined as follows:

1. Construction dewatering discharges
2. Treated or untreated contaminated groundwater cleanup discharges
3. Uncontaminated groundwater discharges

The Developer shall contact the City of Sacramento's Water Quality Section of the Department of Utilities (DOU), (916) 808-1400, 1395 35th Avenue, Sacramento, CA 95822 prior to any groundwater withdrawal. Procedures as specified by the City of Sacramento, Standard Specifications, Section 16, Water Quality Control shall be implemented.

FINDING: [58.40(g)]

Finding of No Significant Impact

(The project will not result in a significant impact on the quality of the human environment)

Finding of Significant Impact

(The project may significantly affect the quality of the human environment)


Preparer Signature:

Date: March 16, 2010

Name/Title/Agency: Steve Noack, Principal, Design, Community & Environment

RE Approving Official Signature:


Date: 7/21/10

Name/Title/Agency: LaShelle Dozier, Executive Director, SHRA

Statement of Purpose and Need for the Proposal: [40 CFR 1508.9(b)]

The Sacramento Housing & Redevelopment Agency is requesting Community Development Block Grant (CDBG) funds to assist in upgrading the infrastructure in the low income area of the project to bring the infrastructure into compliance with current City standards. The project site's 2000 census data indicates that the area is low income with an Area Median Income of 80 percent or less. Although these infrastructure improvements are a stand-alone project, they would facilitate development of the Powerhouse Science Center project, which is proposed in the same area and described below.

The purpose of the Powerhouse Science Center project is to provide new:

1. Enlarged facilities for the Sacramento Museum of History, Science and Technology.

The existing 4,000-square foot museum at 3615 Auburn Boulevard only has room for one major exhibit at a time, and is only open to three student groups in the mornings. The museum has outgrown its current facility and proposes to relocate all operations to the project site. The new facilities with greater capacities will increase educational opportunities in the sciences by allowing more visitors to visit an expanded array of educational exhibits, such as the Challenger Learning Center described below. The proposed project, to be named the Powerhouse Science Center, would triple the amount of visitors each year.

2. Museum, conferencing, and educational space that promotes student achievement and attracts innovative thinkers.

The Powerhouse Science Center is expected to draw approximately 250,000 annual visitors, a substantial portion of which would be K – 12th grade students. The new, expanded museum would provide hands-on science and math education to boost student interest in those subjects. For example, the Powerhouse Science Center's Challenger Learning Center would use space flight to teach students about math, science, language arts, and technology. The Powerhouse Science Center would also have exhibits on the human body, the world, space, and archaeology. Finally, the new Science Center would house an education center for traveling exhibits and would include a conference center that would act as a gathering place for teachers, scientists, and high-tech leaders.

3. Recreational facilities that would promote the development of Sacramento's waterfront, a long-standing goal of the City. These improvements include:
 - Improved access to the Sacramento River Parkway bike trail
 - Interactive outdoor exhibits on water conservation, ecosystems, conservation, agriculture, and a "healthy planet" that combines education with entertainment

- An outdoor exhibition area, suitable for community and cultural events that require an amphitheater-type seating, complete with a terraced orchard
- Promenade with shade trees and solar trees
- Bicycle parking
- Picnic facilities
- Park benches

For the purposes of this environmental review, in accordance with 40CFR 1508.25 (a) regarding connected actions, and 24CFR 58.32 regarding aggregation requirements, these two projects, the infrastructure improvements and the Powerhouse Science Center, will be analyzed as one project. Because the Powerhouse Science Center is the larger of the two actions, its impact area encompasses the infrastructure improvements project area entirely, and it could potentially cause greater impacts to the environment, the bulk of the analysis focuses on the potential impacts of the Powerhouse Science Center.

Description of the Proposal: Include all contemplated actions which logically are either geographically or functionally a composite part of the project, regardless of the source of funding. [24 CFR 58.32, 40 CFR 1508.25]

The project is seeking federal funds for infrastructure improvements to this area of Sacramento to bring it into line with current City standards. The project proposes infrastructure improvements to Jibboom Street for the undergrounding of utilities in conformance to City's standards, beginning 875 feet south of the intersection of Jibboom Street and Richards Boulevard and continuing south for 750 feet. The project also proposes improvements to the street surface, curb, gutters, sidewalks, lighting, and landscaping. Proposed improvements include:

- Two new 12" x 8" tees with standard fire hydrant per City Standard Drawing W-201
- A new curb gutter and sidewalk
- 400 feet of new 8-inch sewer with two manholes including connection to the city's existing sewer system
- A new 937 linear feet (LF) of 12" PVC water main
- Connection of the existing main and drain into the City storm drain; new 90 degree elbow fitting
- Two new 12" gate valves for future connection

While not the primary purpose, the infrastructure improvements would facilitate the development of the Powerhouse Science Center at the proposed site. The Powerhouse Science Center development proposes to rehabilitate a former PG&E Power Station, and construct new facilities to accommodate the Powerhouse Science Center in a site adjacent to the Sacramento River. The project site will include the rehabilitated former PG&E Power Station as the site for the main science center, a new planetarium, an educational center with restaurant, and a parking structure. It will also provide improvements to the Robert T. Matsui Waterfront Park including benches, living

machines and new plantings. The Powerhouse Science Center is projected to create 400 construction jobs and 100 permanent jobs.

The existing 19,250 square foot PG&E Power Station building would be rehabilitated and improved, adding one new partial floor below the first floor (sub-grade) and a new floor addition to the second floor to accommodate interpretive exhibits, education programs and learning labs. A lobby and gift shop would be included. The resulting building would have approximately 36,400 square feet of interior space. A new Planetarium and Challenger Learning Center would be constructed. This 13,218-square foot, two-story (57-foot high) building would accommodate the Challenger Learning Center and a 150-seat Planetarium. The Education Center and Restaurant would be a new 14,500-square foot, two-story building that would accommodate meeting space for conferencing and education, along with a riverfront restaurant. The education center would occupy 3,953 square feet on the entry floor, the restaurant would occupy 6,336 square feet and accommodate 100 patrons, and the Education Center and Restaurant would include offices in 4,211 square feet on the second floor. Finally, the Powerhouse Science Center would include a new parking structure with two levels that would accommodate 298 cars.

The project also calls for two "Living Machine" wastewater reuse facilities. The Living Machine is an engineered ecological system which utilizes plants in porous gravel substrate to create a large surface for biofilms, thin films, or active treatment microorganisms. The Living Machines that will be located on the project site will supplement wastewater services that would normally be provided by the Sacramento Regional County Sanitation District. A goal for the center is to achieve LEED Gold certification or higher. See Figure 3 – Park Improvements.

All proposed site work would occur east of the western edge of the levee bike path along the Sacramento River. There would be no new structures within 10 feet of the levee. (Note that as of March 16, 2010, no detailed plans were available showing areas of disturbance and depths of excavation.)

Existing Conditions and Trends: Describe the existing conditions of the project area and its surroundings, and trends likely to continue in the absence of the project. [24 CFR 58.40(a)]

The project site currently contains the vacant, former PG&E Power Station, and two idle PG&E electrical towers. Other than a brief time in the early 1960s when the site was used as a metal salvage yard, the building has been boarded up and closed since the PG&E Power Station ceased operation in 1954. Since the project site has been vacant for decades, the existing infrastructure is antiquated and does not meet current City standards. To the north of the project site, 241 feet from the existing powerhouse, are motels, hotels and restaurants, including the Best Western Sandman, Days Inn Sacramento, Comfort Suites-Downtown, La Quinta Inn, and El Coyote Junction, with surface parking lots. There are no existing science education facilities in the project area. The project area is currently a low income area with an Area Median Income of 80 percent or less.

The site is bounded on the east by an elevated section of Interstate 5 (I-5), which is 218 feet from the existing powerhouse building. Farther to the east, on the other side of the elevated portion of I-5 and 680 feet from the existing powerhouse building, is the Sacramento Water Treatment Plant. To the west is the American River Bike Trail and the old water intake structure, which is located in the Sacramento River 201 feet from the existing powerhouse building. To the south are the Robert T. Matsui Waterfront Park and a new water intake structure, 378 feet from the existing building. The old railroad yards are southeast 1,300 feet on the other side of the elevated portion of I-5. See Figure 4 – Aerial Photograph. The project site is 2,758 feet, or about 0.52 miles, north of Old Sacramento.

In the absence of the project, the site would most likely remain boarded up and closed as it has been since 1954. The former PG&E building, a potentially significant historic resource, would continue to decline and would not be restored to the benefit of the public. Similarly, the existing infrastructure would not be updated and would continue to fail to meet City standards. In addition, the Powerhouse Science Center would not be able to move into a larger space and increased science education opportunities would be lost.

Statutory Checklist

[24CFR §58.5]

Record the determinations made regarding each listed statute, executive order or regulation. Provide appropriate source documentation. [Note reviews or consultations completed as well as any applicable permits or approvals obtained or required. Note dates of contact or page references]. Provide compliance or consistency documentation. Attach additional material as appropriate. Note conditions, attenuation or mitigation measures required.

Factors

Determination and Compliance Documentation

<p>Historic Preservation [36 CFR 800]</p>	<p>Compliance Determination: As authorized by the Department of Housing and Urban Development, the Sacramento Housing and Redevelopment Agency (SHRA) is leading consultation under Section 106 of the National Historic Preservation Act for the development of the Powerhouse Science Center. The former PG&E building, known as the Sacramento River Station “B” (the Station), and the old water intake structure for the Sacramento Water Treatment Plant are located within the project site. These resources were assigned a California Historic Resource Status Code (CHRSC) of 3S, which means that the resources appear eligible for listing in the National Register as individual properties through survey evaluation. The Station was identified as an eligible priority structure (eligible for individual listing) in the City of Sacramento’s Richards Boulevard Area/River District Architectural and Historical</p>
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Property Survey, which was adopted by the Sacramento City Council in 2001 as part of its adoption of the Richards Boulevard Special Planning District. The City submitted a National Register of Historic Places nomination of the Station on March 8, 2010.

A Cultural Resources Report dated June 15, 2010 was prepared for the Applicant by consultants Page & Turnbull. The Report documented the historic architecture, archeology and cultural resources that would be affected by the Proposed Action. The report was sent to the State Historic Preservation Office as part of the consultation initiated by SHRA. SHRA noted that all project work on the Station would comply with the Secretary of the Interior's Standards for the Treatment of Historic Properties/Rehabilitation Standards. SHRA presented the proposed Area of Potential Effect (APE) as including the following potentially eligible historic resources:

- The Sacramento River Station B
- The former water intake structure for the Sacramento Water Treatment Plant.

On July 7, 2010, SHRA received a letter from SHPO that acknowledged that SHRA had made a reasonable and good faith effort to identify historic properties with the undertaking's APE. SHPO concluded that it concurred with SHRA that for the purposes of the HUD Section 106 review, the project appeared to be consistent with the Secretary of Interior's Standards and, therefore, would not adversely affect the historic PG&E Sacramento River Station B.

According to the Page & Turnbull Cultural Resources Report, there is little potential for buried archaeological deposits to exist within the archeological APE and past site activities are likely to have destroyed anything that might have existed. However, despite this low likelihood, there is always a possibility of discovering archaeological deposits. The following mitigation measures would apply. This mitigation measure also includes procedures in

the event that any Native American or human remains were to be found.

Consultation with the appropriate Native American representatives was initiated by SHRA in letters dated March 1, 2010 to the Native American Heritage Commission and local tribes. A comment letter on the Archaeological Resources Report was received on June 14, 2010 from the Shingle Springs Band of Miwok (SSR) Indians and is included with that report as Section 3 of this Final EA. The letter requested consultation with SHRA, which is ongoing and resulted in the development of mitigation to further reduce potential impacts to archeological resources. Mitigation included a pedestrian survey of the APE conducted by members of the SSR, which occurred on June 25, 2010. Additional mitigation developed as a result of consultation with the SSR is described below.

Mitigation Required:

Mitigation Measure #1: Cultural Resources

In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the Applicant shall consult with a qualified archaeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archaeologist, representatives of the Applicant and the qualified archaeologist shall coordinate to determine the appropriate course of action. In addition, a report shall be prepared by the qualified archaeologist according to current professional standards.

If Native American archaeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of

	<p>Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.</p> <p>In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.</p> <p>If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. Currently it is presumed that members of the SSR are the Most Likely Descendants; therefore, the SSR shall be contacted in the event that remains are found. The Most Likely Descendant shall work with the contractor to develop a program for re-internment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.</p> <p>Mitigation Measure #2: Cultural Resources Prior to the approval of any grading permits or any groundbreaking activity, a Cultural Resources Treatment and Monitoring Agreement (Agreement) shall be prepared in consultation with the Shingle Springs Band of Miwok Indians. This Agreement shall set protocols for procedures to be followed in the event of the discovery of archaeological and human remains during construction. This Agreement shall include a stated policy of avoidance and reburial.</p> <p>Source Documentation:</p>
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	<p>Attachment X1: State Office of Historic Preservation, July 7, 2010. Letter to SHRA regarding PG&E Sacramento River Station Infrastructure & Rehabilitation Project. Attachment 1: Page & Turnbull, June 15, 2010. Cultural Resources Report. Final Draft. Powerhouse Science Center, 400 Jibboom Street, Sacramento, CA..</p>
<p>Floodplain Management [24 CFR 55, Executive Order 11988]</p>	<p>Compliance Determination: The project site is in an area designated "Other Flood Areas, Zone X (shaded), areas of 0.2 percent annual chance flood; areas of 1 percent annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from a 1 percent annual chance flood." All structures for this proposed project would be kept back from the toe of the levee. The levee toe is located where the levee slope meets the natural ground elevation. Therefore, the project site contains no Special Flood Hazard Areas subject to inundation by the 1 percent annual chance flood designated by the Federal Emergency Management Agency (FEMA).</p> <p>Source Documentation: Figure 5, FEMA Issued Flood Map, Community Panel Number 0602660160G, http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay, accessed on January 19, 2010.</p> <p>Attachment 2, Amrhein, Rochelle. Environmental Coordinator, Sacramento Housing & Redevelopment Agency, personal email communication with Alejandro A. Huerta, January 29, 2010.</p>
<p>Wetlands Protection [Executive Order 11990]</p>	<p>Compliance Determination: The project site is located next to the Sacramento River. No wetlands were identified on the U.S. Fish & Wildlife Service National Inventory Map for the project area. However, a seasonal wetland was identified on the site during a biological site assessment for the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project, a previously approved project in the same area. The identified wetland is</p>

to the east of the clay cap and utility berm on the eastern edge of the project site. This seasonal wetland is located in a trench directly to the east of the utility berm. This seasonal wetland is identified as SW-3 in Attachment 7. The U.S. Army Corps of Engineers (USACE) verified the delineation of this feature on December 7, 2009 (SPK-2009-00977). During a site visit, SHRA staff identified another potential wetland feature directly to the west of the utility berm, parallel to SW-3. A qualified biologist conducted a wetland delineation on February 25, 2010 and determined that the feature is a wetland. Because the project would involve new construction within or adjacent to a USACE verified seasonal wetland and another delineated wetland feature, applicable permits and certificates under Sections 401 and 404 of the Clean Water Act (CWA) would be required.

Mitigation Required:

Mitigation Measure #3: Wetlands

- a) Prior to any groundbreaking activities on the project site, the project Applicant(s) shall obtain all required permits, including CWA Section 404 permit from the USACE for the placement of fill within waters of the United States and Section 401 certification from the Central Valley Regional Water Quality Control Board (RWQCB), as applicable.
- b) All conditions that are attached to the USACE permit and/or RWQCB certification shall be implemented as part of the proposed project. The conditions shall be clearly identified in construction plans and specifications and monitored during and after construction to ensure compliance.
- c) The Applicant(s) shall compensate for permanent impacts to waters of the United States (including wetlands) and waters of the state to ensure there is no net loss of functions and values. The compensation will be determined as part of State (RWQCB) and federal (USACE) processes and may be a combination of onsite retention of function and value, offsite restoration/creation, and mitigation credits. Compensation ratios will be a minimum of 1:1 (1 acre of mitigation for every 1 acre

	<p>of impact), as determined by USACE and/or RWQCB. Ratios will be based on site-specific information and determined through coordination with State and federal agencies as part of the permitting process</p> <p>Source Documentation: Attachment 3, U.S. Fish & Wildlife Service, National Wetlands Inventory, http://www.fws.gov/wetlands/Data/Mapper.html, accessed on January 19, 2010.</p> <p>Attachment 4, Exhibit A, Wetlands And Other Waters in the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project Delineation Area.</p> <p>Attachment 4a, ICF International, March 2010, Powerhouse Science Center Project Preliminary Delineation of Waters of the United States, including Wetlands, Exhibit 1 and Wetland Determination Forms.</p>
<p>Coastal Zone Management Act [Sections 307(c),(d)]</p>	<p>Compliance Determination: The project is not located in a Coastal Zone.</p> <p>Source Documentation: Attachment 5, Map "LCP Status North Central Coast Area, as of July 1, 2009," http://www.coastal.ca.gov/lcp/lcpstatus-mapncc.pdf, accessed on September 28, 2009.</p>
<p>Sole Source Aquifers [40 CFR 149]</p>	<p>Compliance Determination: The project is not located on or near a sole source aquifer designated by the U.S. EPA. There are no sole source aquifers located in the City of Sacramento. The nearest sole source aquifer is the Santa Margarita, Scotts Valley Sole Source Aquifer, which is located 110 miles southwest of the project site.</p> <p>Source Documentation: Attachment 6, Santa Margarita, Scotts Valley Sole Source Aquifer Designated Area, http://www.epa.gov/region09/water/groundwater/ssa.html, accessed on September 24, 2009.</p>
<p>Endangered Species Act [50 CFR 402]</p>	<p>Compliance Determination: The project is not located within a critical habitat for</p>

any federally-listed species. However, the site contains the federally threatened valley elderberry longhorn beetle (VELB), which occurs on the site's elderberry shrubs. The proposed project site contains one cluster of blue elderberry plants on the northeastern portion of the site with documented VELB exit holes. Project construction would require the removal of these plants. This action will adversely affect the VELB. Any beetle larvae occupying these plants are likely to be killed when the plants are removed.

Mitigation Required:

Mitigation Measure #4: Valley Elderberry Longhorn Beetle

The Applicant shall comply with the requirements of the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:

Compensatory Mitigation:

Transplant Directly Affected Elderberry Shrubs

- a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation.
- b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective

measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.

- c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.

Compensate for Direct Impacts on Elderberry Shrubs

According to the USFWS VELB Guidelines, adversely affected shrubs that are “transplanted or destroyed” should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.

Source Documentation:

Attachment 7, U.S. Fish and Wildlife Service, 1999, Conservation Guidelines for the Valley Elderberry Longhorn Beetle, pages 4, 15.

Attachment 8, U.S. Fish and Wildlife Service Sacramento Fish & Wildlife Office, December 1 2009, Federal Endangered and Threatened Species that Occur in or May be Affected by Projects in the Counties and/or U.S.G.S. 7 ½ Minute Quads You Requested.

Attachment 9, Affonso, Jana. Chief, Sacramento Valley Branch, Sacramento Fish and Wildlife Office, U.S. Fish & Wildlife Service. Personal email communication with Alejandro A. Huerta, February 17, 2010.

<p>Wild and Scenic Rivers Act [Sections 7 (b), (c)]</p>	<p>Compliance Determination: There is a designated Wild and Scenic River within one mile of the project site, the American (Lower) River. The American (Lower) River is 0.22 mile to the north of the existing Powerhouse building. There would be no impact to the American (Lower) River from the proposed project according to the National Park Service.</p> <p>Source Documentation: Attachment 10, National Wild and Scenic Rivers System September 2009, http://www.rivers.gov/wildriverslist.html, accessed on September 24 2009.</p> <p>Attachment 11, Bowes, Stephen. CA Wild and Scenic Rivers Coordinator, National Park Service. Letter to Alejandro A. Huerta, DC&E, March 1, 2010.</p>
<p>Air Quality [Clean Air Act, Sections 176 (c) and (d), and 40 CFR 6, 51, 93]</p>	<p>Compliance Determination: The Sacramento Metropolitan Area is designated as severe-15 non-attainment for the 1997 8-hour ozone ambient air quality standard by EPA as of June 4, 2010.</p> <p>The Sacramento Metropolitan Air Quality Management District confirmed that the project would be located within a "non-attainment" area, conforms with the EPA-approved State Implementation Plan (SIP), and that the project requires no individual National Emissions Standards for Hazardous Air Pollutants (NESHAP) permit or notification.</p> <p>Source Documentation: Attachment 12, Nonattainment Areas Map-Criteria Air Pollutants, http://www.epa.gov/air/data/nonat.html?us~USA~United%20States, accessed on January 20, 2010.</p> <p>Attachment 13, Hurley, Joseph J. Air Quality Planner/Analyst, Sacramento Metropolitan Air Quality Management District, personal email communication with Rochelle Amrhein, Sacramento Housing & Redevelopment Agency, March 8, 2010.</p>
<p>Farmland Protection</p>	<p>Compliance Determination:</p>

<p>Policy Act [7 CFR 658]</p>	<p>The project site contains no Prime Farmland, Unique Farmland, or Farmland of Statewide or Local Importance. According to the American Farmland Trust, the project site is located in an urban area. In addition, the Sacramento 2030 General Plan Land Use & Urban Form Diagram illustrates that no areas within the project area are designated as farmland or agricultural area. Finally, the site does not support any agricultural activities, and no commercial agricultural activities occur in the general vicinity. Therefore the project would not impact farmland areas.</p> <p>Source Documentation: Attachment 14, "Farming on the Edge: Sprawling Development Threatens America's Best Farmland, California" Farmland Information Center, http://www.farmlandinfo.org/california/, accessed on September 29, 2009.</p> <p>Attachment 15, Sacramento 2030 General Plan Land Use & Urban Form Diagram.</p>
<p>Environmental Justice [Executive Order 12898]</p>	<p>Compliance Determination: The proposed site is located in a low income neighborhood. The infrastructure improvements would benefit the area by providing up-to-date utilities infrastructure compliant with the City of Sacramento Department of Public Works Design and Procedures Manual and Improvement Standards. New water and sewer lines would be constructed, as well as new curbs, gutters, sidewalks and street lighting, which would make the area safer for pedestrians. The infrastructure improvements would facilitate the development of the Powerhouse Science Center. In turn, the Science Center, when completed, would be a museum and educational facility that would have a positive impact on City residents. The visitors to the Powerhouse Science Center would represent the diverse socioeconomic population of the City of Sacramento and region.</p>

HUD Environmental Standards Determination and Compliance Documentation

Noise Abatement and	Compliance Determination:
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<p>Control [24 CFR 51 B]</p>	<p>HUD requires consideration of all noise sources, which may adversely impact noise-sensitive areas such as housing. In this regard, the three principal sources of noise that may be considered are civil airports within 5 miles and military airfields within 15 miles, railroads within 3,000 feet, and major roadways within 1,000 feet of the project site. For this project, the following are found:</p> <ul style="list-style-type: none"> - Interstate 5 (I-5) is located about 228 feet east from the project site. - The Amtrak railroad lines are located 2,555 feet to the south of the project site. - There are no airports within 5 miles of the project site. <p>Noise in the project area is dominated by noise from traffic on I-5. A short-term measurement for the motel closest to the proposed project was a 73 dBA Worst Hour Leq, which, according to HUD Site Acceptability Standards, is normally unacceptable for housing since it is above 65 dB but not exceeding 75 dB. The proposed project does not contain any housing. Therefore, the Site Acceptability Standards do not apply.</p> <p>Source Documentation: Attachment 16, ICF Jones & Stokes, 2008, Draft Noise Study Report, Access Improvements from Railyards to Richards Boulevard and Interstate 5, page 20.</p>
<p>Toxic/Hazardous/Radioactive Materials, Contamination, Chemicals or Gases [24 CFR 58.5(l)(2)]</p>	<p>Compliance Determination: In 1986 a portion of the site was placed on the National Priorities List as a Superfund site due to lead contamination from past uses as a PG&E manufactured gas plant and as a scrap metal recycling facility. Clean-up was certified in 1988 and the site was delisted in 1991. The remedial actions for the site included installation of clay caps over lead-contaminated soil; a deed restriction limiting the site to non-residential uses; groundwater monitoring; and an Operations and Maintenance Plan. The Department of Toxic Substances Control (DTSC) signed the Remedial Action Certification Form on August 19, 1998. The proposed project site, therefore, is not listed on an EPA Superfund</p>

National Priorities or Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) List, or equivalent State list.

In addition, the California Department of Water Resources (DWR) oversaw a site investigation and remedial action for the removal of two fuel oil tanks from the southern side of the Powerhouse Building. A total of 6,200 tons of soil was excavated and three monitoring wells were installed at that time. An earthen cap was built over the top of the contaminated area and vegetative cover installed. DWR considered that because the contaminated soils were restricted to 15 feet below grade, there would not be a threat to site workers. The cap was intended to direct runoff away from the hydrocarbon area. DWR issued a letter confirming the completion of the investigation on April 13, 1999.

Two Leaking Underground Storage Tank (LUST) cleanup sites were located on adjacent sites. The Holiday Inn LUST case at 200 Jibboom Street was closed as of May 28, 1996, and the Texaco SS (Former) LUST case at 226 Jibboom Street was closed as of July 10, 1997.

There are no toxic or solid waste landfills within 3,000 feet of the project site.

Source Documentation:

Attachment 17, State Water Resources Control Board Geotracker Map, https://geotracker.waterboards.ca.gov/map/?CMD=r_unreport&myaddress=95811, accessed on February 11, 2010.

Attachment 18, Department of Toxic Substances Control EnviroStor Record for Jibboom Building (34490056).

Attachment 19, Department of Water Resources, September 10, 1999, Former PG&E Power Plant Site, Sacramento County, California, Remediation Documentation, pages 1 to 3.

Attachment 20, Covenant to Restrict Use of

	<p>Property, Environmental Restriction Former PG&E Power Plant Site, Jibboom Street, "Jibboom Building Site," Sacramento, Sacramento County, California, 1998, pages 1, 2, 4 and 8.</p> <p>Attachment 21, Agreement, Operation and Maintenance RE: Former Pacific, Gas, and Electric Power Plant Site, Jibboom Street, Sacramento, Sacramento County, California, 1998, pages 1 to 2.</p>
<p>Siting of HUD-Assisted Projects near Hazardous Operations [24 CFR 51 C]</p>	<p>Compliance Determination: As shown on the project aerial in Figure 4, no explosive or flammable operations were identified on or adjacent to the project site. In addition, no storage tanks nor drums or other chemical containers were observed on the site.</p> <p>Source Documentation: Figure 4, Aerial Photograph.</p>
<p>Airport Clear Zones and Accident Potential Zones [24 CFR 51 D]</p>	<p>Compliance Determination: The property is not located within 2,500 feet of the end of a civil airport runway or within 8,000 feet of the end of a military airfield runway.</p> <p>This site is not within an FAA-designated Runway Clear Zone or Runway Protection Zone or within a Military Aircraft Clear Zone or Accident Protection Zone.</p> <p>Source Documentation: Attachment 22, Powerhouse Science Center Airport Clear Zones Map.</p>

Environmental Assessment Checklist

[Environmental Review Guide HUD CPD 782, 24 CFR 58.40; Ref. 40 CFR 1508.8 & 1508.27]

Evaluate the significance of the effects of the proposal on the character, features and resources of the project area. Enter relevant base data and verifiable source documentation to support the finding. Then enter the appropriate impact code from the following list to make a determination of impact. **Impact Codes:** (1) - No impact anticipated; (2) - Potentially beneficial; (3) - Potentially adverse; (4) - Requires mitigation; (5) - Requires project modification. Note names, dates of contact, telephone numbers and page references. Attach additional material as appropriate. Note conditions or mitigation measures required.

Land Development	Code	Source or Documentation
Conformance with Comprehensive Plans and Zoning	1	<p>Compliance Determination: The project site is located within the Richards Boulevard Special Planning District, Section C-Highway Commercial Zone (HC zone); the River District Redevelopment Project area; the Sacramento Riverfront Master Plan area; and the proposed River District Specific Plan area. The Powerhouse Science Center would be classified in the City Code as an amusement center and would be an allowed use in the HC zone with the approval of a</p>

	<p>Plan Review. The infrastructure improvements would be consistent with the purpose and intent of the Richards Boulevard Special Planning District, which states that one of the goals is to "provide for improved circulation, infrastructure and community facilities that will serve existing and future needs within the area." Therefore, the infrastructure improvements would not conflict with the Richards Boulevard Special Planning District.</p> <p>Source Documentation: Attachment 23, Sacramento City Code, Chapter 17.120 Richards Boulevard Special Planning District.</p> <p>Attachment 24, River District Redevelopment Area, http://www.riverdistrict.net/about-us/river-district-redevelopment.shtml, accessed on February 12, 2010.</p> <p>Attachment 25, Aerial Photo View of Richards Boulevard Redevelopment Area.</p> <p>Attachment 26, Sacramento Riverfront Master Plan, 2003, Riverfront Concept Map.</p> <p>Attachment 27, River District Specific Plan Vision Map.</p>
<p>Compatibility and Urban Impact</p>	<p>1</p> <p>Compliance Determination: The project is immediately surrounded by a park to the south and a motel to the north. Jibboom Street runs to the east and to the east of Jibboom Street is the elevated portion of Interstate 5. A recreational trail runs to the west of the project on top of the levee, on the outside of which is the Sacramento River. The surrounding area to the north has several low-rise businesses surrounded by paved parking, and south of the park the area is dominated by the elevated portion of I-5 which runs along the Sacramento River. To the northeast of the freeway are large, low-rise commercial developments, some occupying entire blocks, and to east of I-5 is a water treatment plant.</p> <p>The project would be infrastructure improvements that would facilitate development of an educational center attracting 250,000 annual visitors, including large numbers of school children, to several indoor, and some outdoor, attractions. Due to the close proximity (218 feet) to I-5, the area is particularly noisy, which could detract from enjoyment of the outdoor amenities.</p> <p>The 19,250 square foot (sf) existing structure of the Powerhouse would be rehabilitated and two new structures would be built on the site: a 13,218 sf two-story, 57-foot-high Planetarium and Challenger Learning Center; and a 14,500 sf Education Center and Restaurant. In addition, there would be parking for 298 cars. The existing riverine trees would be maintained and several new trees would be planted as part of the project's landscape plan. The new development would not be out of character with the surrounding low-density commercial and industrial development with wide stretches of asphalt, and none of the new structures would exceed the height of the existing building. The riverside zone would maintain its vegetated character. Finally, the proposed project would not displace or divide an existing community since the site is currently an undeveloped lot with the exception of the shuttered former PG&E building. Therefore, the proposed project would be compatible with surrounding land uses.</p> <p>Source Documentation: Attachment 4, Aerial Photograph.</p>

Slope	1	<p>Compliance Determination: The site is generally flat. It is bordered to the west by the ridge of the Sacramento Levee. The Sacramento River was 10 to 15 feet below the top of the levee in January, 2010, and there are substantial seasonal fluctuations. To the east there is a slight break in slope from the edge of the artificial clay cap, down towards Jibboom Street. However, there is no evidence of slope erosion or unstable slope conditions on or near the site.</p> <p>Source Documentation: Attachment 28, Site Photograph.</p>
Erosion	1	<p>Compliance Determination: Soils on the site consist generally of a surface layer of fill underlain by a mixture of silts, silty-sands and some sandy gravels to a depth of around 25 feet below site grade. This is underlain by sand. Two areas, totaling 0.75 acres of the site, have a clay cap that has raised the site level in those places to the elevation of the existing levee. Given the lack of slope, or developed vegetated nature of the site, and the relatively coarse nature of the deposits, erosion would not be a substantial problem. Compliance with the City's Grading, Erosion, and Sediment Control Ordinance (City Code Chapter 15.88) would reduce the proposed project's potential to result in erosion, topographic changes, or unstable soil conditions.</p> <p>Source Documentation: Attachment 29, Dreyfuss & Blackford Architects, 2000, Jibboom Street PG&E Power Plant Site Study Final Report, pages 1.2, 6.1 to 6.2.</p>
Soil Suitability	4	<p>Compliance Determination: Soils on the site consist generally of a surface layer of fill underlain by a mixture of silts, silty-sands and some sandy gravels. Depth to groundwater is closely related to the flow in the Sacramento River that was observed at 10 to 15 feet below the top of the levee in January, 2010. Groundwater flow direction is generally towards the Sacramento River. In general, groundwater is 15 to 30 feet below ground surface but can rise to within 5 feet of the surface at certain times of year. Because of the shallow water table, the structural components necessary for construction of the proposed improvements could require depths that encounter groundwater during construction and could require dewatering. Often, groundwater provides partial support for the near-surface soil materials and, when withdrawn, allows the soils to slough into the excavation. If the dewatering system draws down the water table in the area of the excavation, there is the possibility of undermining structures either on or near the site, causing cracking or collapse.</p> <p>An undetermined amount of contaminated soil would be excavated in the basement of the existing Station in order to create space that may be occupied. The level and extent of excavation would be determined upon further exploration of the condition of the contaminated soil, and existing and abandoned foundation structures below grade. There would be no construction within 10 feet of the required levee.</p> <p>As part of the construction permitting process, the City requires completed reports of soil conditions at the specific construction sites to identify potentially unsuitable soil conditions including liquefaction, settlement, subsidence, lateral spreading, and collapse. The City requires that these evaluations be conducted by registered soil professionals, and measures to eliminate</p>

	<p>inappropriate soil conditions must be applied, depending on the soil conditions. The design of foundation and excavation-wall support must conform to the analysis and implementation criteria described in the California Building Code (CBC), Chapters 16, 18, 33, and the appendix to Chapter 33. Adherence to the CBC and City policies contained in the 2030 General Plan would ensure the maximum practicable protection available for users of buildings and infrastructure and their associated trenches, slopes, and foundations. Specifically, implementation of Sacramento 2030 General Plan Environmental Constraints Policies EC 1.1.1 and EC 1.1.2 would ensure that the City review and enforce all applicable building codes and require site-specific geotechnical reports for all development projects.</p> <p>Source Documentation: Attachment 30, Blackburn Consulting, 2008, Initial Site Assessment, Richards to Railyards Access Improvement, Sacramento, California, pages 2 to 3.</p> <p>Attachment 31, Blackburn Consulting, 2009, Draft Aerially Deposited Lead/Phase II Assessment, Railyards to Richards Boulevard Access Improvement Project, Sacramento, California, pages 10 and 11.</p>
<p>Hazards and Nuisances including Site Safety</p>	<p>1</p> <p>Compliance Determination: The project would bring an increased number of children in close proximity to the Sacramento River along the unfenced recreational trail that is already in public use. Management of the trail is the responsibility of the City of Sacramento Department of Parks and Recreation.</p> <p>The adjacent Jibboom Street, which is the access road to the facility, does not experience traffic in general, or much through-traffic. The project would be adequately lit to aid visitors. The project is relatively isolated from surrounding land uses by roads, fences and the natural topography of the Sacramento River. However, there are several outdoor areas which would be frequented by children and which are within 200 feet of I-5. Although there is no pedestrian access to I-5, there are air quality and noise issues resulting from its proximity. These issues are discussed below with respect to the background conditions and potential for the project to contribute to these. Noise affects the enjoyment of visitors to the facility and would presumably deter them from spending excessive time in the outdoor areas.</p> <p>Park users and customers of the Science Center would be exposed to existing noise levels which currently exceed the 2030 General Plan Exterior Noise Compatibility Standards. The City would be required to take the noise environment into consideration when considering whether to approve the development proposal.</p> <p>The U.S. Department of Housing and Urban Development (HUD) Regulations for acceptable noise for new housing construction projects location are 65 Ldn for exterior noise and 45 Ldn for interior noise. Exterior noise of 73 dBA would therefore be normally unacceptable. The HUD standard applies to housing and there would be no housing in this project; therefore, this standard does not apply.</p> <p>As the development is recreational, visitors would presumably not be outside for long periods of time. Employees at the Powerhouse Science Center would also presumably not be</p>

		<p>working outside for long periods of time. In addition, the Powerhouse Science Center would include a sound and shade structure to the southwest of the former PG&E building that would help reduce the noise from I-5.</p> <p>Inside the Powerhouse building the transmission of exterior noise would be minimized by the solid concrete walls which are sufficient to meet interior noise standards. The new Planetarium would include an exterior shell of insulated panels, laminated glass and layers of gypsum board to reduce the sound from the exterior environment. These features would provide adequate protection inside the building from exterior noise and enable visitors to enjoy the museum experience.</p> <p>Source Documentation: Attachment 16, ICF Jones & Stokes, 2008, Draft Noise Study Report for Access Improvements from Railyards to Richards Boulevard and Interstate 5, page 20.</p>
Energy Consumption	1	<p>Compliance Determination: Further development of the project's program and exhibit concept is needed to determine requirements and energy consumption. However, the project's goal is to attain LEED-Gold certification or higher. One of the components of the project is to use "green power." The goal is to provide at least 35 percent of the building's electricity from renewable sources, such as solar, wind, geothermal, biomass or low-impact hydro sources. In addition, the infrastructure improvements would not significantly increase energy consumption in the area.</p>

Noise - Contribution to Community Noise Levels	1	<p>Compliance Determination: Noise in the project area is dominated by traffic on I-5. Noise was measured at the motel to the immediate north of the project site in 2008 at 73 dBA for the worst hour Leq. This is already in excess of the standard of 65 dBA for the transient lodging (motels, hotels) land use category in the City's General Plan and of 70 dBA for playgrounds and neighborhood parks, which is the land use immediately south of the project site.</p> <p><u>Construction Noise</u> Construction activities associated with the project would also result in short-term increases in noise. Table 1 below summarizes typical noise levels from construction activity).</p> <p>Table 1 - Construction Equipment Noise</p> <table border="1"> <thead> <tr> <th>Type of Equipment</th> <th>Typical Level (dBA at 50 feet)</th> </tr> </thead> <tbody> <tr><td>Air compressor</td><td>81</td></tr> <tr><td>Backhoe</td><td>80</td></tr> <tr><td>Bulldozer</td><td>85</td></tr> <tr><td>Compactor</td><td>82</td></tr> <tr><td>Concrete pump</td><td>82</td></tr> <tr><td>Grader</td><td>85</td></tr> <tr><td>Impact wrench</td><td>85</td></tr> <tr><td>Jackhammer</td><td>88</td></tr> <tr><td>Loader</td><td>85</td></tr> <tr><td>Pneumatic tool</td><td>85</td></tr> <tr><td>Saw</td><td>76</td></tr> <tr><td>Scraper</td><td>89</td></tr> <tr><td>Truck</td><td>88</td></tr> </tbody> </table> <p>Source: Federal Transit Administration 2006.</p>	Type of Equipment	Typical Level (dBA at 50 feet)	Air compressor	81	Backhoe	80	Bulldozer	85	Compactor	82	Concrete pump	82	Grader	85	Impact wrench	85	Jackhammer	88	Loader	85	Pneumatic tool	85	Saw	76	Scraper	89	Truck	88
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Construction noise typically attenuates at a rate of 6 dB per doubling of distance. A reasonable worst-case assumption is that the three loudest pieces of equipment (jackhammer, scraper, and truck) would operate concurrently in the same location. The combined noise level of these three pieces of equipment would be 93 dBA at 50 feet.

The City's noise ordinance establishes these exterior noise standards for residential properties:

From 7 a.m. to 10 p.m., the exterior noise standard is 55 dBA.

From 10 p.m. to 7 a.m., the exterior noise standard is 50 dBA.

The standards are adjusted depending on the duration of noise generation within any given hour. For the purposes of this analysis, construction noise is assumed to operate continuously for at least 1 hour. The noise ordinance exempts construction noise between the hours of 7 a.m. and 6 p.m. on Monday to Saturday, and between 9 a.m. and 6 p.m. on Sunday, provided that the operation of an internal combustion engine will not be exempt if such engine is not equipped with suitable exhaust and intake silencers in good working order.

Assuming a source level of 93 dBA at 50 feet and attenuation at a rate of 6 dB per doubling of distance, the 55 dBA daytime standard could be exceeded within about 4,000 feet of construction, and the nighttime standard could be exceeded within about 7,000 feet. The high ambient noise level in the project area from traffic on I-5 will likely reduce these distances substantially. This analysis indicates that construction activity during non-exempt hours could exceed the noise ordinance standards at the adjacent motel (which is classified as a sensitive noise receptor) in the project area.

Sacramento 2030 General Plan Policy EC 3.1.10 requires all development projects subject to discretionary approval to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on these uses, to the extent feasible. Because this policy requires mitigation of construction noise from future development and because construction noise would be restricted in intensity and hours of operation by the City's noise ordinance, this effect would be reduced to the minimum possible. In addition, the construction noise would be limited in duration.

Construction-Generated Vibration

Operation of heavy equipment may generate groundborne vibration that could be perceptible at sensitive land uses close to construction activity. Table 2 summarizes vibration levels at various distances based on source levels developed by the Federal Transit Administration as of 2006.

Peak particle velocity (PPV) is the maximum velocity of a particle in a vibrating medium such as soil. PPV is usually expressed in inches/second.

Table 2- Peak particle velocity (PPV) Vibration from Construction Equipment (measured in feet)

Equipment	PPV@ 25	PPV@50	PPV@ 100	PPV@150	PPV@250
Vibratory Roller	0.210	0.074	0.026	0.014	0.007
Hoe Ram or Large Bulldozer	0.089	0.031	0.011	0.006	0.003

		<table border="1"> <tr> <td>Loaded Truck</td> <td>0.076</td> <td>0.027</td> <td>0.010</td> <td>0.005</td> <td>0.002</td> </tr> <tr> <td>Jackhammer</td> <td>0.035</td> <td>0.012</td> <td>0.004</td> <td>0.002</td> <td>0.001</td> </tr> </table>	Loaded Truck	0.076	0.027	0.010	0.005	0.002	Jackhammer	0.035	0.012	0.004	0.002	0.001
Loaded Truck	0.076	0.027	0.010	0.005	0.002									
Jackhammer	0.035	0.012	0.004	0.002	0.001									
		<p>Source: Federal Transit Administration 2006.</p> <p>Commercial uses would be located within about 100 feet of construction activity. The results in Table 2 indicate that construction activity has the potential to result in vibration at commercial uses that exceeds the PPV threshold for commercial uses of 0.5 inches/second. Implementation of Sacramento 2030 General Plan EC 3.1.5 would require this vibration to be limited to acceptable levels as defined by the City.</p> <p>The former PG&E Power Station and the old water intake structure are the only historic structures near the project site. The PPV threshold for historic buildings is 0.2 inches/sec. Vibration from construction activity (vibratory roller) is predicted to exceed this value at the Power Station and could cause damage to the structure. Mitigation Measure #5: Vibration would be implemented to reduce this effect so that damage is prevented.</p> <p>While there would not be any construction within 10 feet of the required levee, it is conceivable that vibration in close proximity to the levee could cause damage to the levee. Since the levee is under the jurisdiction of the Central Valley Flood Protection Board (CVFPB), the Applicant may be required to submit an encroachment permit application to CVFPB for the proposed project. Mitigation Measure #6 would be applied.</p> <p>Operational Noise Traffic noise in the project area currently exceeds and would continue to exceed City land use compatibility standards for transient lodging (65 Ldn) and playgrounds (70 Ldn) with or without implementation of the proposed project. The project's traffic would not make much difference given this background. The most noise that would occur would be noise generated from vehicles entering and exiting the parking lots and customers congregating outside. Park users and customers of the Powerhouse Science Center would be exposed to existing noise levels which currently exceed the 2030 General Plan Exterior Noise Compatibility Standards. However, implementation of Sacramento 2030 General Plan EC 3.1.4 would require the City to take the noise environment into consideration when considering whether to approve the development proposal.</p> <p>Mitigation Required: Mitigation Measure #5: Vibration Vibratory rollers shall be limited to no closer than 25 feet from the former PG&E Power Station building.</p> <p>Mitigation Measure #6: Encroachment Permit The Applicant shall be required to coordinate with the Central Valley Flood Protection Board (CVFPB). An encroachment permit may be required by the CVFPB. This encroachment permit application process would include consultation with the U.S. Army Corps of Engineers (USACE) to determine if project features or construction would pose any risk to levee integrity, and whether any additional geotechnical reports would be required.</p> <p>Source Documentation: Attachment 16, ICF Jones & Stokes, 2008, Draft Noise Study Report for Access Improvements from Railyards to Richards Boulevard and Interstate 5, page 20.</p>												
Air Quality	1	Compliance Determination:												

Effects of Ambient Air Quality on Project and Contribution to Community Pollution Levels

The project area is located in the Sacramento Valley Air Basin (SVAB), which is bounded by the Sierra Nevada on the east and the Coast Range on the west. Prevailing winds in the project area originate primarily from the southwest. These winds are the result of marine breezes coming through the Carquinez Straits. These marine breezes diminish during the winter months, and winds from the north occur more frequently at this time. Air quality within the project area and surrounding region is largely influenced by urban emission sources.

The SVAB is subject to federal, State, and local air quality regulations under the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD). As there are minimal industrial emissions, urban emission sources originate primarily from automobiles. Home fireplaces also contribute a significant portion of the air pollutants, particularly during the winter months. Air quality hazards are caused primarily by carbon monoxide (CO), particulate matter equal to or less than 10 microns in diameter (PM₁₀), and ozone, primarily as a result of motor vehicles. The national 24-hour PM₁₀ standard has not been exceeded since 1987 in the SVAB. In June, 2010, the Sacramento Metropolitan Area was designated as severe-15 for non-attainment of the 1997 8-hour ozone national ambient air quality standard by EPA. All development/construction projects subject to environmental review under CEQA or NEPA were then subject to a 25 tons/year (137 lbs/day) standard for NO_x and ROG emissions, rather than the previously adopted 50 tons/year (274 lbs/day).

The SMAQMD adopted the following thresholds of significance in 2002:

Ozone and Particulate Matter. An increase of nitrogen oxides (NO_x) above 85 pounds per day for short-term effects (construction) would exceed the SMAQMD threshold adopted for this EA. An increase of either ozone precursor, nitrogen oxides (NO_x) or reactive organic gases (ROG), above 65 pounds per day for long-term effects (operation), would also exceed the SMAQMD threshold. As both the SMAQMD construction and operation standards are more stringent than the June 2010 EPA standards, they are used here in this EA. The threshold of significance for PM₁₀ is a concentration-based threshold equivalent to the California Ambient Air Quality Standard (CAAQS). For PM₁₀, a project would exceed the threshold if it would emit pollutants at a level equal to or greater than 5 percent of the CAAQS (50 micrograms/cubic meter for 24 hours) if there were an existing or projected violation; however, if a project is below the ROG and NO_x thresholds, it can be assumed that the project is below the PM₁₀ threshold as well.

Carbon Monoxide. The pollutant of concern for sensitive receptors is carbon monoxide (CO). Motor vehicle emissions are the dominant source of CO in Sacramento County. For purposes of environmental analysis, sensitive receptor locations generally include parks, sidewalks, transit stops, hospitals, rest homes, schools, playgrounds, and residences. Commercial buildings are generally not considered sensitive receptors. Carbon monoxide concentrations would exceed the SMAQMD threshold if they exceed the 1-hour state ambient air quality standard of 20.0 parts per million (ppm) or the 8-hour state ambient standard of 9.0 ppm (state ambient air quality standards are more stringent than their federal counterparts).

Toxic Air Contaminants (TACs). The project would exceed the SVAB thresholds if it would expose sensitive receptors to substantial pollutant concentrations.

Operational Impacts

The URBEMIS 2007 9.2.4 model was used to calculate estimated

emissions for the operation of the proposed project. Estimated highest ROG and NO_x summer and winter emissions for using the URBEMIS 2007 9.2.4 model were calculated to be approximately 7.37 pounds per day (lbs/day) and 11.38 lbs/day, respectively, which is below the 65 lbs/day threshold.

Project-Related Construction Impacts

The URBEMIS 2007 9.2.4 model was used to calculate estimated emissions for the construction of the proposed project. Based on the estimated emissions from running the URBEMIS model, the proposed project is not likely to exceed the short-term emissions threshold of 85 lbs/day for NO_x. Estimated NO_x summer emissions using the URBEMIS 2007 9.2.4 model were calculated to be approximately 58.27 lbs/day, which is below the 85 lbs/day threshold.

The SMAQMD 2004 Guide to Air Quality Assessment states that if the project's NO_x mass emissions from heavy-duty, mobile sources do not exceed the SMAQMD threshold using the recommended methodologies for estimating emissions (Manual Calculation, URBEMIS, and Roadway Construction Model), the Lead Agency may assume that exhaust emissions of other pollutants from operation of construction equipment and worker commute vehicles also do not exceed the threshold. The URBEMIS 2007 model indicated that the project would not exceed the NO_x threshold and, based on the guidance of the air district, the analysis of other criteria pollutant emissions is not included in this discussion.

Construction activities would be subject to SMAQMD's Rule 403 on Fugitive Dust, which provides that contractors shall take every reasonable precaution not to cause or allow the emissions of fugitive dust from being airborne beyond the property line from which the emission originates, from any construction, handling or storage activity, or any excavation, grading, clearing of land or solid waste disposal operation. Reasonable precautions include, but are not limited to: the use of water or chemicals for control of dust, where possible, during construction operations (including roadways), or during the clearing of land; the application of asphalt, oil, water, or suitable chemicals on dirt roads, materials stockpiles, and other surfaces which can give rise to airborne dusts; and other means approved by the Air Pollution Control Officer.

Land uses such as schools, hospitals, residences and convalescent homes are considered to be relatively sensitive to poor air quality. However, since proposed project emissions of NO_x, ROG, PM₁₀ and CO are not anticipated to exceed SMAQMD thresholds and the surrounding land uses are not considered sensitive, it is not expected that concentrations will exceed any standards for sensitive receptors.

The project would not therefore exceed the SMAQMD thresholds that are used in this EA to determine if the project would contribute substantially towards Community Pollution Levels.

Although the project itself is not expected to contribute substantially toward community pollution levels, it should be noted that the existing former PG&E building is located 228 feet from I-5, which is a major highway with more than 6 lanes of traffic. This is a major source of CO and particulate matter.

Background air quality monitoring would need to be carried out at the project site to determine current levels of these pollutants. Projected estimates would need to be added to these pollutant levels to determine the effects of ambient air quality on the project. Although users of the project are expected to include a high proportion of children, who are considered sensitive receptors, they would be unlikely to spend much

	<p>time outside due to the noise. Indoor air quality is not likely to be much affected by the particulate pollution because this would be filtered out by the building's ventilation system.</p> <p><u>Greenhouse Gases</u> Greenhouse gases (GHGs) are an area of recent concern and analysis in HUD documents. As the project would be designed with the goal of attaining LEED-Gold certification or higher, it will be relatively energy-efficient. Operational GHG emissions would be largely derived from passenger vehicles making trips to and from the site. The URBEMIS 2007 model runs calculated CO₂ emissions (the main GHG) for the project. Over the lifetime of the project, the total metric tons of CO₂ per year would be less than 2,000 tons per year (tons/yr). This is considerably less than the threshold of 25,000 tons/yr that is being considered for adoption by the Council of Environmental Quality for projects undergoing NEPA review.</p> <p>Source Documentation: Attachment 32, ARB Almanac 1999 – Chapter 4: Historical Basinwide Emissions and Air Quality, pages 145 and 153.</p> <p>Attachment 33, SMAQMD, adopted March 2002, Thresholds of Significance Table.</p> <p>Attachment 34, SMAQMD, 2004, Guide to Air Quality Assessment, page 3-2.</p> <p>Attachment 35, SMAQMD, 2005, Rule 403 on Fugitive Dust, pages 403-5 and 403-6.</p> <p>Attachment 36, Federal Agencies Should Consider Climate Change When Reviewing Environmental Effects Of Projects, Says Council on Environmental Quality, February 23, 2010.</p>
<p>Environmental Design Visual Quality - Coherence, Diversity, Compatible Use and Scale</p>	<p>1 Compliance Determination: The project is immediately surrounded by a park to the south and a motel to the north. Jibboom Street runs to the east and farther to the east is the elevated portion of the I-5 freeway. A recreational trail runs to the west of the project, on top of the levee, on the outside of which is the Sacramento River. The surrounding area to the north has several low-rise businesses surrounded by paved parking, and the area farther south is dominated by the elevated portion of I-5 which runs along the Sacramento River. East of the freeway are large, low-rise commercial and industrial developments some occupying entire blocks and to the southeast is a water treatment plant.</p> <p>The 19,250 sf existing structure of the PG&E building would be rehabilitated and two new structures would be built: a 13,218 sf two-story, 57-foot-high Planetarium and Challenger Learning Center; and a 14,500 sf Education Center and Restaurant. There would also be parking for 298 cars. The existing riverine trees would be maintained and several new trees planted around the project site. The new development would not be out of character with the nearby low-density industrial and commercial development with wide stretches of asphalt, and none of the new structures would exceed the height of the existing building. The riverside zone would maintain its vegetated character. Finally, the proposed project would not displace or divide an existing community since the site is currently a vacant lot with the shuttered former PG&E building. Therefore, the proposed project would be compatible with surrounding land uses.</p> <p>The project reuses and rehabilitates the 1912 Powerhouse building, maintaining its character-defining features, with changes to its current</p>

	<p>setting to include the two aforementioned new structures. The site will be diverse and the newer buildings are designed to contrast with the older Powerhouse, while respecting its character-defining features, scale, massing and primary facades. As the neighborhood is already architecturally diverse, and unremarkable, this project would stand out as a well designed civic attraction.</p> <p>Source Documentation: Attachment 4, Aerial Photograph Attachment 37, Project Rendering</p>
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Socioeconomic Code Source or Documentation

Demographic Character Changes	2	The proposed project would not displace any demographic group because the proposed project would be located on a site with no occupants. The proposed project would introduce a demographic group – K-12 students and other visitors – that does not currently exist in the project area. Overall, the proposed project would benefit the City of Sacramento by providing new educational and museum facilities for students and other visitors.
Displacement	1	Compliance Determination: The proposed project would be located on a site with no occupants and therefore would not displace any existing residents or employees.
Employment and Income Patterns	1	Compliance Determination: The proposed project is an educational, museum and restaurant project and would introduce a commercial use that would unlikely alter employment and income patterns. The Powerhouse Science Center is projected to create 400 construction jobs and 100 permanent jobs. The project vicinity already contains lodgings and restaurants to the north. In addition, the project is of a density and demographic character that would not trigger substantial changes to income patterns throughout the project vicinity.

Community Facilities and Services

Code Source or Documentation

Educational Facilities	1	Compliance Determination: The proposed project involves the development of civic buildings to house exhibits for educational purposes, a restaurant and café, a gift shop, and improvements to the existing park. The proposed project does not include a residential component. As a result, it would not generate any additional needs for schools or necessitate the construction of new school facilities.
Commercial Facilities	2	Compliance Determination: The proposed project would result in new public facilities. These facilities would be potentially beneficial to the project area and City by increasing jobs and adding a new restaurant facility near the Sacramento waterfront.
Health Care	1	Compliance Determination: The proposed project does not include a residential component. Therefore, there would not be a demand for additional health care services beyond those required for emergency services. Consequently, the proposed project would not adversely impact medical services.
Social Services	1	Compliance Determination: The proposed project would not adversely impact the social services provided by Sacramento County and the City of Sacramento because it is a visitor-serving, educational facility.
Solid Waste	1	Compliance Determination: Solid waste in Sacramento is collected by City and permitted private haulers. The City offers both commercial and residential solid waste collection services. Construction and demolition waste is collected by the City and private companies. Commercial solid waste collected by the City is transported to one of two transfer stations for processing: the Sacramento Recycling and Transfer

	<p>Station owned by BLT Enterprises, which is permitted for a maximum daily disposal of 2,500 tons; and the North Area Transfer Station, owned by the County of Sacramento Public Works Department, which accepts a maximum of 2,400 tons per day of construction/demolition, industrial, and green materials, tires, wood waste, and mixed municipal waste.</p> <p>The Integrated Waste Management Act of 1989 (AB 939) requires each city and county in California to reduce landfilled waste by 50 percent. As of 2004, the most recent data available that has been approved by the California Integrated Waste Management Board (CIWMB) shows that the City of Sacramento maintained a 49 percent diversion rate. The City has six recycling programs, six programs specializing in source reduction and four public education programs designed to encourage and promote recycling in the communities.</p> <p>Implementation of Policies U 5.1.1 through U 5.1.3 from the Sacramento 2030 General Plan Master EIR ensures that solid waste and recycling facilities such as transfer stations are adequately provided throughout the city to help reduce the amount of waste sent to landfills. Policies U 5.1.1 through U 5.1.3 are:</p> <p>U 5.1.1 Zero Waste. The City shall achieve zero waste to landfills by 2040 through reusing, reducing, and recycling solid waste; and using conversion technology if appropriate.</p> <p>U 5.1.2 Landfill Capacity. The City shall continue to coordinate with Sacramento County in providing long-term landfill disposal capacity.</p> <p>U 5.1.3 Transfer Stations. The City shall provide for adequate transfer station facilities to meet the city's demand.</p> <p>Many programs are already in place to promote waste diversion, which will help reduce waste flow to landfills. The proposed project will be sufficiently served by the City and will comply with federal, State, and local statutes and regulations related to solid waste.</p> <p>Source Documentation: Attachment 38, CalRecycle, Transfer Station Profile for Sacramento Recycling & Transfer Station (34-AA-0195), http://www.calrecycle.ca.gov/Profiles/Facility/Transfer/TransProfile1.asp?COID=34&FACID=34-AA-0195, accessed on February 19, 2010.</p> Attachment 39, CalRecycle, Transfer Station Profile for North Area Transfer Station (34-AA-0002), http://www.calrecycle.ca.gov/Profiles/Facility/Transfer/TransProfile1.asp?COID=34&FACID=34-AA-0002 , accessed on February 19, 2010. Attachment 40, CalRecycle, Jurisdictional Profile for City of Sacramento, http://www.calrecycle.ca.gov/Profiles/Juris/JurProfile2.asp?RG=C&JURID=418&JUR=Sacramento , accessed on February 19, 2010.
Wastewater	<p>1 Compliance Determination: Wastewater collection in the project area is provided by the City. The City provides wastewater collection to about two-thirds of the area within the project area via a combined sewer system (CSS). Currently all flows into the CSS are conveyed westerly to two pumping stations (Sump 2/2A and 1/1A) located on the Sacramento River. For secondary treatment and disinfection of the flow, the City has entered into an agreement with the Sacramento Regional Wastewater Treatment Plant (SRWTP) to convey up to 60 million gallons per day (mgd). This treatment capacity is currently sufficient for dry weather flows. During heavy storms where the flows exceed this amount, the Combined Wastewater Treatment Plant (CWTP) at South Land Park Drive and 35th Avenue is used to provide primary treatment of an additional 130 mgd. Excess flows beyond 190 mgd are diverted to the Pioneer Reservoir storage and treatment facility that has a capacity of 350 mgd. When all three treatment facilities (SRWTP, CWTP, and Pioneer) have reached capacity, excess flows are directly discharged into the Sacramento River from Sump 2 without treatment. These are called combined sewer overflows (CSOs). In the central City, when the pipeline system capacities are surpassed, the excess flows flood local streets through maintenance holes and catchbasins.</p> <p>The City of Sacramento adopted a sewer ordinance for the CSS in 2005, which requires payment of a development fee for projects that add sewer flows within the CSS service boundary. Key aspects of the CSS development fee include: a fee per equivalent single-family dwelling unit that</p>

	<p>will be subject to periodic adjustments; CSS development fees may be fully or partially offset by constructing or cost sharing in the construction of a mitigation project approved by the City Department of Utilities; the fee approximates the cost to construct local storage to mitigate downstream impacts; and fees will be collected and deposited in a fund for the City to construct larger projects to mitigate multiple developments.</p> <p>Based on the uses planned for the site, the proposed project is anticipated to generate approximately 7,468 gallons per day of wastewater. The proposed project is consistent with the 2030 General Plan. Development under the 2030 General Plan would increase the demand for conveyance capacity in the local City-maintained sewer lines that connect to major trunk lines and interceptors in the separate sewer system. The City's CSS is limited in capacity, and flows must currently be mitigated in accordance with the Combined System Development Fee.</p> <p>The proposed project is constructing "Living Machine" systems, which adapt the ecological process of natural tidal wetlands to produce clean water from wastewater. The Living Machine is an engineered ecological system which utilizes plants in porous gravel substrate to create a large surface for biofilms, thin films or active treatment microorganisms. Biofilms efficiently treat wastewater from municipal, agricultural and other sources. After the wastewater is treated the water can be stored and used for watering the surrounding landscape onsite. The "Living Machines" that will be located on the project site will not replace but will supplement wastewater services that would normally be provided by the Sacramento Regional County Sanitation District. With the Living Machines in operation, impacts to the CSS would not be potentially adverse, and the requirement to pay the CSS impact fee may be reduced but still required.</p> <p>In addition, an 8-inch sanitary sewer line would be installed under Jibboom Street as part of the proposed project. This line would connect to currently active lines on Jibboom Street north of the project site. The new sanitary sewer line would serve the proposed project as needed. With the Living Machines on-site, and a back-up sewer line, as well as policies to ensure there is adequate wastewater service, no impact is anticipated.</p> <p>Source Documentation: Attachment 41, Bertrand, Tony. Sacramento Department of Utilities. Personal email communication with Dana Allen, City of Sacramento Community Development Department, January 28, 2010.</p>
Stormwater	<p>1 Compliance Determination: The City's separate storm drainage system includes conveyance of storm water and dry weather urban runoff to the adjacent creeks and rivers. The separate drainage system consists of street drains, conveyance systems, and usually a pump station to discharge into either the Sacramento or American River. These discharges are regulated for water quality by the Regional Water Quality Control Board National Pollutant Discharge Elimination System (NPDES) permit R5-2002-0206.</p> <p>The City of Sacramento design standards for project drainage include capturing the 10-year design storm without street flooding and preventing water from the 100-year storm from reaching within one foot of any building pad. The flows are generally conveyed in pipes or pipes and channels to pump stations. The channels are designed to hold the 100-year design storm. Projects that may cause the conveyance system to exceed their 100-year design capacity are required to detain their flows on-site or otherwise mitigate the potential flow exceedance.</p> <p>The 2030 General Plan also includes policies to address stormwater drainage facilities, such as Policy U 4.1.1 to ensure that there are adequate drainage facilities. Policy U 4.1.5 requires that new development adhere to the City stormwater design requirements, and Policy ER 1.1.4 directs the City to require new development to protect the quality of water bodies and natural drainage systems through site design, storm water treatment, and best management practices. These policies are:</p> <p>U 4.1.1 Adequate Drainage Facilities. The City shall ensure that all new drainage facilities are adequately sized and constructed to accommodate stormwater runoff in urbanized areas.</p> <p>U 4.1.5 New Development. The City shall require proponents of new development to</p>

	<p>submit drainage studies that adhere to City stormwater design requirements and incorporate measures to prevent on- or off-site flooding.</p> <p>ER 1.1.4 New Development. The City shall require new development to protect the quality of water bodies and natural drainage systems through site design, source controls, storm water treatment, runoff reduction measures, best management practices (BMPs) and Low Impact Development (LID), and hydromodification strategies consistent with the City's NPDES Permit.</p> <p>The size of the project area is approximately 6.35 acres. This project is greater than 1 acre in size; therefore, the project is required to comply with the State "NPDES General Permit for Stormwater Discharges Associated with Construction Activity" (State Permit). To comply with the State Permit, the Applicant will need to file a Notice of Intent (NOI) with the State Water Resources Control Board (SWRCB) and prepare a Stormwater Pollution Prevention Plan (SWPPP) prior to construction. A copy of the State Permit and NOI may be obtained from www.swrcb.ca.gov/stormstr/construction.html. The SWPPP will be reviewed by the Department of Utilities prior to issuing a grading permit. The following items shall be included in the SWPPP: (1) vicinity map, (2) site map, (3) list of potential pollutant sources, (4) type and location of erosion and sediment BMPs, (5) name and phone number of person responsible for SWPPP and (6) certification by property owner or authorized representative. Additionally, development of the site would be required to comply with regulations involving the control of pollution in stormwater discharges under the City's Stormwater Management and Discharge Control Code (Title 13, Chapter 13.16). This code requires all development to prevent pollutants from entering the stormwater conveyance system. Under this code, the project would be required to develop and comply with Best Management Practices (BMPs) (e.g. use of erosion control barriers, proper disposal of chemicals, hydroseeding, good housekeeping, etc.) to manage short-term, construction related, erosion and stormwater issues which would be regulated by the City's Stormwater Prevention Pollution Plan Inspectors. Long term stormwater issues are addressed through source control and good housekeeping practices.</p> <p>The Applicant would ensure adherence to these established plans and requirements, best management practices and policies to ensure runoff is collected in appropriately sized catchbasins in order to gain project approval from the City. As such there would not be substantial environmental effects from the project in regards to stormwater management.</p> <p>Source Documentation: Attachment 42, California Regional Water Quality Control Board Central Valley Region, Waste Discharge Requirements Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, Sacramento, and County of Sacramento Storm Water Discharges from Municipal Separate Storm Sewer Systems Sacramento County, http://www.waterboards.ca.gov/centralvalley/board_decisions/adopted_orders/sacramento/r5-2008-0142.pdf, accessed on February 19, 2010.</p>
Water Supply	<p>1 Compliance Determination: Municipal water services within the project area are provided by the City of Sacramento and other water purveyors. The City's water supply comes from the American and Sacramento Rivers and groundwater pumped from the North and South American Subbasins. On average, groundwater use has consisted of 15 to 20 percent of the City's supply between 1999 and 2006.</p> <p>As part of the Sacramento River Water Intake Structure project, approximately 700 lineal feet of 12 inch diameter water pipe were placed to provide water to the new intake structure, the Robert T. Matsui Waterfront Park and the proposed project site. The water pipe extends from the northeast corner of the old PG&E power station building lot to the intake structure and connects to the water distributions system on the east side of I-5 via two 4 inch pipes, thereby creating a "loop" system. Currently, as part of the infrastructure improvements, a new 12-inch water line would also be placed under Jibboom Street to meet City standards. It will replace the existing water line located on the former PG&E property placed underground during the Sacramento River Water Intake Structure project. This line would connect to currently active lines on Jibboom Street and would accommodate the development of the proposed project. In addition, due to the project's proximity to the water treatment facility there is water pressure of roughly 60 pounds per square inch (psi) that is more than sufficient for fire suppression purposes. Therefore, there are sufficient water supplies available to serve the project.</p> <p>Source Documentation:</p>

		Attachment 43, Joyce, Neal. City of Sacramento, Department of Utilities. Personal email communication with Alejandro A. Huerta, DC&E, February 23, 2010.
Public Safety-Police	1	<p>Compliance Determination: The Sacramento Police Department (SPD) is principally responsible for providing police protection services for areas within the city. The SPD's authorized staffing is 799 sworn police officers for an officer-to-population ratio of 1.66 officers per 1,000 residents. The SPD is in the process of developing a 10-year plan to increase the ratio to 2 to 2.5 officers per 1,000 residents. Central Command, at 300 Richards Boulevard, is the closest police station, about 0.5 mile, from the project site. The project site would be located in the Central Division, District 3, Beat 3A. The Central Command facility houses patrol officers, forensic investigations (CSI), detectives, administrative staff, SWAT, K9, bicycle officers and traffic officers who respond to calls for service mainly in the downtown area, but also citywide.</p> <p>The SPD expects adequate access to the site by car, bike or horse. The SPD believes that it will be able to provide adequate service if the project incorporates design principles that prevent crime such as video cameras.</p> <p>Source Documentation: Attachment 44, Taylor, Chris. Sergeant, Sacramento Police Department. Personal email communication with Alejandro A. Huerta, DC&E, February 11, 2010.</p>
Fire	1	<p>Compliance Determination: The Sacramento Fire Department (SFD) provides fire protection services to the entire city, which includes approximately 98 square miles within the existing city limits as well as three contract areas that include 47 square miles immediately adjacent to the city boundaries within the unincorporated county. There are currently 530 sworn fire officers. Station 2 at 1229 I Street would be the first station to respond to an incident at this location. Due to the project's proximity to the water treatment facility there is water pressure of roughly 60 psi which is more than adequate for fire suppression. The City's goal is to maintaining appropriate response times to adequately provide fire protection and medical aid services. The City is also committed to maintaining optimum staffing levels for sworn, civilian, and support staff in order to provide fire protection and emergency services to the community. The response goal is to arrive on scene within a 4- to 6-minute response time 90 percent of the time for fire suppression and medic units within 8 minutes 90 percent of the time. According to Fire Department Deputy Chief of Administration, Leo Baustian, the project would be adequately served by the new fire station that will be built for the Sacramento Downtown Railyards project approved on December 11, 2007. A shared developer fee would be used to pay for the new fire station. The project would be required to provide adequate access and enough water supply for fighting fires.</p> <p>Source Documentation: Attachment 43, Joyce, Neal. City of Sacramento, Department of Utilities. Personal email communication with Alejandro A. Huerta, DC&E, February 23, 2010.</p> <p>Attachment 45, Tunson, King. Program Analyst, Planning & Land use, Sacramento Fire Department. Personal email communication with Alejandro A. Huerta, DC&E, February 10, 2010.</p> <p>Baustian, Leo. Deputy Chief of Administration, Sacramento Fire Department. Personal phone conversation with Alejandro A. Huerta, DC&E, March 5, 2010.</p>
Emergency-Medical	1	<p>Compliance Determination: The Sutter Medical Center, Sacramento is a Sutter Health Affiliate made up of several facilities that serve Sacramento. Sutter General Hospital is the closest facility to the project site at 2801 L Street in Sacramento. As of 2006, there were 950 physicians for the entire Sutter Medical Center, with 181,029 outpatient visits and 70,544 emergency visits. The Sutter Medical Center's services include 24-hour emergency services, surgery, respiratory therapy, intensive care, diagnostic imaging, rehabilitation, cardiopulmonary, occupational health, laboratory, physical therapy, home health and hospice services. The proposed project would not adversely impact the medical services provided by the Sutter General Hospital. In addition, fire personnel from the Sacramento Fire Department would be able to administer emergency medical attention, which would further reduce impacts, per the following General Plan policies:</p> <p>PHS 2.1.2 Response Time Standards. The City shall strive to maintain appropriate emergency response times to provide optimum fire protection and emergency medical services to the community.</p>

		<p>PHS 2.1.3 Staffing Standards. The City shall maintain optimum staffing levels for sworn, civilian, and support staff, in order to provide quality fire protection and emergency medical services to the community.</p> <p>Source Documentation: Attachment 46, Facts at a Glance, Sutter Medical Center, Sacramento, http://www.sutterhealth.org/about/affiliates/hospitals.html, accessed on February 16, 2010.</p>
Open Space and Recreation	2	<p>Compliance Determination: Because the proposed project would not involve the construction of new homes, it would not result in an increased demand for neighborhood or regional parks, or other recreational facilities beyond those identified in the General Plan and the Master EIR. The proposed project would not alter demand for park and open space facilities. Because the proposed project is proposing to improve recreation opportunities with improvements to the existing park, the proposed project would be potentially beneficial.</p>
Recreation	2	<p>Compliance Determination: The proposed project would not alter the existing recreational opportunities that adjoin it. Because the proposed project is proposing to improve recreation opportunities with improvements to the existing park and improved access to the adjacent bike trail, the proposed project would be potentially beneficial.</p>
Cultural Facilities	1	<p>Compliance Determination: The proposed project involves the rehabilitation of an existing vacant industrial building and the development of two new commercial buildings to house exhibits for educational purposes, a restaurant and café, a gift shop, and improvements to the existing park. The proposed project does not include a residential component. As a result, it would not generate any additional needs for schools (no increase in schoolchildren) or necessitate the construction of new school facilities. Nor would there be a need for expanded or new library services. The project is intended to serve students from the area. Therefore, no impacts are anticipated to schools or libraries.</p>
Transportation		<p>Compliance Determination:</p> <p><u>Access to the Site</u> Vehicular access to the project site would be provided from two driveways on Jibboom Street. Jibboom Street is a two-lane street, which begins at I Street in Downtown Sacramento and extends northwards toward Richards Boulevard, and then crosses the American River, terminating within Discovery Park. The daily traffic volume on Jibboom Street is about 9,400 vehicles.</p> <p><u>Public Transportation</u> Sacramento Regional Transit (RT) provides service along three routes in the study area. The 11 and 15 lines serve Richards Boulevard as a regular bus route, while the 33 line serves Bercut Drive and Richards Boulevard during peak hours. There are currently no light rail stations in the River District although the first segment, MOS1, of the Green Line is under construction. The first station will be at Township 9 located at the northwest corner of Richards Boulevard and North 7th Street.</p> <p><u>Bikeways and Pedestrian Access</u> A Class II bike lane is striped on both sides of Jibboom Street. The Sacramento River Parkway bicycle path, a Class I bikeway that runs from Old Sacramento to the American River Parkway, is located west of the proposed project. There is an existing sidewalk at the west side of Jibboom Street just north of the project site but no sidewalk is provided adjacent to the project site.</p> <p><u>Disabled Access and Truck Access to the Project</u> All buildings would be accessible to the disabled from the public right-of-way. All building interiors would be accessible to the disabled through the use of elevators.</p> <p>Trucks would be able to access the site at an off-hours loading area at the northeast corner of the Powerhouse Science Center building.</p> <p><u>Level of Service (LOS) Resulting from the Project</u> The proposed project is anticipated to attract 250,000 visitors when it opens in 2013. The table below summarizes the trip generation estimates of the proposed project. The Museum and Restaurant land uses are calculated separately since the operation hours are different. Assuming 20 percent of visitors are expected to arrive by bus, mostly school field trip groups, with 30 visitors in a bus and assuming 2.7 visitors per vehicle for the remaining 80 percent of visitors arriving in personal vehicles, the museum component of the project would generate 378 daily trips.</p>

Adjustments were made to account for restaurant pass-by trips and for internal trips between the museum and the restaurant. Internal trips are trips that would occur between different land uses on the same site without accessing the external street system. Pass-by trips are vehicle trips already traveling on the adjacent roadway system that are diverted into and out of the driveways serving the project site. No pass-by or internal trip reductions are applied for a.m. peak hour since restaurant business hours are expected to be from 11 a.m. to 8 p.m. weekdays. The proposed project will generate 863 daily trips, 43 trips in the a.m. peak hour and 113 trips in the p.m. peak hour, as listed below.

Land Use	Size (1000 sf)	Daily trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
Museum	67.71	378	33	5	38	8	67	75
Restaurant	6.336	570	5	0	5	31	16	47
Internal trip reduction (-3%)		-28	0	0	0	-1	-3	-4
Restaurant Pass-by trips (-10%)		-57	0	0	0	-3	-2	-5
Total Trips		863	38	5	43	35	78	113

Source: Trip generation estimates based on land uses from the California Indian Heritage Center Traffic Study data, Natural History Museum trip generation analysis; museum and land use estimates taken from Institute of Transportation Engineers, Trip Generation, 8th Edition, 2008.

The total project peak-hour number of trips would not be considered substantial and would not degrade Level of Service (LOS) on roadways or intersections to unacceptable levels. The Powerhouse Science Center has been assumed as a baseline project in the I-5 and Richards Boulevard interim interchange study, and thus any potential future impacts are accounted for.

The existing streets in the vicinity of the project site would have adequate capacity to accommodate the project generated traffic volumes without any substantial adverse effects to traffic. However, the project is still subject to entitlement review and may be required to provide frontage improvements to the satisfaction of Department of Transportation Traffic Engineering Division.

Road Design Changes and Safety Issues

The recently-approved Access Improvements from Railyards to Richards Boulevard and Interstate 5 Project will improve Jibboom Street with restriping, repaving, and widening approximately 600 feet of the southern portion of the existing roadway. Along the west side of the widened section of Jibboom Street, fronting the PG&E property, curb, gutter with storm drain extensions would be added. Pending coordination with the utility companies, if the existing overhead utilities are relocated underground, Jibboom Street would be shifted toward I-5, and off-street parking would be added to portions of the west side. If these utilities remained on overhead poles, the existing asphalt sidewalk would be maintained with the poles in their existing locations, and off-street parking would not be added to the west side of Jibboom Street. This action is anticipated to commence in July 2010.

The proposed project will be consistent with Section 16.48.110 of the City Code, which states that street and roadway improvements should be designed and constructed to City standards in place at the time that the building permit is issued. All such improvements are required to be designed and constructed to the satisfaction of the Department of Transportation and this would ensure that there would be no hazards to safety from design features or incompatible uses. Therefore, the proposed project is not anticipated to result in increases in hazards due to design features.

Emergency Access

Existing and proposed project infrastructure provides adequate emergency access to the nearby uses. The project is required to be designed to appropriate standards of the City of Sacramento Department of Transportation and the Sacramento Fire Department. During construction, the project proponent would prepare a Transportation Management Plan (TMP) that ensures that construction period traffic impacts are minimized. The TMP would identify the type of construction

	<p>work; lane/road closure; traffic management measures to minimize impacts; and provisions made for emergency vehicles, heavy vehicles, cyclists, and pedestrians. In addition, the TMP would assess public transportation services affected and propose a public notification process. Proper notification and advanced warning to nearby emergency service providers, as directed to be included in the proposed project-level TMP, would ensure adequate egress and ingress for emergency service personnel. Therefore, the project would not result in inadequate access to nearby uses or for emergency vehicles.</p> <p><u>Bike and Pedestrian Safety</u> Pedestrian and bicycle access to the Sacramento River Parkway bicycle path could be disrupted temporarily during construction. No actual improvements would be made to the bicycle path. This construction zone would be coned off to allow limited access for workers and to ensure the exclusion and safety of the bicycle path users. Advance signage would also be placed in both directions of the pathway and bicyclists would be directed to walk their bicycles through this construction zone. With these precautionary measures, the construction adjacent to the Sacramento River Parkway bicycle path would not result in unsafe conditions for pedestrians or bicyclists.</p> <p><u>Parking</u> The project site currently has one off-street parking lot, located at the Robert T. Matsui Waterfront Park. The proposed project is proposing additional parking with the construction of a parking structure to accommodate 298 cars, which is considered adequate for the project's needs. Additionally, students accessing the project site are expected to arrive by school bus. School bus parking would be accommodated on-site. Any overflow parking would be accommodated off-site consistent with City Code 17.64.010 General Provisions (A)(1)(c), which states: "Off-Site Parking Under Different Ownership Outside a Specified Radius from Subject Site. Outside the central city, a special permit may be granted to locate required and non-required off-street vehicle parking on a parcel(s) outside of a three hundred (300) foot radius of the subject site if the parcels designated for off-site parking are under different ownership from the subject site. Within the central city, a special permit may be granted to locate required and non-required off-street vehicle parking for retail/commercial uses on a parcel(s) outside of a one thousand (1,000) foot radius of the subject site if the parcels designated for off-site parking are under different ownership from the subject site. A special permit may be granted only if the Applicant provides written evidence that users of the subject site will have unrestricted exclusive right to use the other parcel(s) for required parking for a period of not less than ten (10) years, or otherwise provides an arrangement satisfactory to the planning commission. Under no circumstances shall the amount of parking approved by the planning commission exceed any maximum amount of allowable parking." Undergrounding the water intake pipe, which is part of the infrastructure improvements, will allow for improved circulation related to parking access.</p> <p>Source Documentation: Attachment 47, City of Sacramento Department of Transportation, Engineering Services, Traffic Counts Database, count from 09/12/2007, http://www.cityofsacramento.org/transportation/traffic/list.cfm, accessed on February 22, 2010.</p> <p>Attachment 48, Sacramento Regional Transit District, System Map, http://www.sacrt.com/systemmap/systemmap.stm, accessed on February 19, 2010.</p>
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Natural Features	Source or Documentation
Water Resources	<p>Compliance Determination: <u>Stormwater Runoff Quality Construction</u> During construction of the proposed project, stormwater runoff quality would be protected by using standard California Department of Transportation (Caltrans) approved Best Management Practices (BMPs) to reduce or eliminate potential water quality impairments. Caltrans BMPs are described in the 2003 Caltrans Stormwater Management Plan and the City's BMPs are included in the Sacramento Stormwater Quality Improvement Plan (SQIP). Both plans list measures that cover sediment and erosion controls, fueling and hazardous materials storage areas,</p>

waste handling and cleaning schedules, and known contributors that affect receiving water quality.

Construction activities are regulated under the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit), provided that the total amount of ground disturbance during construction exceeds one acre or disturbs less than one acre but are part of a larger common plan of development that in total disturbs one or more acres. The Central Valley Regional Water Quality Control Board (RWQCB) enforces the General Construction Permit. Coverage under a General Construction Permit requires the preparation of a Stormwater Pollution Prevention Plan (SWPPP) and notice of intent. The SWPPP includes pollution prevention measures (measures to control erosion, sediment, and non-stormwater discharges and hazardous spills), demonstration of compliance with all applicable local and regional erosion and sediment control standards, identification of responsible parties, a detailed construction timeline, and a BMPs monitoring and maintenance schedule. The notice of intent includes site-specific information and the certification of compliance with the terms of the General Construction Permit.

Operation

Site drainage plans will be prepared to reduce operational runoff from the project site. Implementation of the proposed project would change absorption rates, drainage patterns, and the amount of stormwater runoff from the project area. The size of the project area is approximately 6.35 acres. The project site drains to the Caltrans retention basin, adjacent to the southbound I-5 off-ramp to Jibboom Street. The Caltrans retention basin would receive all of the additional stormwater runoff from new impervious surfaces associated with the proposed project. The additional amount of stormwater would be safely conveyed to the Caltrans facilities.

Caltrans retention basins act as natural treatment systems for stormwater runoff. Runoff associated with the new impervious surface would be drained to this basin for treatment prior to it being discharged to the American River. The basin provides treatment through percolation, filtration, sedimentation, and other biological processes that reduce or remove pollutants associated with highway and urban stormwater. The additional surface water discharges associated with the proposed project would not deplete or adversely affect water quality in the rivers. Therefore, no improvements to the City's drainage facilities would be needed.

Groundwater Discharge

The project would not use groundwater from the site. However, given the proximity to the Sacramento River and the relatively shallow depth of groundwater (seasonally only 5 feet below ground surface), the excavations will need dewatering. The groundwater beneath the site is known to have been contaminated. It is currently being monitored by the Department of Toxic Substances Control (DTSC). If groundwater needs to be withdrawn during construction during any underground utility construction, the following mitigation measure, Mitigation Measure #7: Groundwater, shall be implemented so that polluted groundwater is not discharged.

	<p>While small amounts of construction-related dewatering are covered under the General Construction Permit, the RWQCB has also adopted a NPDES Low Threat Discharge and Dewatering Permit. This permit applies to various categories of dewatering activities and would likely apply to aspects of the proposed project if construction requires dewatering in greater quantities than those allowed by the General Construction Permit. The General Dewatering Permit contains waste discharge limitations and prohibitions similar to those in the General Construction Permit. To obtain coverage, the Applicant must submit a notice of intent and a Pollution Prevention and Monitoring Program (PPMP). The PPMP must include a description of the discharge location, discharge characteristics, primary pollutants, the receiving water, treatment systems, spill prevention plans, and other measures necessary to comply with discharge limits. A representative sampling and analysis program must be prepared as part of the PPMP and implemented by the permittee, along with recordkeeping and quarterly reporting requirements during dewatering activities. For dewatering activities that are not covered by the General Dewatering Permit, an individual NPDES permit and waste discharge requirements must be obtained from the RWQCB. The General Dewatering Permit would be applicable to the City contractors where excavation activities may encounter the water table.</p> <p><u>Soil and Groundwater Contamination</u></p> <p>The Powerhouse site has been contaminated with lead from its past activities as either a power plant or a scrap metal recycling yard. Contaminated soil remains in an area to the east of the Powerhouse Building beneath a clay cap that prevents worker exposure to these soils. An Operation and Maintenance agreement and a Deed Restriction cover the area of lead contamination east of the Powerhouse. This states that the Covenantor shall not permit any use or activity at the site which would disturb the integrity of any hazardous waste containment or monitoring system, including but not limited to the cap, without first applying for and receiving a written variance from the DTSC.</p> <p>The site has also been contaminated with petroleum hydrocarbons from two fuel oil tanks that were removed from the eastern side of the Powerhouse Building. Contaminated soil remains inside and outside the south building wall including in the building basement. This soil around the building has been covered with a separate clay cap to protect worker exposure from contaminated soil that is at least 15 feet below the surface, and to direct water away from the area.</p> <p>Groundwater is monitored from wells around both of these contaminated areas. However, the bunker oil is relatively insoluble and tends to remain in the soil and only low concentrations (<10 milligrams per liter or mg/l) have been detected in wells near the south end of the Powerhouse building. Similarly, the lead is relatively insoluble: The most recent groundwater monitoring report from September 2009 found dissolved lead below the detection limit in all samples.</p> <p>The proposed project places parking over most of the area of lead-contaminated soil. This is shown on Figure 3. This would involve only shallow excavation and the clay cap would therefore remain intact. However, there could be some structures associated with the Powerhouse rehabilitation, such as the new Science Center entrance, that would be constructed over the</p>
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	<p>areas of the clay cap. As per the Operation and Maintenance agreement, either the integrity of the clay cap would be maintained by the proposed work, or if it became necessary to remove or modify a portion of it, this work would be agreed by DTSC. A subsequent Operations and Maintenance Agreement has been made between DTSC and the City as required when the City purchased the property. This describes how the remediation system will remain in place until the remediation objectives are achieved, but that monitoring wells may be relocated if a suitable alternative location is provided and written permission is obtained from DTSC.</p> <p>The area of hydrocarbon-contaminated soil would be graded to allow for the installation of the amphitheatre, among other features. The edge of that area also intersects with the proposed plan for the Challenger Center Planetarium. It is expected that some contaminated soil will be removed from the basement level of the Powerhouse. Existing and abandoned foundations could also restrict the area available for the new construction.</p> <p>Soils would be tested during excavation as per standard landfill disposal requirements. Any soil found to be contaminated would be remediated under the oversight of DTSC. Monitoring wells that needed to be relocated would be capped and re-drilled under oversight of DTSC.</p> <p><u>Project Operations Affect on Groundwater Recharge</u> The proposed project includes increasing the amount of impervious surfaces (approximately 64,808 square feet), which could reduce the amount of groundwater recharge in the area. This figure takes into account the current areas of the site that are covered by a clay cap and already impervious.</p> <p>Mitigation Required: Mitigation Measure #7: Groundwater All new groundwater discharges to the City of Sacramento's Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (refer City Council Resolution #92-439) Groundwater discharges to the City's sewer system are defined as follows:</p> <ol style="list-style-type: none"> 1. Construction dewatering discharges 2. Treated or untreated contaminated groundwater cleanup discharges 3. Uncontaminated groundwater discharges <p>The Developer shall contact the City of Sacramento's Water Quality Section of the Department of Utilities (DOU), (916) 808-1400, 1395 35th Avenue, Sacramento, CA 95822 prior to any groundwater withdrawal. Procedures as specified by the City of Sacramento, Standard Specifications, Section 16, Water Quality Control shall be implemented.</p> <p>Source Documentation: Attachment 30, Blackburn Consulting, 2008, Initial Site Assessment, Richards to Railyards Access Improvement, Sacramento, California, pages 2 to 3.</p> <p>Attachment 31, Blackburn Consulting, 2009, Draft Aerially Deposited Lead/Phase II Assessment, Railyards to Richards Boulevard Access Improvement Project, Sacramento, California, pages 10 and 11.</p>
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		<p>Attachment 49, Email from Jason Silva, Dreyfuss & Blackford Architects, to DC&E, February 17, 2010, Re: construction plans and contamination location.</p> <p>Attachment 50, Letter from Pamela Wee to John Webre, Kleinfelder, Inc. Subject: Preliminary Environmental Evaluation of Jibboom Street Property.</p> <p>Attachment 51, Department of Water Resources, November 7, 1996, Jibboom Street Grading, Clay Caps Plan.</p> <p>Attachment 52, Department of Toxic Substances Control, November 30, 2009, Operations and Maintenance Agreement, Former PG&E Power Plant, 240 Jibboom Street, Sacramento, California.</p>
Surface Water	1	<p>Compliance Determination: The project site is immediately adjacent to the Sacramento River. During construction, stormwater runoff would be controlled to prevent sediment or contamination reaching the Sacramento River. During project operation, the site would drain to the north to the Caltrans retention basin adjacent to the southbound I-5 offramp to Jibboom Street. Groundwater may be pumped from the excavation and discharged to the storm sewer where it would be regulated and monitored by the City Department of Utilities. Therefore, the proposed project would not directly affect surface water.</p>
Unique Natural Features and Agricultural Lands	1	<p>Compliance Determination: The project site does not contain unique natural features or agricultural lands that would be affected by the proposed project.</p>
Vegetation and Wildlife	4	<p>Compliance Determination: The proposed project site contains one cluster of blue elderberry plants on the northeastern portion of the site with documented Valley elderberry longhorn beetle (VELB) exit holes. Project construction would require the removal of these plants. This action will adversely affect the VELB. Any beetle larvae occupying these plants are likely to be killed when the plants are removed. To mitigate this effect, the proposed project would be required to follow the Fish and Wildlife Service's Conservation Guidelines for the Valley Elderberry Longhorn Beetle, listed in Mitigation Measure #4: Valley Elderberry Longhorn Beetle.</p> <p>Mitigation Required: Mitigation Measure #4: Valley Elderberry Longhorn Beetle The Applicant shall comply with the requirements of the <i>Conservation Guidelines for the Valley Elderberry Longhorn Beetle</i>. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:</p> <p>Compensatory Mitigation: Transplant Directly Affected Elderberry Shrubs</p> <p>a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from</p>

	<p>transplantation.</p> <p>b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.</p> <p>c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.</p> <p>Compensate for Direct Impacts on Elderberry Shrubs According to the USFWS VELB Guidelines, adversely affected shrubs that are "transplanted or destroyed" should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.</p> <p>Source Documentation: Attachment 53, ICF International, 2009, Biological Assessment, Access Improvements from Railyards to Richards Boulevard and I-5 Project Biological Assessment, pages 4-1 to 4-3.</p>
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Other Factors

Source or Documentation

<p>Flood Disaster Protection Act [Flood Insurance] [§58.6(a)]</p>	<p>1</p> <p>Compliance Determination: The proposed project area site is not located within a flood hazard zone as delineated by the Federal Emergency Management Agency. Therefore, there is no need for flood insurance.</p> <p>Source Documentation: Figure 5, FEMA Issued Flood Map, Community Panel Number 0602660160G, http://msc.fema.gov/webapp/wcs/stores/servlet/CategoryDisplay, accessed on January 19, 2010.</p>
<p>Coastal Barrier Resources Act/ Coastal Barrier Improvement Act [§58.6(c)]</p>	<p>1</p> <p>Compliance Determination: The project site is not located in a Coastal Zone.</p> <p>Source Documentation: Attachment 5, Map "LCP Status North Central Coast Area, as of July 1, 2009," http://www.coastal.ca.gov/lcp/lcpstatus-mapncc.pdf, accessed on September 28, 2009.</p>
<p>Airport Runway Clear Zone or Clear Zone Disclosure [§58.6(d)]</p>	<p>1</p> <p>Compliance Determination: The proposed project is not in an Airport Runway Clear Zone.</p> <p>Source Documentation: Attachment 22, Powerhouse Science Center Airport Clear Zones Map.</p>

Other Factors	<p>Compliance Determination: In addition to the levees that provide flood protection, dams located upstream of the project area provide a level of flood protection by controlling the release of water from the reservoirs. Dams can fail for a variety of reasons, and the effects are often catastrophic. If Folsom Dam were to fail or be overtopped during a rain event, the project area is within the "dam inundation zone" and would likely experience extensive flooding. However, given the degree and extensive nature of the Sacramento River flood protection system, this is highly unlikely to occur.</p>
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Summary of Findings and Conclusions

ALTERNATIVES TO THE PROPOSED ACTION

Alternatives and Project Modifications Considered [24 CFR 58.40(e), Ref. 40 CFR 1508.9] (Identify other reasonable courses of action that were considered and not selected, such as other sites, design modifications, or other uses of the subject site. Describe the benefits and adverse impacts to the human environment of each alternative and the reasons for rejecting it.)

1) Powerhouse-Only Alternative

This alternative would involve only the renovation of the Powerhouse and addition of parking to accommodate the visitors. The new Planetarium and the educational center and restaurant would not be built. There would be no improvements to the Robert T. Matsui Waterfront Park. Infrastructure improvements that are part of the project and would also facilitate the development of the Powerhouse Science Center would still take place.

Discussion of Environmental Effects

Reduced development would minimize some of the environmental effects from exposure of soil, risk of soil erosion and entrainment in storm water, even though these are insubstantial through application of specified construction procedures. No grading or shallow construction would take place in areas of the site that are covered by the clay cap that overlies contaminated soil and this reduces the risk of exposure of contaminated soil, or changes to groundwater flow patterns that could remobilize contamination. There would be no removal of elderberry shrubs that provide habitat for the federally threatened VELB. Reduced construction activity would reduce the short-term noise and air pollution.

If a smaller museum were to occupy the Powerhouse building only, with fewer visitors, there would be less traffic and less congestion; less air pollution and noise; and a lower demand for water, wastewater, fire, police, and other services.

Ability to Meet the Project Objectives

The Powerhouse-Only Alternative would not provide the full museum capacity for the desired 250,000 annual visitors. There would be no space for the Planetarium program and no conference center to act as a gathering place for teachers, scientists and high-tech leaders. The Science Center might not ultimately relocate to the site at all because the location would not meet its capacity requirements. In conclusion, the smaller size of the facility would result in reduced benefits of the project such as the educational value of providing expanded facilities for science education and the employment from increased operations. Similarly, the smaller size of the facility would result in reduced revenues from fewer visitors. If the park were not improved, the project would not achieve the recreational benefits desired by the City such as improved access to the bike trail and the improvements to the outdoor recreation such as provided by the shade structure and other park furniture. Finally, the 2003 Sacramento Riverfront Master Plan identifies the goal – provide pedestrian and bicycle linkages along river and into adjacent areas – which would not be met by this Powerhouse-Only Alternative.

2) Current Parks Master Plan Alternative

This alternative includes development of the park, but no improvements to the Powerhouse building, and no new construction of the Planetarium and Educational Center and Restaurant. The Powerhouse would remain in its current condition and would not be occupied by the museum under this alternative. There would be no infrastructure improvements.

Discussion of Environmental Effects

If the new buildings were not built, there would be no deeper excavation necessary for foundations and there would be less exposure of soil, risk of soil erosion and entrainment in stormwater, even though these are insubstantial

through application of specified construction procedures. Reduced construction activity would reduce the short-term noise and air pollution.

There would still be minor grading in areas of the site that are covered by the clay cap that overlies contaminated soil and there would still be a small risk of exposure of contaminated soil, and changes to groundwater flow patterns that could remobilize contamination. There would still be removal of elderberry shrubs that provide habitat for the federally threatened VELB.

If the museum did not move to the Powerhouse site, there would be only a small amount of additional traffic associated with increased numbers of visitors to the park. Compared to the project, there would be much less traffic and congestion; less air pollution and noise; and a lower demand for water, wastewater, fire, police, and other services.

With the park improvements, the project would still achieve some of the recreational benefits desired by the City. However, none of the benefits of the project associated with the expansion of the existing museum and its relocation to the Powerhouse site, such as the educational value and employment, would be achieved. Without renovation of the Powerhouse, it would decay further, its historic value could be compromised, and it could become a danger to park users.

Ability to Meet the Project Objectives

The current Parks Master Plan Alternative would not provide the museum capacity for the desired 250,000 annual visitors. It would not provide the additional educational facilities such as the Planetarium and Conference Center, which would prevent visitors from receiving the benefit of expanded science education facilities. There would also not be the economic benefit of new employment or revenues from visits. It would still meet the objective of provision of enhanced recreational facilities. Finally, this alternative would not include the infrastructure improvements, which would mean the existing infrastructure for the area would continue to fail to meet City standards.

No Action Alternative [24 CFR 58.40(e)]

(Discuss the benefits and adverse impacts to the human environment of not implementing the preferred alternative).

Under the No-Action Alternative the project site would remain as vacant lot.

Discussion of Environmental Effects

If the site were to remain in its current condition, the minor environmental effects associated with the project would not occur. There would be no soil erosion from construction, no risk of exposure of contaminated soil or spread of groundwater contamination, and no risk of damage to the levee. There would be no noise or air pollution or traffic congestion associated with the construction or operation of the project. Without the project, there would be no extra demand for services.

None of the beneficial effects of the project such as increased educational value and employment would be achieved. The City would not see any additional recreational amenities. Without renovation of the Powerhouse, it would decay further, causing visual blight; its historic value could be compromised; and it could become a danger to park users.

Ability to Meet the Project Objectives

The No-Action Alternative would not provide the museum capacity for the desired 250,000 annual visitors. It would not provide the additional educational facilities such as the Planetarium and Conference Center. In addition, this alternative would not meet the Master Plan objective of providing a large public facility. It would also not meet the objective of providing enhanced recreational facilities. Finally, this alternative would not include the infrastructure improvements, which would mean the existing infrastructure for the area would continue to fail to meet City standards. The 2003 Sacramento Riverfront Master Plan identifies the goal – provide pedestrian and bicycle linkages along river and into adjacent areas – which would not be met by this No Action Alternative.

Mitigation Measures Recommended [24 CFR 58.40(d), 40 CFR 1508.20]

(Recommend feasible ways in which the proposal or its external factors should be modified in order to minimize adverse environmental impacts and restore or enhance environmental quality.)

Mitigation Measure #1: Cultural Resources

In the event that any prehistoric subsurface archeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, animal bone, obsidian and/or

mortars are discovered during construction-related earth-moving activities, all work within 50 meters of the resources shall be halted, and the Applicant shall consult with a qualified archeologist to assess the significance of the find. Archeological test excavations shall be conducted by a qualified archeologist to aid in determining the nature and integrity of the find. If the find is determined to be significant by the qualified archeologist, representatives of the Applicant and the qualified archeologist shall coordinate to determine the appropriate course of action. In addition, a report shall be prepared by the qualified archeologist according to current professional standards.

If Native American archeological, ethnographic, or spiritual resources are involved, all identification and treatment shall be conducted by qualified archeologists, who are certified by the Society of Professional Archeologists (SOPA) and/or meet the federal standards as stated in the Code of Federal Regulations (36 CFR 61), and Native American representatives, who are approved by the local Native American community as scholars of the cultural traditions.

In the event that no such Native American is available, persons who represent tribal governments and/or organizations in the locale in which resources could be affected shall be consulted. If historic archeological sites are involved, all identified treatment is to be carried out by qualified historical archeologists, who shall meet either Register of Professional Archeologists (RPA), or 36 CFR 61 requirements.

If a human bone or bone of unknown origin is found during construction, all work shall stop in the vicinity of the find, and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the coroner shall notify the Native American Heritage Commission, who shall notify the person most likely believed to be a descendant. Currently it is presumed that members of the SSR are the Most Likely Descendants; therefore, the SSR shall be contacted in the event that remains are found. The Most Likely Descendant shall work with the contractor to develop a program for re-interment of the human remains and any associated artifacts. No additional work is to take place within the immediate vicinity of the find until the identified appropriate actions have taken place.

Mitigation Measure #2: Cultural Resources

Prior to the approval of any grading permits or any groundbreaking activity, a Cultural Resources Treatment and Monitoring Agreement (Agreement) shall be prepared in consultation with the Shingle Springs Band of Miwok Indians. This Agreement shall set protocols for procedures to be followed in the event of the discovery of archaeological and human remains during construction. This Agreement shall include a stated policy of avoidance and reburial.

Mitigation Measure #3: Wetlands

a) Prior to any groundbreaking activities on the project site, the project Applicant(s) shall obtain all required permits, including CWA Section 404 permit from the USACE for the placement of fill within waters of the United States and Section 401 certification from the Central Valley Regional Water Quality Control Board (RWQCB), as applicable.

b) All conditions that are attached to the USACE permit and/or RWQCB certification shall be implemented as part of the proposed project. The conditions shall be clearly identified in construction plans and specifications and monitored during and after construction to ensure compliance.

c) The Applicant(s) shall compensate for permanent impacts to waters of the United States (including wetlands) and waters of the state to ensure there is no net loss of functions and values. The compensation will be determined as part of State (RWQCB) and federal (USACE) processes and may be a combination of onsite retention of function and value, offsite restoration/creation, and mitigation credits. Compensation ratios will be a minimum of 1:1 (1 acre of mitigation for every 1 acre of impact), as determined by USACE and/or RWQCB. Ratios will be based on site-specific information and determined through coordination with State and federal agencies as part of the permitting process

Mitigation Measure #4: Valley Elderberry Longhorn Beetle

The Applicant shall comply with the requirements of the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. The Applicant would be required to consult with the USFWS through the Section 7 consultation or Section 10(a)(B) permit in developing measures to avoid and minimize adverse effects on the Valley elderberry longhorn beetle. A final mitigation plan shall be developed, and approved by USFWS, prior to removal of the shrubs, and shall include the following:

Compensatory Mitigation:**Transplant Directly Affected Elderberry Shrubs**

- a) The shrub that is directly affected by the proposed project will be transplanted to a USFWS-approved conservation area. At the USFWS's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation.
- b) A qualified biological monitor will be on the site for the duration of the transplanting of elderberry shrubs to ensure that no unauthorized take of VELB occurs. If unauthorized take does occur, the monitor will have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the USFWS.
- c) Elderberry shrubs will be transplanted when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success. The Applicant will follow the specific transplanting guidance provided in the USFWS VELB Guidelines.

Compensate for Direct Impacts on Elderberry Shrubs

According to the USFWS VELB Guidelines, adversely affected shrubs that are "transplanted or destroyed" should be mitigated for according to the measures outlined in Table 1 of the USFWS VELB Guidelines. The Applicant shall mitigate

for impacts on the shrubs by purchasing mitigation credits at a USFWS approved mitigation bank. If mitigation credits are unavailable, additional mitigation including planting of elderberry seedlings and companion plantings may be required.

Mitigation Measure #5: Vibration

Vibratory rollers shall be limited to no closer than 25 feet from the PG&E Power Station building.

Mitigation Measure #6: Encroachment Permit

The Applicant shall be required to coordinate with the Central Valley Flood Protection Board (CVFPB). An encroachment permit may be required by the CVFPB. This encroachment permit application process would include consultation with the U.S. Army Corps of Engineers (USACE) to determine if project features or construction would pose any risk to levee integrity, and whether any additional geotechnical reports would be required.

Mitigation Measure #7: Groundwater

All new groundwater discharges to the City of Sacramento's Combined or Separated Sewers must be regulated and monitored by the Department of Utilities (refer City Council Resolution #92-439) Groundwater discharges to the City's sewer system are defined as follows:

1. Construction dewatering discharges
2. Treated or untreated contaminated groundwater cleanup discharges
3. Uncontaminated groundwater discharges

The Developer shall contact the City of Sacramento's Water Quality Section of the Department of Utilities (DOU), (916) 808-1400, 1395 35th Avenue, Sacramento, CA 95822 prior to any groundwater withdrawal. Procedures as specified by the City of Sacramento, Standard Specifications, Section 16, Water Quality Control shall be implemented.

Additional Studies Performed

(Attach studies or summaries)

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]

Aerial Photo View of Richards Boulevard Redevelopment Area.

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Agreement, Operation and Maintenance RE: Former Pacific, Gas, and Electric Power Plant Site, Jibboom Street, Sacramento, Sacramento County, California, 1998.

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Baustian, Leo. Deputy Chief of Administration, Sacramento Fire Department. Personal phone conversation with Alejandro A. Huerta, DC&E, March 5, 2010.

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Blackburn Consulting, 2009, Draft Aerially Deposited Lead/Phase II Assessment, Railyards to Richards Boulevard Access Improvement Project, Sacramento, California.

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Bowes, Stephen. CA Wild and Scenic Rivers Coordinator, National Park Service. Letter to Alejandro A. Huerta, DC&E, March 1, 2010.

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Exhibit A, Wetlands and Other Waters in the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project Delineation Area.

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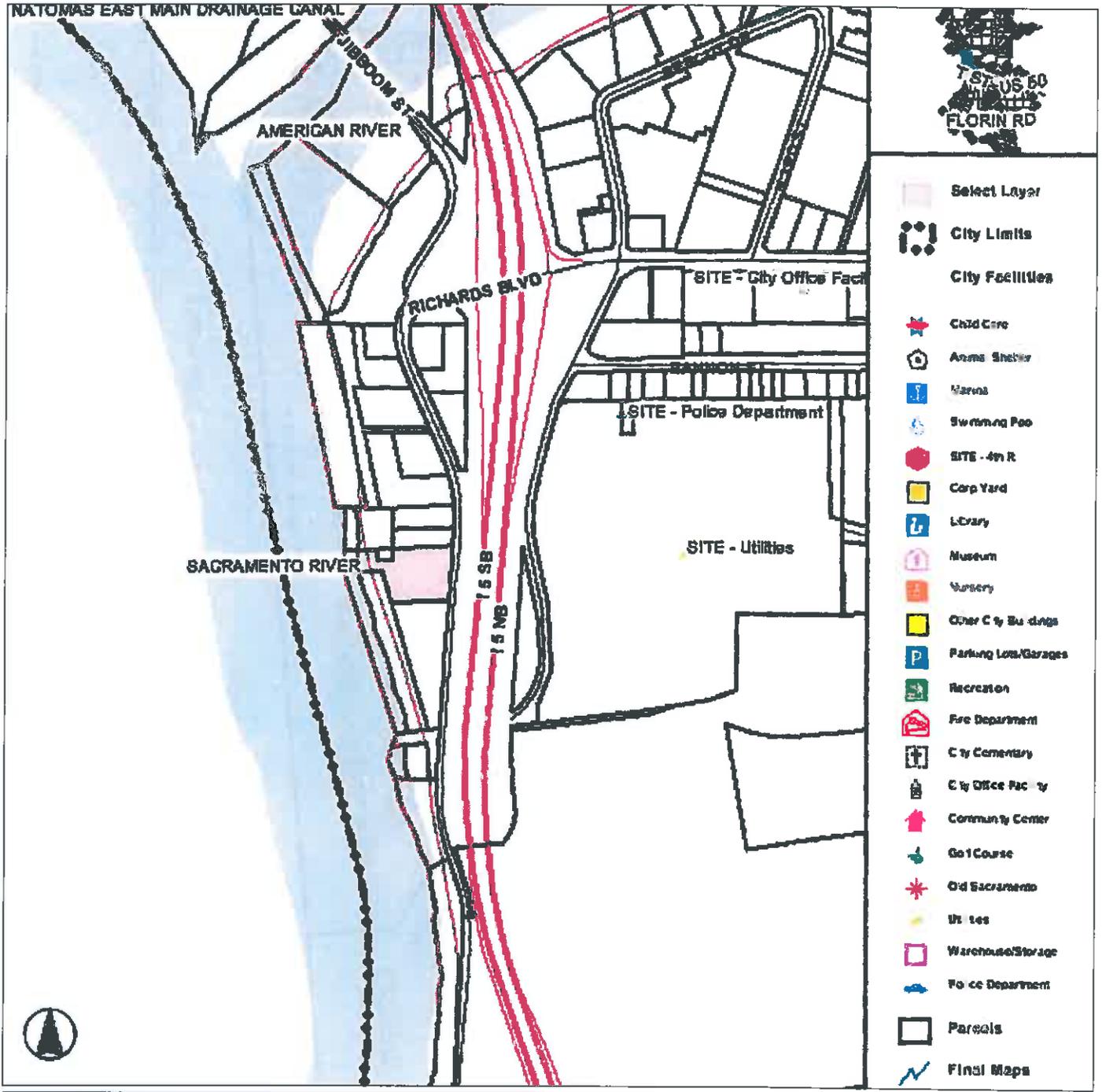
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<http://www.fws.gov/wetlands/Data/Mapper.html>, accessed on January 19, 2010.

Wee, Pamela to John Webre, Kleinfelder, Inc. Letter, Subject: Preliminary Environmental Evaluation of Jibboom Street Property.

Powerhouse Final Environmental Assessment

Final Environmental Assessment Figures and Attachments

**SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY
POWERHOUSE SCIENCE CENTER ENVIRONMENTAL ASSESSMENT**



Source: City of Sacramento

FIGURE 1
PROJECT LOCATION MAP

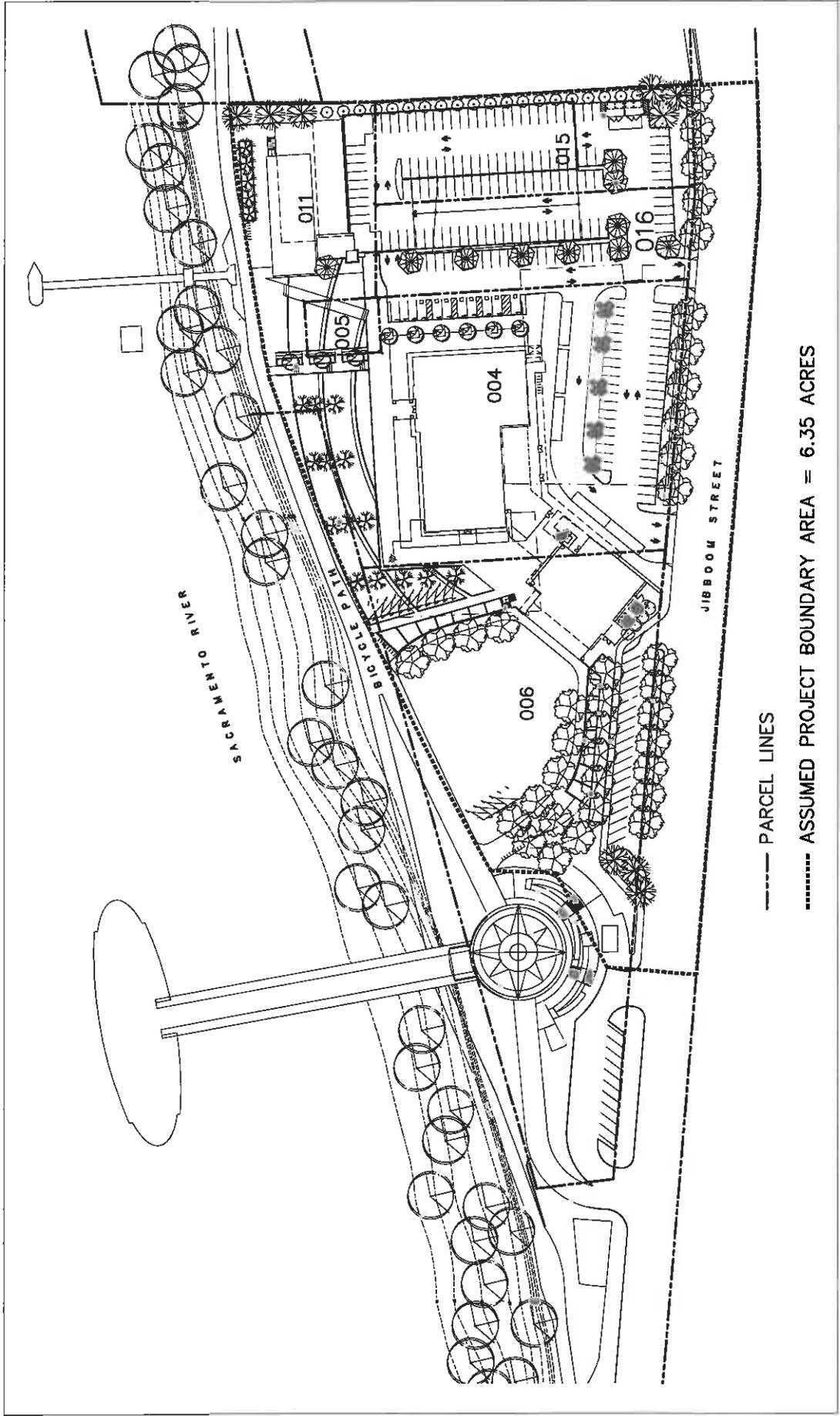
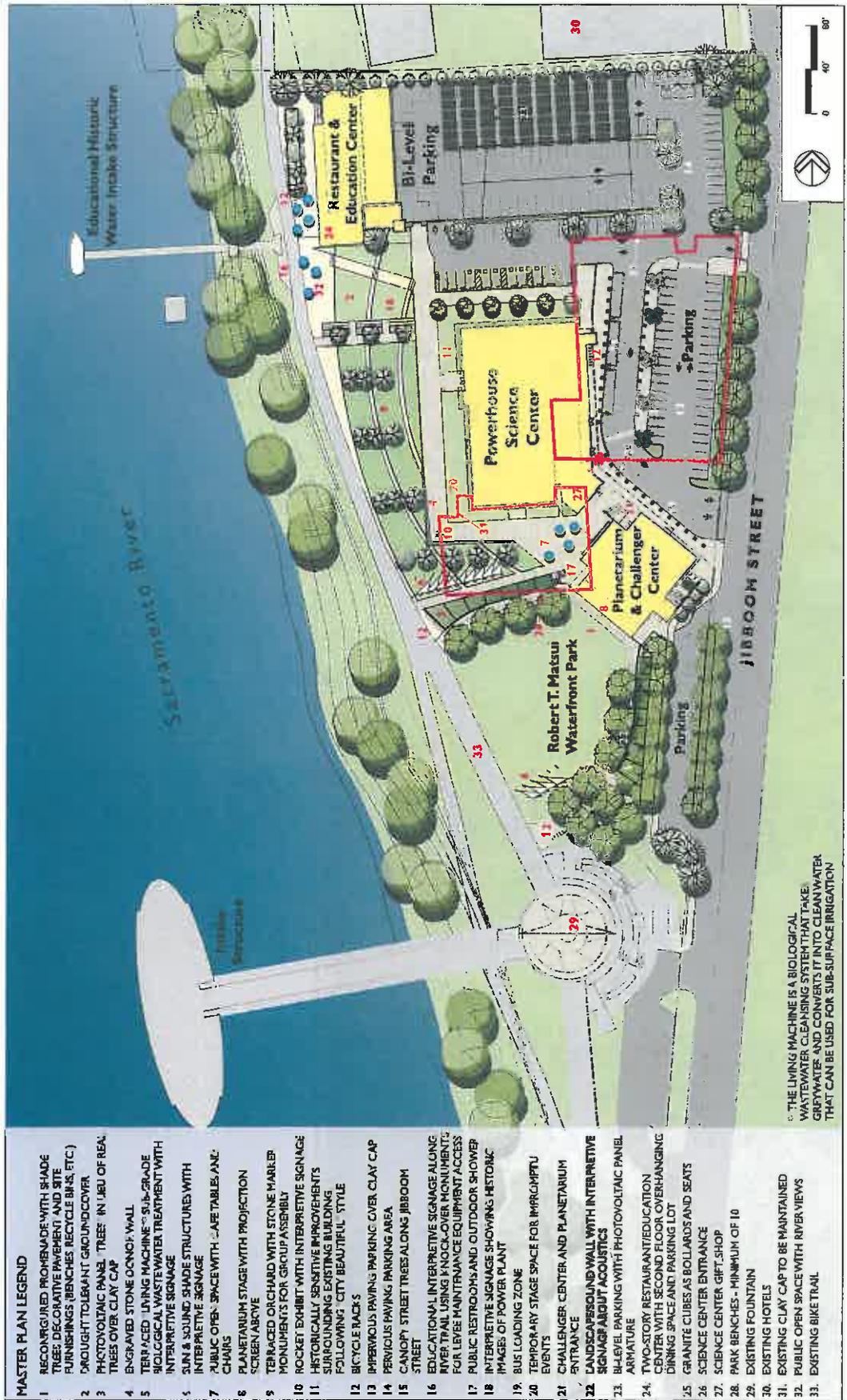


FIGURE 2
PROJECT BOUNDARY MAP

**SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY
POWERHOUSE SCIENCE CENTER ENVIRONMENTAL ASSESSMENT**



MASTER PLAN LEGEND

- 1 RECONFIGURED PROMENADE WITH SHADE TREES, DECORATIVE FURNITURE AND SITE FURNISHINGS (BENCHES, RECYCLE BIKES, ETC.)
- 2 DROUGHT-TOLERANT GROUND COVER TREES OVER CLAY CAP
- 3 PHOTOVOLTAIC PANEL TREES IN LINED OF REAL
- 4 ENGRAVED STONE (CONO) WALL
- 5 TERRACED LIVING MACHINES'S SUB-GRADE BIOLOGICAL WASTEWATER TREATMENT WITH INTERPRETIVE SIGNAGE
- 6 SUN & SOUND SHADE STRUCTURES WITH INTERPRETIVE SIGNAGE
- 7 PUBLIC OPEN SPACE WITH LAZE TABLES, ANCHORS
- 8 PLANETARIUM STAGE WITH PROJECTION SCREEN ABOVE
- 9 TERRACED ORCHARD WITH STONE MARKER MONUMENTS FOR GROUP ASSEMBLY
- 10 ROCKET EXHIBIT WITH INTERPRETIVE SIGNAGE
- 11 HISTORICALLY SENSITIVE IMPROVEMENTS SURROUNDING EXISTING BUILDING FOLLOWING 'CITY BEAUTIFUL' STYLE
- 12 BICYCLE RACKS
- 13 IMPROVED PAVING PARKING OVER CLAY CAP
- 14 PERVIOUS PAVING PARKING AREA
- 15 CANOPY STREET TREES ALONG JIBBOOM STREET
- 16 EDUCATIONAL INTERPRETIVE SIGNAGE ALONG RIVER TRAIL USING KNOCK-OVER MONUMENTS FOR LEVEE MAINTENANCE EQUIPMENT ACCESS
- 17 PUBLIC RESTROOMS AND OUTDOOR SHOWER IMAGES OF POWER PLANT
- 18 INTERPRETIVE SIGNAGE SHOWING HISTORIC IMAGES OF POWER PLANT
- 19 BUS LOADING ZONE
- 20 TEMPORARY STAGE SPACE FOR IMRIGMPTU EVENTS
- 21 CHALLENGER CENTER AND PLANETARIUM ENTRANCE
- 22 LANDSCAPE SOUND WALL WITH INTERPRETIVE SIGNAGE ABOUT ACOUSTICS
- 23 BI-LEVEL PARKING WITH PHOTOVOLTAIC PANEL ARMATURE
- 24 TWO-STORY RESTAURANT EDUCATION CENTER WITH SECOND FLOOR OVERHANGING DINING SPACE AND PARKING LOT
- 25 GRANITE CUBES AS BOLLARDS AND SEATS
- 26 SCIENCE CENTER ENTRANCE
- 27 SCIENCE CENTER GIFT SHOP
- 28 PARK BENCHES - MINIMUM OF 10
- 29 EXISTING FOUNTAIN
- 30 EXISTING HOTELS
- 31 EXISTING CLAY CAP TO BE MAINTAINED
- 32 PUBLIC OPEN SPACE WITH RIVER VIEWS
- 33 EXISTING BIKE TRAIL

THE LIVING MACHINE IS A BIOLOGICAL WASTEWATER CLEANSING SYSTEM THAT TAKE GRAYWATER AND CONVERTS IT INTO CLEAN WATER THAT CAN BE USED FOR SUB-SURFACE IRRIGATION

FIGURE 3

PROPOSED PARK IMPROVEMENTS

SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY
POWERHOUSE SCIENCE CENTER ENVIRONMENTAL ASSESSMENT



FIGURE 4
AERIAL PHOTOGRAPH

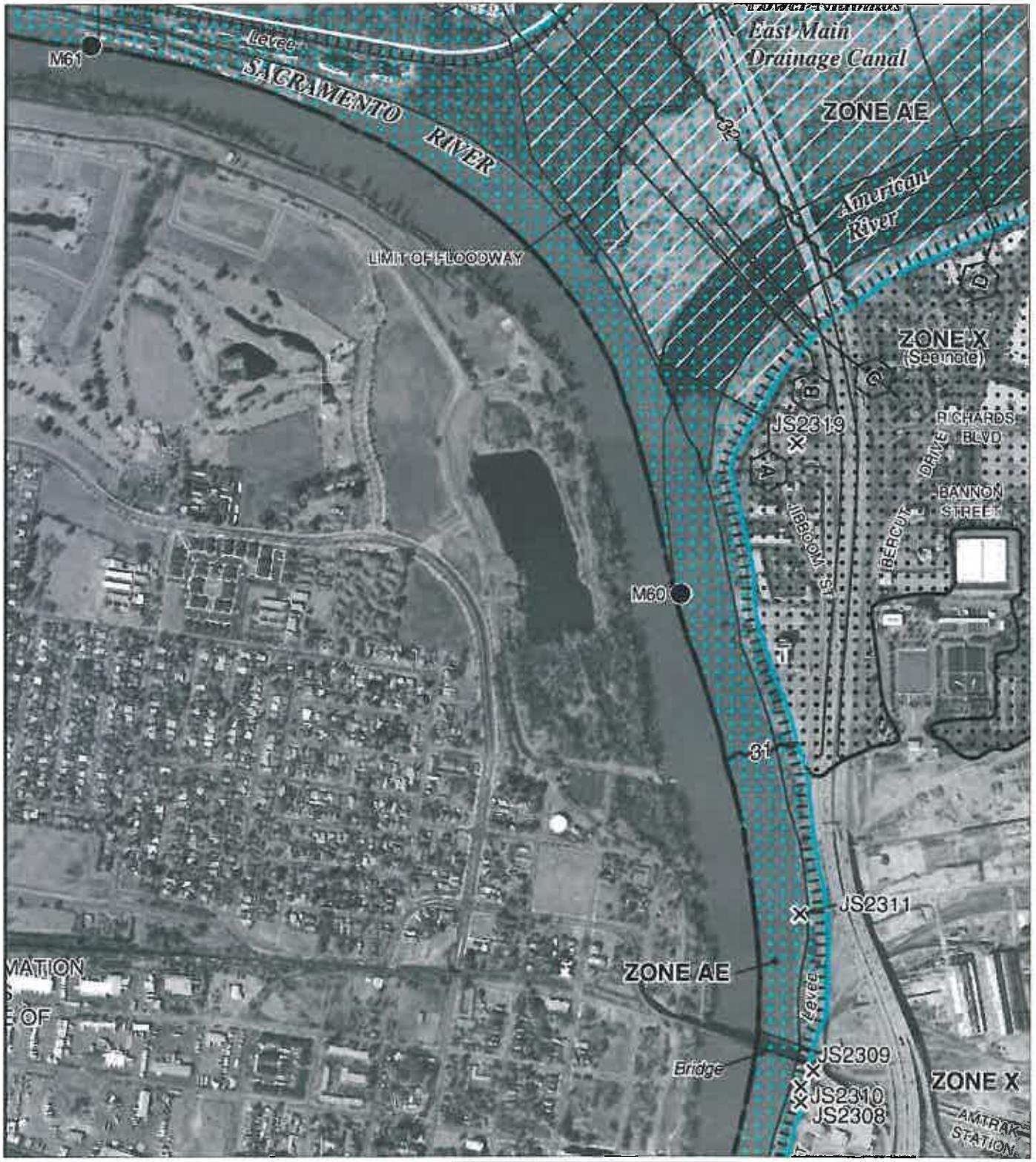


FIGURE 5
FEMA ISSUED FLOOD MAP

List of Attachments

Attachment X1: State Office of Historic Preservation, July 7, 2010. Letter to SHRA regarding PG&E Sacramento River Station Infrastructure & Rehabilitation Project.

Attachment 1: Page & Turnbull, June 15, 2010. Cultural Resources Report. Final Draft. Powerhouse Science Center, 400 Jibboom Street, Sacramento, CA..

Attachment 2, Amrhein, Rochelle. Environmental Coordinator, Sacramento Housing & Redevelopment Agency, personal email communication with Alejandro A. Huerta, January 29, 2010.

Attachment 3, U.S. Fish & Wildlife Service, National Wetlands Inventory, <http://www.fws.gov/wetlands/Data/Mapper.html>, accessed on January 19, 2010.

Attachment 4, Exhibit A, Wetlands and Other Waters in the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project Delineation Area.

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Attachment 6, Santa Margarita, Scotts Valley Sole Source Aquifer Designated Area, <http://www.epa.gov/region09/water/groundwater/ssa.html>, accessed on September 24, 2009.

Attachment 7, U.S. Fish and Wildlife Service, 1999, Conservation Guidelines for the Valley Elderberry Longhorn Beetle, pages 4, 15.

Attachment 8, U.S. Fish and Wildlife Service Sacramento Fish & Wildlife Office, December 1 2009, Federal Endangered and Threatened Species that Occur in or May be Affected by Projects in the Counties and/or U.S.G.S. 7 ½ Minute Quads You Requested.

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Attachment 10, National Wild and Scenic Rivers System September 2009, <http://www.rivers.gov/wildriverslist.html>, accessed on September 24 2009.

Attachment 11, Bowes, Stephen. CA Wild and Scenic Rivers Coordinator, National Park Service. Letter to Alejandro A. Huerta, DC&E, March 1, 2010.

Attachment 12, Nonattainment Areas Map-Criteria Air Pollutants, <http://www.epa.gov/air/data/nonat.html?us~USA~United%20States>, accessed on January 20, 2010.

Attachment 13, Hurley, Joseph J. Environmental Coordinator, Sacramento Metropolitan Air Quality Management District, personal email communication with Rochelle Amrhein, Sacramento Housing & Redevelopment Agency, March 8, 2010.

Attachment 14, "Farming on the Edge: Sprawling Development Threatens America's Best Farmland, California" Farmland Information Center, <http://www.farmlandinfo.org/california/>, accessed on September 29, 2009.

Attachment 15, Sacramento 2030 General Plan Land Use & Urban Form Diagram.

Attachment 16, ICF Jones & Stokes, 2008, Draft Noise Study Report, Access Improvements from Railyards to Richards Boulevard and Interstate 5, page 20.

Attachment 17, State Water Resources Control Board Geotracker Map, <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=95811>, accessed on February 11, 2010.

Attachment 18, Department of Toxic Substances Control EnviroStor Record for Jibboom Building (34490056).

Attachment 19, Department of Water Resources, September 10, 1999, Former PG&E Power Plant Site, Sacramento County, California, Remediation Documentation, pages 1 to 3.

Attachment 20, Covenant to Restrict Use of Property, Environmental Restriction Former PG&E Power Plant Site, Jibboom Street, "Jibboom Building Site," Sacramento, Sacramento County, California, 1998, pages 1, 2, 4 and 8.

Attachment 21, Agreement, Operation and Maintenance RE: Former Pacific, Gas, and Electric Power Plant Site, Jibboom Street, Sacramento, Sacramento County, California, 1998, pages 1 to 2.

Attachment 22, Powerhouse Science Center Airport Clear Zones Map.

Attachment 23, Sacramento City Code, Chapter 17.120 Richards Boulevard Special Planning District.

Attachment 24, River District Redevelopment Area, <http://www.riverdistrict.net/about-us/river-district-redevelopment.shtml>, accessed on February 12, 2010.

Attachment 25, Aerial Photo View of Richards Boulevard Redevelopment Area.

Attachment 26, Sacramento Riverfront Master Plan, 2003, Riverfront Concept Map.

Attachment 27, River District Specific Plan Vision Map.

Attachment 28, Site Photograph.

Attachment 29, Dreyfuss & Blackford Architects, 2000, Jibboom Street PG&E Power Plant Site Study Final Report, pages 1.2, 6.1 to 6.2.

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Attachment 37, Project Rendering.

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Attachment 43, Joyce, Neal. City of Sacramento, Department of Utilities. Personal email communication with Alejandro A. Huerta, DC&E, February 23, 2010.

Attachment 44, Taylor, Chris. Sergeant, Sacramento Police Department. Personal email communication with Alejandro A. Huerta, DC&E, February 11, 2010.

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Attachment 48, Sacramento Regional Transit District, System Map, <http://www.sacrt.com/systemmap/systemmap.stm>, accessed on February 19, 2010.

Attachment 49, Email from Jason Silva, Dreyfuss & Blackford Architects, to DC&E, February 17, 2010, Re: construction plans and contamination location.

Attachment 50, Letter from Pamela Wee to John Webre, Kleinfelder, Inc. Subject: Preliminary Environmental Evaluation of Jibboom Street Property.

Attachment 51, Department of Water Resources, November 7, 1996, Jibboom Street Grading, Clay Caps Plan.

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**OFFICE OF HISTORIC PRESERVATION
DEPARTMENT OF PARKS AND RECREATION**

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Received in the Legal Department

JUL 12 2010

Sacramento Housing & Redevelopment Agency

July 7, 2010

Refer to HUD100218A

Rochelle Amrhein
Environmental Coordinator
Sacramento Housing & Redevelopment Agency
801 12th Street
Sacramento, CA 95814

Attachment X1

Dear Ms. Amrhein:

Re: PG&E Sacramento River Station Infrastructure & Rehabilitation Project

Thank you for forwarding additional information regarding the above referenced undertaking to our office for continued review and comment pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations found at 36 CFR Part 800. The regulations and advisory material are found at www.achp.gov.

Identification of Historic Properties

On June 17, 2010 our office received the second submittal of information for this undertaking, which included information about the PG&E Powerhouse and plans for its rehabilitation, documentation of SHRA's efforts to identify any properties of significance to Native Americans, results of an archeological resources survey within the APE, and information about other potential historic properties within the APE. SHRA has made a reasonable and good faith effort to identify historic properties within the undertaking's APE.

Assessment of Effects

During an earlier review of this undertaking the PG&E Sacramento River Station B, located at 450 Jibboom Street in Sacramento, was determined eligible for listing in the National Register of Historic Places under Criteria A & C by concurrence between SHRA and our office. As a result, it is considered an historic property for the purposes of this Section 106 review. Based on your June 17, 2010 letter we understand that SHRA finds that this undertaking will not adversely affect the historic property because the project meets the Secretary of the Interior's Standards for Rehabilitation. After a thorough review of all of the information submitted for the undertaking we can concur that for the purposes of this HUD Section 106 review the project, as proposed, appears to be consistent with the Secretary of the Interior's Standards and, therefore, will not adversely affect the historic PG&E Sacramento River Station B.

Ms. Amrhein
July 7, 2010
Page 2 of 2

However, we offer the following additional comments and recommendations for the overall design of the project:

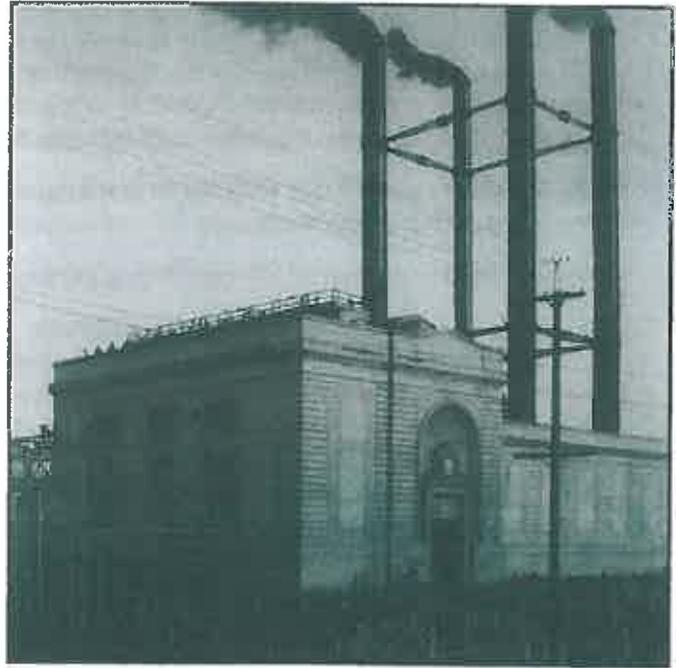
Although the approach to the project appears consistent with the Secretary of the Interior's Standards for Rehabilitation, there is concern that the extent of site development, new construction, and rehabilitation impacts required by the new program may overwhelm the original character of the historic building and its setting. Based on the information submitted the following recommendations are provided: 1) simplify the extent and design of the landscaping to be more compatible with the original industrial setting; 2) design the Challenger Planetarium to be a freestanding structure and not be connected to the original building; 3) minimize the covering or obscuring of any of the elevations on the original building, and; 4) revise the approach to the overall planning and design of the site to make the original building the focal point (both physically and visually) of the development (on the east and west sides) instead of the new construction becoming the focal point of the site (with the historic building tucked behind).

At this time, SHRA's Section 106 obligations are complete. Your consideration of historic properties in the project planning process is appreciated. If you have any other questions, please do not hesitate to contact Shannon Lauchner, State Historian II, with the Local Government Unit at (916)653-5649 or by email at slauchner@parks.ca.gov.

Sincerely,



Milford Wayne Donaldson, FAIA
State Historic Preservation Officer



Cultural Resources Report
Final Draft

Powerhouse Science Center
400 Jibboom Street, Sacramento, CA

15 June 2010

Prepared for
Otto Construction
Sacramento, CA

Prepared by
PAGE & TURNBULL, INC.
2401 C St., Suite B, Sacramento, CA 95816
916.930.9903 / www.page-turnbull.com

Chapter 6

Conclusions and Recommendations

NRHP Evaluation

NRHP significance criteria applied to evaluate the cultural resources in this study are defined in 36 CFR 60.4 as the quality of significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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

Eligibility for listing in the NRHP requires that a resource not only meet one of the A–D significance criteria but also possess integrity. *Integrity* is the ability of a property to convey its significance. The evaluation of a resource's integrity must be grounded in an understanding of that resource's physical characteristics and how those characteristics relate to its significance. The evaluation of a resource's integrity in relation to its significance will be conducted as prescribed in *National Register Bulletin No. 15: How to Apply the National Register Criteria for Evaluation* (National Park Service 2002).

Historic research and physical assessment of Pads A and B have not elicited any significant association of these pads with the PG&E Powerhouse or an important individual. Their purpose, function, and date of use are unknown and they do not exhibit any distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic values. Nor do they represent significant and distinguishable entities whose components may lack individual distinction. Lastly, the pads have no potential to yield information important to the study of history. As a result, it appears that Pads A and B do not meet any of the criteria for listing in the NRHP.

ICF recommends that SHRA determine Pads A and B ineligible for listing in the NRHP and that they forward such determination to the SHPO for concurrence.

Conclusions

The review of ethnographic data, historic maps, geomorphological data, and soil remediation documents described earlier in this inventory indicate that there little potential for buried archaeological deposits to exist within the archaeological APE. Although the APE is located near the

confluence of two major rivers (Sacramento and American) and two ethnographic villages (*Molmol* and *Sama*) (Wilson and Towne 1978), the area was natural swamp land as it was in a relatively low lying area before the American River was redirected in 1868. Such low-lying areas are not suitable for Native American associated activities that would leave behind material remains. Dredging and filling activities associated with this redirection would have had major ground-disturbing impacts to the area.

Although historic archaeological deposits are not known or expected within the APE, these activities described in this report (including, construction and modification of the levee between 1910 and the 1940s, construction of the powerhouse itself in 1911, and extensive soil remediation conducted within the parcel between 1986 and 1997) would also have had impacts to any historic archaeological deposits. Finally, geotechnical analyses summarized by Dreyfuss & Blackford (2000) state that a layer of fill exists from 10 to 15 feet on the parcel. This fill consists of "loose to medium dense silty sand with minor rubble that was believed to have been either placed during hazardous materials cleanup operations or was associated with the PG&E power plant" (Dreyfuss & Blackford 2000:6.1). Although rubble may include historic materials, it is mixed with the silty sand, indicating it is not a discrete and separate layer with historic integrity.

Recommendations

ICF recommends that SHRA determine that this archaeological study support a finding of no adverse effect for the undertaking as a whole. Although the possibility of inadvertently discovering any intact archaeological deposits is low because the APE is underlain by artificially placed fill, there is always a possibility of such a discovery. Specifically, the possibility exists for human remains, particularly of Native American ancestry, to be unearthed during ground-disturbing activities associated with this undertaking. These remains may be primary or secondary placements as archaeological materials and human remains are sometimes incorporated into fill deposits, where such fill has been acquired from a former living site or unmarked cemetery.

Regardless of their origin, the proper treatment of Native American human remains and items of cultural patrimony is of paramount concern to the SSR. To ensure that such remains, artifacts and other materials associated with the remains and other items of cultural patrimony are identified and treated in accordance with traditional values and practices, the measures described below will be taken in consultation with the SSR for this traditional area.

1. A pedestrian survey will be conducted by tribal members of the SSR choosing. A professional archaeologist will accompany the tribal members during their survey. The pedestrian survey and access to the APE will be arranged through the City of Sacramento staff.
2. The SSR will prepare a Cultural Resources Treatment and Monitoring Agreement (Plan) in coordination with the SHRA, the City, and their consultants. The Plan will contain provisions for monitoring during construction, as well as protocols and responsibilities for construction-related discoveries of archaeological and human remains. The Plan will be prepared in accordance with applicable federal, state, and local cultural resources regulations. The Plan will be finalized before construction may begin on the project. The Plan will specify the timing associated with the completion of each task. If, for example, the Plan specifies that a task be completed prior to ground disturbance, that task must be completed prior to the start of any project related ground disturbance.

- 3. Tribal Monitors, as designated by the MLD, will monitor all ground-disturbing activities associated with the project if determined to be necessary by the MLD and the SHRA.**

Attachment 2

Alejandro Huerta

From: Rochelle Amrhein [ramrhein@shra.org]
Sent: Friday, January 29, 2010 2:16 PM
To: Alejandro Huerta
Subject: Powerhouse flood elevations

Alejandro,

I had to look up another site on the FEMA maps, so I took a look at the Powerhouse site also. It looks to me as though the online maps are the most up to date (12/8/08). Also, the majority of the Powerhouse site is in Shaded X. It looks as though the AE zone starts at the toe of the levee. It is my understanding that all of the structures will be kept back from the toe of the levee, which means that they would all be in the Shaded X area.

Please let me know if you have any questions.

Thanks,

Shelly

Shelly Amrhein

Environmental Coordinator

Sacramento Housing & Redevelopment Agency

801 12th Street, Sacramento, CA 95814

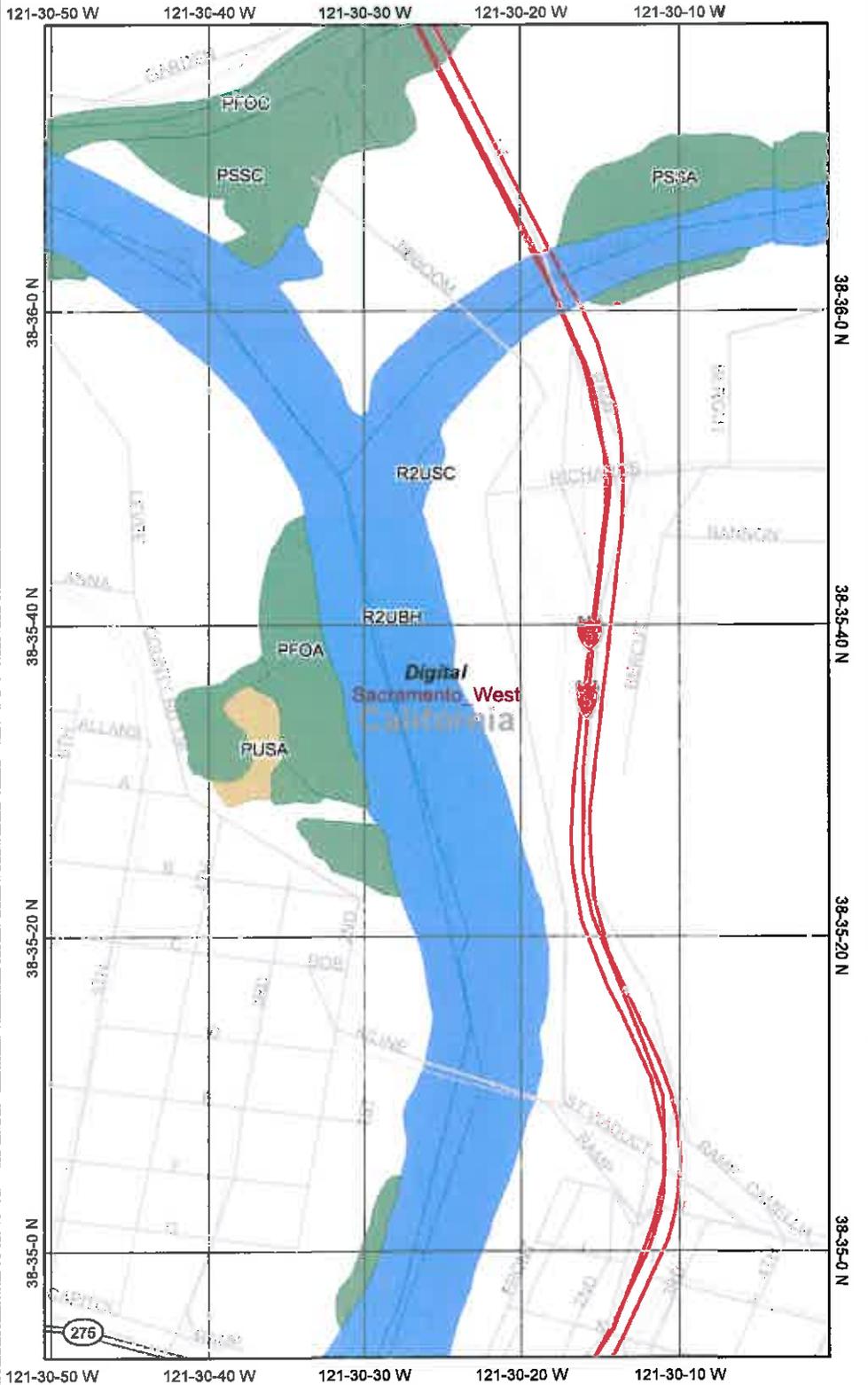
Phone: (916)440-1312

ramrhein@shra.org

ATTACHMENT 1

2/19/2010

Powerhouse_Wetlands



Legend

Ohio_wet_scan

- 0
- 1
- Out of range
- ↔ Interstate
- ↔ Major Roads
- ↔ Other Road
- ↔ Interstate
- ↔ State highway
- ↔ US highway
- ↔ Roads
- Cities
- USGS Quad Index 24K
- Lower 48 Wetland Polygons
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Lower 48 Available Wetland Data
- Non-Digital
- Digital
- No Data
- Scan
- NHD Streams
- Counties 100K
- States 100K
- South America
- North America



Scale: 1:12,648

Map center: 38° 35' 36" N, 121° 30' 25" W

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Attachment 4



Wetlands		Acres
EXHIBIT A		
WETLANDS AND OTHER WATERS IN THE SACRAMENTO ACCESS IMPROVEMENTS FROM RAILYARDS TO RICHARDS BOULEVARD AND I-5 PROJECT DELINEATION AREA		
Seasonal Wetlands - <u>Wetlands</u>	0.014	0.027
Seasonal Wetlands - <u>Wetlands</u>	0.015	
Seasonal Wetlands - <u>Wetlands</u>	0.021	0.021
Total Wetlands Mapped		0.048 Acres
Other Waters Type		Acres
Intermittent Drainage Ditches - <u>Intermittent</u>		
OW41	0.007	0.131
OW43	0.003	
OW46	0.004	
OW47	0.002	
OW48	0.004	
Estimated Drainage Ditches - <u>Intermittent</u>		0.007
OW42	0.001	
OW44	0.004	
OW49	0.002	
Total Other Waters Mapped		0.138 Acres
Total Wetlands Mapped		0.048 Acres
Total Other Waters Mapped		0.138 Acres
Total Area of Wetlands & Other Waters		0.186 Acres

Legend	
○	Date Point
□	Drainage Area Boundary (0.1872 acres)
○	Pump Station
◇	Conduit
◇	PUMP CURVE
---	Unsegmented Portion of OW47 & OW48

200 0 200 Feet	
Collected By: <u>Richard & C. Vetter</u> Date: <u>December 12, 2008</u> Verified By: <u>TBD</u> U.S. Army Corps of Engineers Regulatory File # <u>TBD</u> Revision: _____ Date: _____	

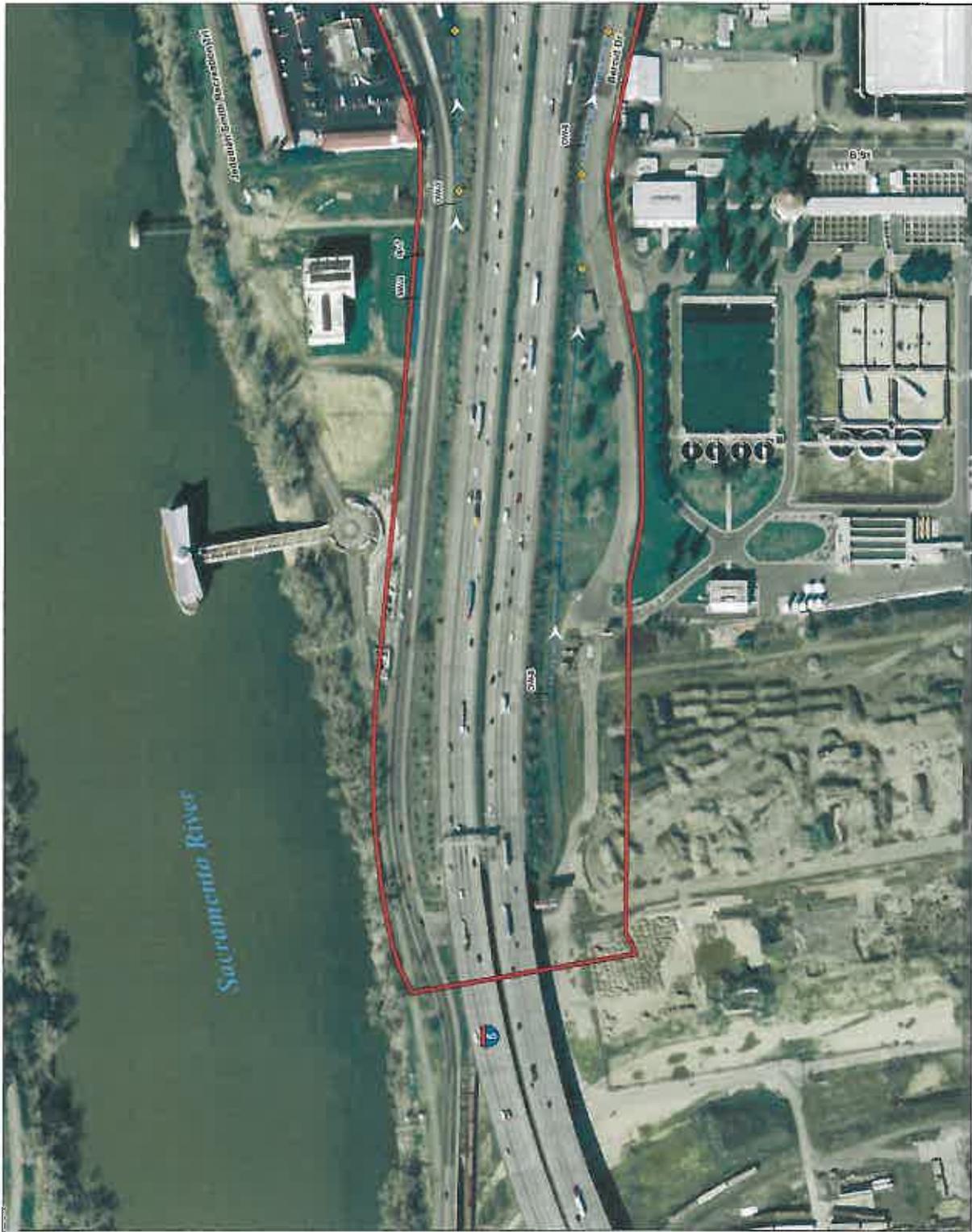


EXHIBIT A
WETLANDS AND OTHER WATERS IN THE
SACRAMENTO ACCESS IMPROVEMENTS
FROM RAILYARDS TO RICHARDS
BOULEVARD AND I-5 PROJECT
DELINEATION AREA

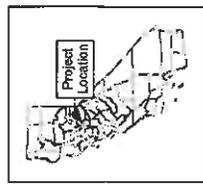
Wetlands	Acres
Seasonal Wetlands - <i>Wetlands</i>	0.077
SW41	0.014
SW42	0.013
Seasonal Wetlands - <i>Wetlands</i>	0.021
SW43	0.021
Total Wetlands Mapped	0.048 Acres

Other Waters Type	Acres
Intermittent Drainage - <i>Drainage</i>	0.131
CW41	0.007
CW43	0.053
CW45	0.004
CW46	0.002
CW47	0.032
CW48	0.054
Enhanced Drainage - <i>Drainage</i>	0.007
CW42	0.001
CW44	0.004
CW49	0.002
Total Other Waters Mapped	0.138 Acres

Total Wetlands Mapped	0.048 Acres
Total Other Waters Mapped	0.138 Acres
Total Area of Wetlands & Other Waters	0.186 Acres

Legend

- Data Point
- Delineation Area Boundary (0.1872 acres)
- Pump Station
- ◇ Culvert
- ◇ Paved Culvert
- Underground Portion of OW43 & OW48



Delineated By: <i>Hayden & C. Wright</i>	December 13, 2008
Drawn By: <i>B. Cosowick</i>	December 20, 08
Verified By: TBD	December 20, 08
U.S. Army Corps of Engineers Regulatory File # TBD	
Revision:	By: _____ Date: _____

**POWERHOUSE SCIENCE CENTER PROJECT
PRELIMINARY DELINEATION OF WATERS OF THE UNITED
STATES, INCLUDING WETLANDS**

PREPARED FOR:

Diepenbrock Harrison, on behalf of the Discovery Museum of Sacramento
(Sacramento Museum of History, Science, Space, and Technology)
400 Capitol Mall, Suite 1800
Sacramento, CA 95814
Contact: Jeffrey K. Dorso, Esq.
916/492-5000

PREPARED BY:

ICF International
630 K Street, Suite 400
Sacramento, CA 95814
Contact: Bonnie Chiu
916/737-3000

March 2010



EXHIBIT 1
**WETLANDS AND OTHER WATERS IN THE
 POWERHOUSE SCIENCE CENTER PROJECT
 DELINEATION AREA**

Wetlands	Acres
Seasonal Wetland	0.046
Total Wetlands Mapped	0.046 Acres
Other Waters	Acres
No Other Waters in Delineation Area	0.000

Total Wetlands Mapped	0.046 Acres
Total Other Waters Mapped	0.000 Acres
Total Area of Wetlands & Other Waters	0.046 Acres

Legend

- Data Point (In)
- Data Point (Out)
- Delineation Area (0.046 Acres)



Scale: 100 0 100 Feet

North Arrow

Delineated By: L. L. Purpus	February, 2010
Drawn By: S. Seifm	March, 2010
Verified By: TBD	TBD
US Army Corps of Engineers Regulatory File # 150	
Revised By	Date



Soil Map

COLUMBIA-URBAN LAND COMPLEX, DRAINED, 0 TO 2 PERCENT SLOPES

ORYNTS-URBAN LAND COMPLEX, 0 TO 2 PERCENT SLOPES

SOIL

Data point: DP-2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features					Comments
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Contrast ³	
0-6	10YR 4/2	50	none					is
0-6		50						gravel/fill material

¹Type: C=Concentration; D=Depletion; RM=Reduced Matrix

²Location: PL=Pore Lining, RC=Root Channel, M=Matrix

³Contrast: f=faint; d=distinct; p=prominent (see Table A1 for definitions)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils: ⁴
<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A 10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)	<input type="checkbox"/> Listed on National/Local Hydric Soils List
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)	⁴ Indicators of hydrophytic vegetation and wetland hydrology must be present
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pool (F9)	

Restrictive Layer (if present):

Type: fill/gravel

Depth (inches): 6

Hydric Soil Present? Yes No

Remarks: Shovel refusal at a depth of 6" due to presence of fill/gravel.
The stratum consists of approximately 50% fill/gravel, but the soil matrix present appears to reflect pre-spoils pile conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2) (w/in 12")
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1) (w/in 12")
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soil (C6)
- Other (Explain in Remarks)

Secondary Indicators (2 or more required)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Thin Muck Surface (C7)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): none
 Water Table Present? Yes No Depth (inches): none
 Saturation Present? Yes No Depth (inches): none
 (includes capillary fringe) (12 inch determination)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Texture and Rock Fragment Content

Texture

- cos - coarse sand
- s - sand
- fs - fine sand
- vfs - very fine sand
- lcos - loamy coarse sand
- ls - loamy sand
- lfs - loamy fine sand
- lvfs - loamy very fine sand
- cosl - coarse sandy loam

- sl - sandy loam
- fsl - fine sandy loam
- vfsl - very fine sandy loam
- l - loam
- sil - silt loam
- si - silt

- scl - sandy clay loam
- cl - clay loam
- sicl - silty clay loam
- sc - sandy clay
- sic - silty clay
- c - clay

Rock Fragments

- gr - gravelly
- vgr - very gravelly
- xgr - extremely gravelly
- cb - cobbly
- vcb - very cobbly
- xcb - extremely cobbly
- st - stony
- vst - very stony
- xst - extremely stony

SOIL

Data point: DP-3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)							
Depth (inches)	Matrix		Redox Features				Comments
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	
0-4	10YR 4/2	75	none				ls 25% gravel/fill material
4-6	Gley 1 4/N	80	none				scl
4-6	10YR 4/2	20	none				scl

¹Type: C=Concentration; D=Depletion; RM=Reduced Matrix
²Location: PL=Pore Lining, RC=Root Channel, M=Matrix ³Contrast: f=faint; d=distinct; p=prominent (see Table A1 for definitions)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils: ⁴
<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Redox (S5)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Redox Dark Surface (F6)
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Depleted Dark Surface (F7)
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Redox Depressions (F8)
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	<input type="checkbox"/> Vernal Pool (F9)
	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
	<input type="checkbox"/> 2 cm Muck (A 10) (LRR B)
	<input type="checkbox"/> Reduced Vertic (F18)
	<input type="checkbox"/> Red Parent Material (TF2)
	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Listed on National/Local Hydric Soils List
	⁴ Indicators of hydrophytic vegetation and wetland hydrology must be present

Restrictive Layer (if present): Type: <u>fill/gravel</u> Depth (inches): <u>6</u>	Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
---	---

Remarks: Shovel refusal at a depth of 6" due to presence of fill/gravel.

HYDROLOGY

Wetland Hydrology Indicators:	
Primary indicators (any one indicator is sufficient)	Secondary Indicators (2 or more required)
<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2) (w/in 12")	<input type="checkbox"/> Biotic Crust (B12)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1) (w/in 12")
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Plowed Soil (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input checked="" type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Thin Muck Surface (C7)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:	Wetland Hydrology Present?
Surface Water Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>1</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Depth (inches): <u>none</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Depth (inches): <u>surface</u> (includes capillary fringe) (12 inch determination)	

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Texture and Rock Fragment Content

Texture				Rock Fragments	
cos - coarse sand	icos - loamy coarse sand	sl - sandy loam	scl - sandy clay loam	gr - gravelly	xcb - extremely cobbly
s - sand	ls - loamy sand	fsl - fine sandy loam	cl - clay loam	vgr - very gravelly	st - stony
fs - fine sand	lfs - loamy fine sand	vfsl - very fine sandy loam	sicl - silty clay loam	xgr - extremely gravelly	vst - very stony
vfs - very fine sand	lvfs - loamy very fine sand	l - loam	sc - sandy clay	cb - cobbly	xst - extremely stony
	cosl - coarse sandy loam	sil - silt loam	sic - silty clay	vcb - very cobbly	
		si - silt	c - clay		

WETLAND DETERMINATION FORM - Arid West Region

Project/Site: Sacramento Powerhouse Science Center City/County: Sacramento/Sacramento Data Point: DP-4
 Applicant/Owner: Discovery Museum of Sacramento State: CA Date: 02/25/10
 Investigator(s): J. Hughes Section, Township, Range: 26 & 35/9N/4E
 Landform (hillslope, terrace, etc.): plain Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): C Lat: 38° 35' 36.551" Long: 121° 30' 18.776" Datum: WGS84
 Soil Map Unit Name: Orthents-Urban land complex, 0-2% slopes NWI classification: none
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks)
 Are Vegetation N Soil Y or Hydrology N significantly disturbed? Are "Normal Circumstances" present? YES NO
 Are Vegetation N Soil N or Hydrology N naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS - Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes <u> </u>	No <u>X</u>	Is the Sampled Area within a wetland? Yes <u> </u> No <u>X</u>
Hydric Soil Present?	Yes <u> </u>	No <u>X</u>	
Wetland Hydrology Present?	Yes <u> </u>	No <u>X</u>	
Remarks: <p style="text-align: center; font-size: small;">Area sampled is located on the level area west of the seasonal wetland. Soils in area sampled contain approximately 50% of fill/gravel from the spoils pile.</p>			

VEGETATION

Tree Stratum (scientific names) woody plants >3" dbh	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
				Number of Dominant Species That are OBL, FACW, or FAC: <u>0</u> (A)	
				Total Number of Dominant Species Across All Strata: <u>2</u> (B)	
				Percent of Dominant Species that are OBL, FACW, or FAC: <u>0%</u> (A/B)	
Total Cover: <u> </u>				Prevalence index worksheet Total % Cover of: <u> </u> Multiply by: <u> </u> OBL species <u> </u> x 1 = <u>0</u> FACW species <u> </u> x 2 = <u>0</u> FAC species <u> </u> x 3 = <u>0</u> FACU species <u> </u> x 4 = <u>0</u> UPL species <u> </u> x 5 = <u>0</u> Column Total: <u>0</u> (A) <u>0</u> (B) Prevalence Index = B/A = <u>#DIV/0!</u>	
Total Cover: <u> </u>					
Herb Stratum (non-woody plants, regardless of size)					
<i>Medicago polymorpha</i>	20	Y	UPL	Hydrophytic vegetation indicators <input type="checkbox"/> Dominance test is >50% <input type="checkbox"/> Prevalence index is ≤ 3.0 ¹ <input type="checkbox"/> Morphological adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soils and wetland hydrology must be present	
<i>Vicia villosa</i>	2	N	UPL		
<i>Geranium dissectum</i>	20	Y	UPL		
<i>Centaurea solstitialis</i>	3	N	UPL		
<i>Vulpia myuros</i>	10	N	FACU		
<i>Poa annua</i>	3	N	FACW		
<i>Senecio vulgaris</i>	2	N	NI		
<i>Brassica sp.</i>	2	N	N/A		
Total Cover: <u>62</u>				Hydrophytic Vegetation Present? Yes <u> </u> No <u>X</u>	
Woody Vine Stratum (regardless of size)					
Total Cover: <u> </u>					
% Bare ground in Herb Stratum <u>38</u> % Cover of Biotic Crust <u> </u>					
Remarks:					

SOIL

Data point: DP-4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators)

Depth (inches)	Matrix		Redox Features					Comments
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²	Contrast ³	
0-16	10YR 4/2	75	none					scl 25% gravel/fill material

¹Type: C=Concentration; D=Depletion; RM=Reduced Matrix

²Location: PL=Pore Lining, RC=Root Channel, M=Matrix

³Contrast: f=faint; d=distinct; p=prominent (see Table A1 for definitions)

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

Indicators for Problematic Hydric Soils:⁴

- | | | |
|--|--|---|
| <input type="checkbox"/> Histosol (A1) | <input checked="" type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> 2 cm Muck (A 10) (LRR B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Depleted Dark Surface (F7) | <input type="checkbox"/> Listed on National/Local Hydric Soils List |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Redox Depressions (F8) | ⁴ Indicators of hydrophytic vegetation and wetland hydrology must be present |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | <input type="checkbox"/> Vernal Pool (F9) | |

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

The stratum consists of approximately 25% fill/gravel, but the soil matrix present appears to reflect pre-spills pile conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary indicators (any one indicator is sufficient)

Secondary Indicators (2 or more required)

- | | | |
|--|--|--|
| <input type="checkbox"/> Surface Water (A1) | <input type="checkbox"/> Salt Crust (B11) | <input type="checkbox"/> Water Marks (B1) (Riverine) |
| <input type="checkbox"/> High Water Table (A2) (w/in 12") | <input type="checkbox"/> Biotic Crust (B12) | <input type="checkbox"/> Sediment Deposits (B2) (Riverine) |
| <input type="checkbox"/> Saturation (A3) | <input type="checkbox"/> Aquatic Invertebrates (B13) | <input type="checkbox"/> Drift Deposits (B3) (Riverine) |
| <input type="checkbox"/> Water Marks (B1) (Nonriverine) | <input type="checkbox"/> Hydrogen Sulfide Odor (C1) (w/in 12") | <input type="checkbox"/> Drainage Patterns (B10) |
| <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) | <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) | <input type="checkbox"/> Dry-Season Water Table (C2) |
| <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) | <input type="checkbox"/> Presence of Reduced Iron (C4) | <input type="checkbox"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soil (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

Field Observations:

Surface Water Present? Yes No Depth (inches): none
 Water Table Present? Yes No Depth (inches): none
 Saturation Present? Yes No Depth (inches): none
 (includes capillary fringe) (12 inch determination)

Wetland Hydrology Present? Yes No

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

Texture and Rock Fragment Content

Texture

- | | |
|----------------------|-----------------------------|
| cos - coarse sand | lcos - loamy coarse sand |
| s - sand | ls - loamy sand |
| fs - fine sand | lfs - loamy fine sand |
| vfs - very fine sand | lvfs - loamy very fine sand |
| | cosl - coarse sandy loam |

- | |
|-----------------------------|
| sl - sandy loam |
| fsl - fine sandy loam |
| vfsl - very fine sandy loam |
| l - loam |
| sil - silt loam |
| si - silt |

- | |
|------------------------|
| scl - sandy clay loam |
| cl - clay loam |
| sicl - silty clay loam |
| sc - sandy clay |
| sic - silty clay |
| c - clay |

Rock Fragments

- | | |
|--------------------------|------------------------|
| gr - gravelly | xcb - extremely cobbly |
| vgr - very gravelly | st - stony |
| xgr - extremely gravelly | vst - very stony |
| cb - cobbly | xst - extremely stony |
| vcb - very cobbly | |

LCP Status North Central Coast Area As of July 1, 2009

Legend

-  County LCP Effectively Certified
-  City LCP Effectively Certified
-  Area of Deferred Certification

 Sonoma County

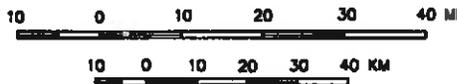
 Marin County

 Calle del Arroyo Lots
(Marin Co. Unit I)

 San Francisco City and County
(1 of 2 segments)

 San Mateo County

-  Daly City
-  Pacifica
-  Quarry Area
-  Shell Dance
-  Half Moon Bay



NOTE: Coastal Zone Boundary for illustrative purposes only.



California Coastal Commission
Technical Services Division

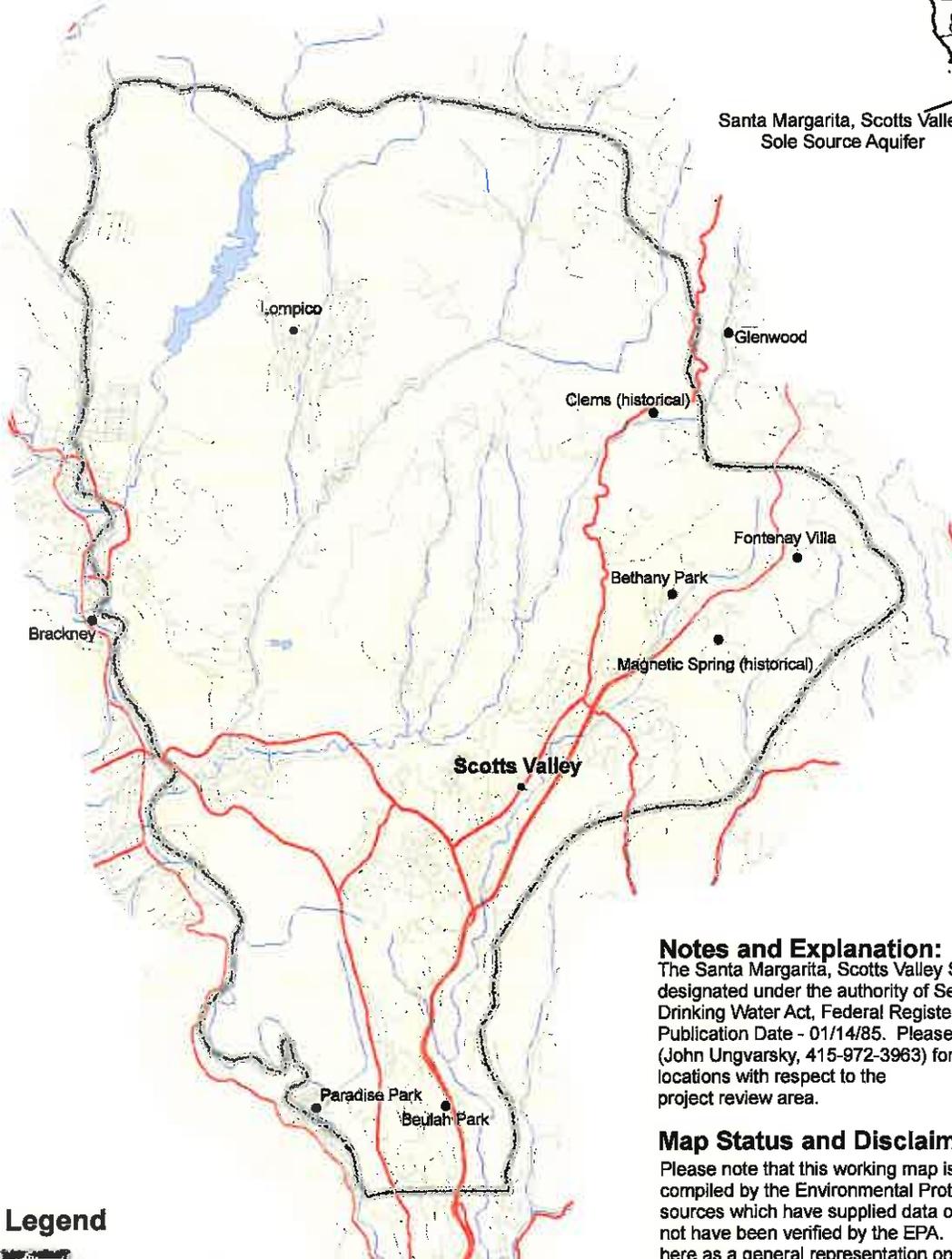


North Central Coast
Location Map

Santa Margarita, Scotts Valley Sole Source Aquifer

Designated Area

CALIFORNIA



Legend

-  Designation Boundary
-  Highways, Major Roads
-  Streets
-  Streams
-  Cities, Towns



Notes and Explanation:

The Santa Margarita, Scotts Valley Sole Source Aquifer was designated under the authority of Section 1424(e) of the Safe Drinking Water Act, Federal Register Citation-50 FR 2023, Publication Date - 01/14/85. Please contact US EPA Region 9 (John Ungvarsky, 415-972-3963) for assistance in determining place locations with respect to the project review area.

Map Status and Disclaimer:

Please note that this working map is a computer representation compiled by the Environmental Protection Agency (EPA) from sources which have supplied data or information that may not have been verified by the EPA. This data is offered here as a general representation only, and is not to be used for commercial purposes without verification by an independent professional qualified to verify such data or information. The EPA does not guarantee the accuracy, completeness, or timeliness of the information shown, and shall not be liable for any loss or injury resulting from reliance upon the information shown.



United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825

Conservation Guidelines for the
Valley Elderberry Longhorn Beetle
9 July 1999

The following guidelines have been issued by the U.S. Fish and Wildlife Service (Service) to assist Federal agencies and non-federal project applicants needing incidental take authorization through a section 7 consultation or a section 10(a)(1)(B) permit in developing measures to avoid and minimize adverse effects on the valley elderberry longhorn beetle. The Service will revise these guidelines as needed in the future. The most recently issued version of these guidelines should be used in developing all projects and habitat restoration plans. The survey and monitoring procedures described below are designed to avoid any adverse effects to the valley elderberry longhorn beetle. Thus a recovery permit is not needed to survey for the beetle or its habitat or to monitor conservation areas. If you are interested in a recovery permit for research purposes please call the Service's Regional Office at (503) 231-2063.

Background Information

The valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*), was listed as a threatened species on August 8, 1980 (Federal Register 45: 52803-52807). This animal is fully protected under the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.). The valley elderberry longhorn beetle (beetle) is completely dependent on its host plant, elderberry (*Sambucus* species), which is a common component of the remaining riparian forests and adjacent upland habitats of California's Central Valley. Use of the elderberry by the beetle, a wood borer, is rarely apparent. Frequently, the only exterior evidence of the elderberry's use by the beetle is an exit hole created by the larva just prior to the pupal stage. The life cycle takes one or two years to complete. The animal spends most of its life in the larval stage, living within the stems of an elderberry plant. Adult emergence is from late March through June, about the same time the elderberry produces flowers. The adult stage is short-lived. Further information on the life history, ecology, behavior, and distribution of the beetle can be found in a report by Barr (1991) and the recovery plan for the beetle (USFWS 1984).

4. The applicant must provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed.
5. Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five (5) feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

Transplant Elderberry Plants That Cannot Be Avoided

Elderberry plants must be transplanted if they can not be avoided by the proposed project. All elderberry plants with one or more stems measuring 1.0 inch or greater in diameter at ground level must be transplanted to a conservation area (see below). At the Service's discretion, a plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation. In cases where transplantation is not possible the minimization ratios in Table 1 may be increased to offset the additional habitat loss.

Trimming of elderberry plants (e.g., pruning along roadways, bike paths, or trails) with one or more stems 1.0 inch or greater in diameter at ground level, may result in take of beetles. Therefore, trimming is subject to appropriate minimization measures as outlined in Table 1.

1. **Monitor.** A qualified biologist (monitor) must be on-site for the duration of the transplanting of the elderberry plants to insure that no unauthorized take of the valley elderberry longhorn beetle occurs. If unauthorized take occurs, the monitor must have the authority to stop work until corrective measures have been completed. The monitor must immediately report any unauthorized take of the beetle or its habitat to the Service and to the California Department of Fish and Game.
2. **Timing.** Transplant elderberry plants when the plants are dormant, approximately November through the first two weeks in February, after they have lost their leaves. Transplanting during the non-growing season will reduce shock to the plant and increase transplantation success.
3. **Transplanting Procedure.**
 - a. Cut the plant back 3 to 6 feet from the ground or to 50 percent of its height (whichever is taller) by removing branches and stems above this height. The trunk and all stems measuring 1.0 inch or greater in diameter at ground level should be replanted. Any leaves remaining on the plant should be removed.

Conservation Guidelines for the Valley Elderberry Longhorn Beetle

Table 1: Minimization ratios based on location (riparian vs. non-riparian), stem diameter of affected elderberry plants at ground level, and presence or absence of exit holes.

Location	Stems (maximum diameter at ground level)	Exit Holes on Shrub Y/N (quantify) ¹	Elderberry Seedling Ratio ²	Associated Native Plant Ratio ³
non-riparian	stems >= 1" & < 3"	No:	1:1	1:1
		Yes:	2:1	2:1
non-riparian	stems > 3" & < 5"	No:	2:1	1:1
		Yes:	4:1	2:1
non-riparian	stems >= 5"	No:	3:1	1:1
		Yes:	6:1	2:1
riparian	stems >= 1" & < 3"	No:	2:1	1:1
		Yes:	4:1	2:1
riparian	stems > 3" & < 5"	No:	3:1	1:1
		Yes:	6:1	2:1
riparian	stems >= 5"	No:	4:1	1:1
		Yes:	8:1	2:1

¹ All stems measuring one inch or greater in diameter at ground level on a single shrub are considered occupied when exit holes are present anywhere on the shrub.

² Ratios in the *Elderberry Seedling Ratio* column correspond to the number of cuttings or seedlings to be planted per elderberry stem (one inch or greater in diameter at ground level) affected by a project.

³ Ratios in the *Associated Native Plant Ratio* column correspond to the number of associated native species to be planted per elderberry (seedling or cutting) planted.

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Federal Endangered and Threatened Species that Occur in
or may be Affected by Projects in the Counties and/or
U.S.G.S. 7 1/2 Minute Quads you requested
 Document Number: 100217101656
 Database Last Updated: December 1, 2009

No quad species lists requested.

County Lists

Sacramento County

Listed Species

Invertebrates

Branchinecta conservatio

Conservancy fairy shrimp (E)

Branchinecta lynchi

Critical habitat, vernal pool fairy shrimp (X)
 vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus

Critical habitat, valley elderberry longhorn beetle (X)
 valley elderberry longhorn beetle (T)

Elaphrus viridis

delta green ground beetle (T)

Lepidurus packardii

Critical habitat, vernal pool tadpole shrimp (X)
 vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris

green sturgeon (T) (NMFS)

Hypomesus transpacificus

Critical habitat, delta smelt (X)
 delta smelt (T)

Oncorhynchus mykiss

Central Valley steelhead (T) (NMFS)
 Critical habitat, Central Valley steelhead (X) (NMFS)

Oncorhynchus tshawytscha

Central Valley spring-run chinook salmon (T) (NMFS)
 Critical Habitat, Central Valley spring-run chinook (X) (NMFS)
 Critical habitat, winter-run chinook salmon (X) (NMFS)
 winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense

California tiger salamander, central population (T)
 Critical habitat, CA tiger salamander, central population (X)

Rana aurora draytonii

California red-legged frog (T)

Reptiles

Thamnophis gigas

giant garter snake (T)

Plants

Castilleja campestris ssp. succulenta

Critical habitat, succulent (=fleshy) owl's-clover (X)

Oenothera deltoides ssp. howellii

Antioch Dunes evening-primrose (E)

Orcuttia tenuis

Critical habitat, slender Orcutt grass (X)
slender Orcutt grass (T)

Orcuttia viscida

Critical habitat, Sacramento Orcutt grass (X)
Sacramento Orcutt grass (E)

Candidate Species**Birds***Coccyzus americanus occidentalis*

Western yellow-billed cuckoo (C)

Key:

(E) *Endangered* - Listed as being in danger of extinction.

(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.

(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.

(NMFS) Species under the Jurisdiction of the [National Oceanic & Atmospheric Administration Fisheries Service](#). Consult with them directly about these species.

Critical Habitat - Area essential to the conservation of a species.

(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.

(C) *Candidate* - Candidate to become a proposed species.

(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.

(X) *Critical Habitat* designated for this species

Important Information About Your Species List**How We Make Species Lists**

We store information about endangered and threatened species lists by U.S. Geological Survey 7½ minute quads. The United States is divided into these quads, which are about the size of San Francisco.

The animals on your species list are ones that occur within, **or may be affected by** projects within, the quads covered by the list.

- Fish and other aquatic species appear on your list if they are in the same watershed as your quad or if water use in your quad might affect them.
- Amphibians will be on the list for a quad or county if pesticides applied in that area may be carried to their habitat by air currents.
- Birds are shown regardless of whether they are resident or migratory. Relevant birds on the county list should be considered regardless of whether they appear on a quad list.

Plants

Any plants on your list are ones that have actually been observed in the area covered by the list. Plants may exist in an area without ever having been detected there. You can find out what's in the surrounding quads through the California Native Plant Society's online [Inventory of Rare and Endangered Plants](#).

Surveying

Some of the species on your list may not be affected by your project. A trained biologist and/or botanist, familiar with the habitat requirements of the species on your list, should determine whether they or habitats suitable for them may be affected by your project. We recommend that your surveys include any proposed and candidate species on your list. See our [Protocol](#) and [Recovery Permits](#) pages.

For plant surveys, we recommend using the [Guidelines for Conducting and Reporting Botanical Inventories](#). The results of your surveys should be published in any environmental documents prepared for your project.

Your Responsibilities Under the Endangered Species Act

All animals identified as listed above are fully protected under the Endangered Species Act of 1973, as amended. Section 9 of the Act and its implementing regulations prohibit the take of a federally listed wildlife species. Take is defined by the Act as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any such animal.

Take may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR §17.3).

Take incidental to an otherwise lawful activity may be authorized by one of two procedures:

- If a Federal agency is involved with the permitting, funding, or carrying out of a project that may result in take, then that agency must engage in a formal [consultation](#) with the Service. During formal consultation, the Federal agency, the applicant and the Service work together to avoid or minimize the impact on listed species and their habitat. Such consultation would result in a biological opinion by the Service addressing the anticipated effect of the project on listed

and proposed species. The opinion may authorize a limited level of incidental take.

- If no Federal agency is involved with the project, and federally listed species may be taken as part of the project, then you, the applicant, should apply for an incidental take permit. The Service may issue such a permit if you submit a satisfactory conservation plan for the species that would be affected by your project.

Should your survey determine that federally listed or proposed species occur in the area and are likely to be affected by the project, we recommend that you work with this office and the California Department of Fish and Game to develop a plan that minimizes the project's direct and indirect impacts to listed species and compensates for project-related loss of habitat. You should include the plan in any environmental documents you file.

Critical Habitat

When a species is listed as endangered or threatened, areas of habitat considered essential to its conservation may be designated as critical habitat. These areas may require special management considerations or protection. They provide needed space for growth and normal behavior; food, water, air, light, other nutritional or physiological requirements; cover or shelter; and sites for breeding, reproduction, rearing of offspring, germination or seed dispersal.

Although critical habitat may be designated on private or State lands, activities on these lands are not restricted unless there is Federal involvement in the activities or direct harm to listed wildlife.

If any species has proposed or designated critical habitat within a quad, there will be a separate line for this on the species list. Boundary descriptions of the critical habitat may be found in the Federal Register. The information is also reprinted in the Code of Federal Regulations (50 CFR 17.95). See our [Map Room](#) page.

Candidate Species

We recommend that you address impacts to candidate species. We put plants and animals on our candidate list when we have enough scientific information to eventually propose them for listing as threatened or endangered. By considering these species early in your planning process you may be able to avoid the problems that could develop if one of these candidates was listed before the end of your project.

Species of Concern

The Sacramento Fish & Wildlife Office no longer maintains a list of species of concern. However, various other agencies and organizations maintain lists of at-risk species. These lists provide essential information for land management planning and conservation efforts. [More info](#)

Wetlands

If your project will impact wetlands, riparian habitat, or other jurisdictional waters as defined by section 404 of the Clean Water Act and/or section 10 of the Rivers and Harbors Act, you will need to obtain a permit from the U.S. Army Corps of Engineers. Impacts to wetland habitats require site specific mitigation and monitoring. For questions regarding wetlands, please contact Mark Littlefield of this office at (916) 414-6580.

Updates

Our database is constantly updated as species are proposed, listed and delisted. If you address proposed and candidate species in your planning, this should not be a problem. However, we recommend that you get an updated list every 90 days. That would be May 18, 2010.

Attachment 9

Alejandro Huerta

From: Jana_Affonso@fws.gov
Sent: Wednesday, February 17, 2010 9:01 AM
To: Alejandro Huerta
Cc: Viola_Taylor@fws.gov
Subject: Re: Fw: Endangered Species

Mr. Huerta,

In response to your inquiry below, please visit our website and pull a species list for your project.

http://www.fws.gov/sacramento/es/spp_list.htm

You will use that list to determine which species may be in the area and could be affected. We cannot make your effects determination for you, we only concur or not with your determination. I can tell you that this project is not located within critical habitat for any federally-listed species. Let me know if you have any questions,

-Jana

Jana Affonso
 Chief, Sacramento Valley Branch
 Sacramento Fish and Wildlife Office
 US Fish & Wildlife Service
 2800 Cottage Way, Room W-2605
 Sacramento, CA 95825-1846
 916-414-6645 (voice)
 916-414-6713 (fax)

Viola Taylor/SAC/R1/FWS/DOI

02/16/2010 11:42 AM

To: Jana Affonso/SAC/R1/FWS/DOI@FWS

cc

Subject: Fw: Endangered Species

Hi Jana,

See the below request that came through the SFWO website. I'm not sure who would handle? Could you please make sure who ever reply's directly to the requester also cc:'s me for tracking. Thanks

Viola Taylor, External Affairs Assistant
 External Affairs Program
 Sacramento Fish and Wildlife Office
 (916)414-6567, (fax)414-6712

----- Forwarded by Viola Taylor/SAC/R1/FWS/DOI on 02/16/2010 11:37 AM -----

"Alejandro Huerta" <Alejandro@dceplanning.com>

02/10/2010 08:49 PM

To: <fw1sacweb@fws.gov>

cc:

Subject: Endangered Species

2/17/2010

To Whom It May Concern:

I hope this message finds you well. I am consulting with the Sacramento Housing & Redevelopment Agency to complete a HUD NEPA environmental assessment for the proposed Powerhouse Science Center at 450 Jibboom Street. The project would attract approximately 250,000 annual visitors to the site and consists of the following:

1. Renovation of the former PG&E Power Station building to serve as the science center. The existing 19,250 square foot (s.f.) building would be renovated, and two floors would be added to accommodate interpretive exhibits, education programs and learning labs. A lobby, café, and gift shop would be included. The resulting building would have approximately 36,400 s.f. of interior space.
2. A new Planetarium and Challenger Learning Center would be constructed. This 13,218 s.f. two-story building would accommodate the Challenger Learning Center and a 150-seat Planetarium. It would be fifty-seven feet in height.
3. Education Center and Restaurant: This new 14,500 s.f. two-story building would accommodate meeting space for conferencing and education, along with a riverfront restaurant. The education center would occupy 3,953 s.f. on the entry floor, the restaurant would occupy 6,336 s.f. and accommodate 100 patrons, and offices would occupy 4,211 s.f. on the second floor.
4. Parking to accommodate 298 cars.

Per HUD NEPA standards, can you please tell me under which category the proposed project would fall:

Endangered Species: A) The RE documents that the proposal will have “no effect” or “is not likely to adversely affect” any federally protected (listed or proposed) Threatened or Endangered Species (i.e., plants or animals, fish, or invertebrates), nor adversely modify designated critical habitats. This finding is to be based on the review of designated critical habitats, contacts with the U.S. Fish and Wildlife Service or National Marine Fisheries Service, or by special study completed by a biologist or botanist. A determination of “no effect” based on the well-documented absence of listed species and critical habitats does not require U.S. FWS concurrence. B) Consult with the U.S. FWS or with the National Marine Fisheries Service, as appropriate, in accordance with procedural regulations contained in 50 CFR Part 402. Formal consultation with FWS or NMFS is always required for federally funded “major construction” activities and anytime a “likely to adversely affect” determination is made.

Guidance: <http://www.hud.gov/offices/cpd/environment/review/endangeredspecies.cfm>

In the past, I have used the US Fish & Wildlife Service's Critical Habitat Mapper, but I noticed that this is currently down for repairs.

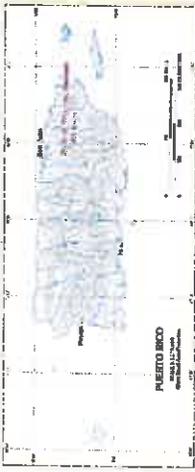
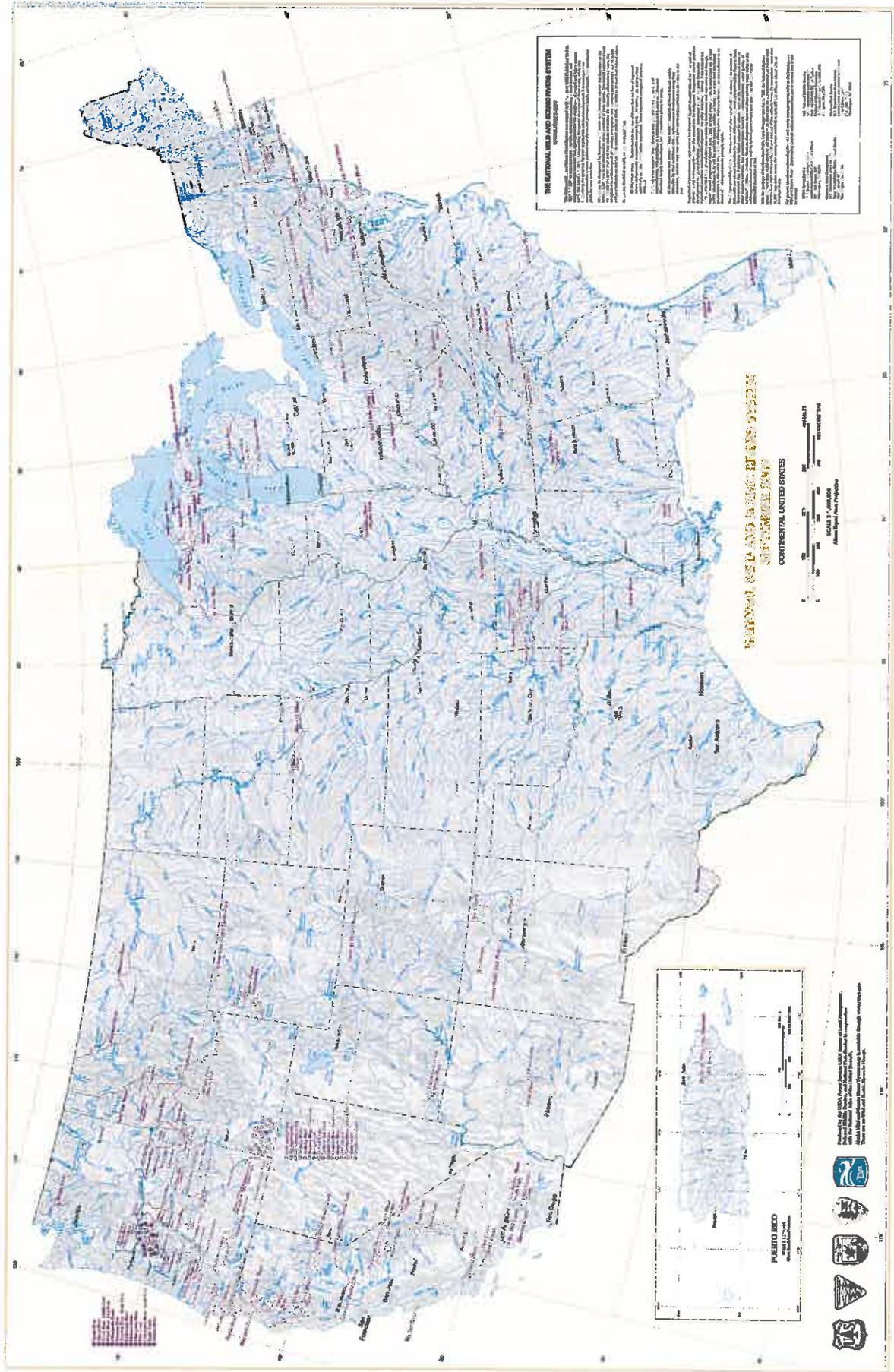
Please refer me to appropriate departments or agencies if you are unable to answer these questions.

Sincerely,

ALEJANDRO HUERTA | PLANNER

Design, Community & Environment
 1625 Shattuck Avenue, Suite 300
 Berkeley, CA 94709
 P 510-848-3815
 F 510-848-4315
www.dceplanning.com

2/17/2010



This map is a product of the National Water Research Institute (NWRI) and is available for use by the public. The NWRI is a part of the National Water Research Institute (NWRI) and is responsible for the development and maintenance of the National Water and Precipitation System (NWS) maps. The NWRI is a part of the National Water Research Institute (NWRI) and is responsible for the development and maintenance of the National Water and Precipitation System (NWS) maps.



United States Department of the Interior

NATIONAL PARK SERVICE

Pacific West Region

1111 Jackson Street

Oakland, CA 94607

March 1, 2010

Alejandro Huerta
Design, Community & Environment
1625 Shattuck Avenue, Suite 300
Berkeley, CA 94709

Subject: Powerhouse Science Center at 450 Jibboom Street

Dear Mr Huerta:

This letter is in response to your request of impacts to the American Wild & Scenic River that may be caused by the construction of the Powerhouse Science Center at 450 Jibboom Street.

Section 7 of the Wild and Scenic Rivers Act prohibits federal agencies from “assist[ing] by loan grant, license, or otherwise in the construction of any water resources project that would have a direct and adverse effect on the values for which such river was established.”

Based on the information provided I feel that the proposed project will not have a direct and adverse effect on the values for which the river was designated. However if the project scope should change, further consultation with the National Park Service would be required.

If you have any further questions, please contact me at (510) 817-1451.

Sincerely,

Stephen Bowes
CA Wild and Scenic Rivers Coordinator
National Park Service
1111 Jackson Street, suite 700
Oakland, CA 94607



AirData

You are here: [EPA Home](#) | [Air & Radiation](#) | [AirData](#) | [Reports and Maps](#) | [Select Geography](#) | [Select Report/Map](#) | [Nonattainment Areas Map Criteria](#) | [Nonattainment Areas Map](#)

EPA is assessing its data systems, including AirData reports and maps. Data updates are suspended while the assessment is underway. The last update included data through January 10, 2009; see [database status](#) for details. For more recent air quality data, visit the [Air Explorer](#) and [Air Emission Sources](#) sites.

Nonattainment Areas Map - Criteria Air Pollutants

Geographic Area: United States

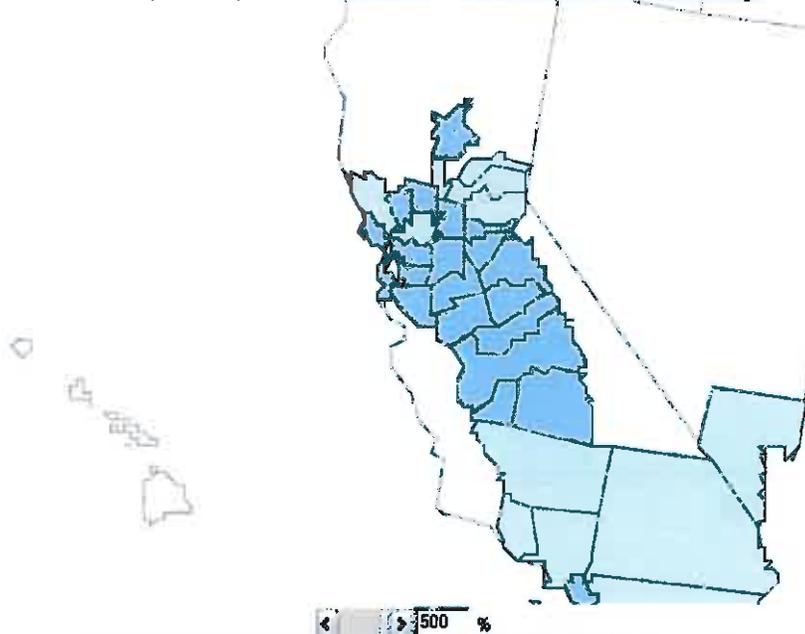
Pollutant: Ozone (8-hour)

Effective Date of Nonattainment Designations: December 2008

293 Nonattainment Counties

See [Disclaimer](#)

Position mouse pointer on map to view additional information. See zoom and pan instructions below this image.



To ZOOM: Click slider with mouse, type in zoom percentage number, or use keyboard Shift + arrow keys.
To PAN: Click and drag image with mouse, or use keyboard arrow keys.

[Download Image](#)

Postscript Gray

[Download Data](#)

Tab Delimited

[View Data](#)

25 rows per page

Disclaimer: Nonattainment information for this map is provided by the EPA Office of Air Quality Planning and Standards, and is based on air monitoring data in EPA's Air Quality System (AQS) database. The nonattainment designations in this map were in effect as of December 16, 2008. For detailed information about nonattainment areas, see the [Green Book](#) Web site.

Readers are cautioned not to infer a qualitative ranking order of geographic areas based on AirData maps, charts, or reports. Air pollution levels measured in the vicinity of a particular monitoring site may not be representative of the prevailing air quality of a county or urban area. Pollutants emitted from a particular source may have little impact on the immediate geographic area, and the amount of pollutants emitted does not indicate whether the source is complying with applicable regulations.

This request took 10.42 seconds of real time (v9.2 build 1495).

Alejandro Huerta

To: Rochelle Amrhein
Subject: RE: Powerhouse Science Center Air Quality

From: JOSEPH J. HURLEY [mailto:JHURLEY@airquality.org]
Sent: Monday, March 08, 2010 3:16 PM
To: Rochelle Amrhein
Cc: KAREN HUSS
Subject: FW: Powerhouse Science Center Air Quality

Good afternoon Ms. Amrhein,

Per our earlier conversation, I am writing to confirm that the Powerhouse Science Center project will conform with the EPA-approved SIP, as it is consistent with the Land Use Assumptions that went into the MTP. I also went ahead and checked on the asbestos issue, the SMAQMD rules on asbestos (rule 902) are actually more stringent than the federal NESHAP standard for asbestos, so compliance with local rules would ensure that the project is going beyond what is required by Federal law.

Please let me know if you have any further questions,

-JJ Hurley

From: Rochelle Amrhein [mailto:ramrhein@shra.org]
To: JOSEPH J. HURLEY
Subject: Powerhouse Science Center Air Quality

JJ,

Thank you for taking the time to speak with me about the Air Quality portion of the Powerhouse Science Center project this week. I have attached the area map, a site plan, the project description and summary of air quality impacts, and the URBEMIS calcs (provided by Dana Allen at the City). For the NEPA portion, we would like your confirmation that the project will conform with the EPA-approved SIP, and it will not require an individual NESHAP permit or notification. The draft IS and EA will be routed to you for your review and comment, as well.

Please let me know if you have any questions.

Thanks again,

Shelly

Shelly Amrhein
Environmental Coordinator
Sacramento Housing & Redevelopment Agency
801 12th Street, Sacramento, CA 95814
Phone: (916)440-1312
ramrhein@shra.org

3/9/2010

FARMING ON THE EDGE

Sprawling Development Threatens America's Best Farmland

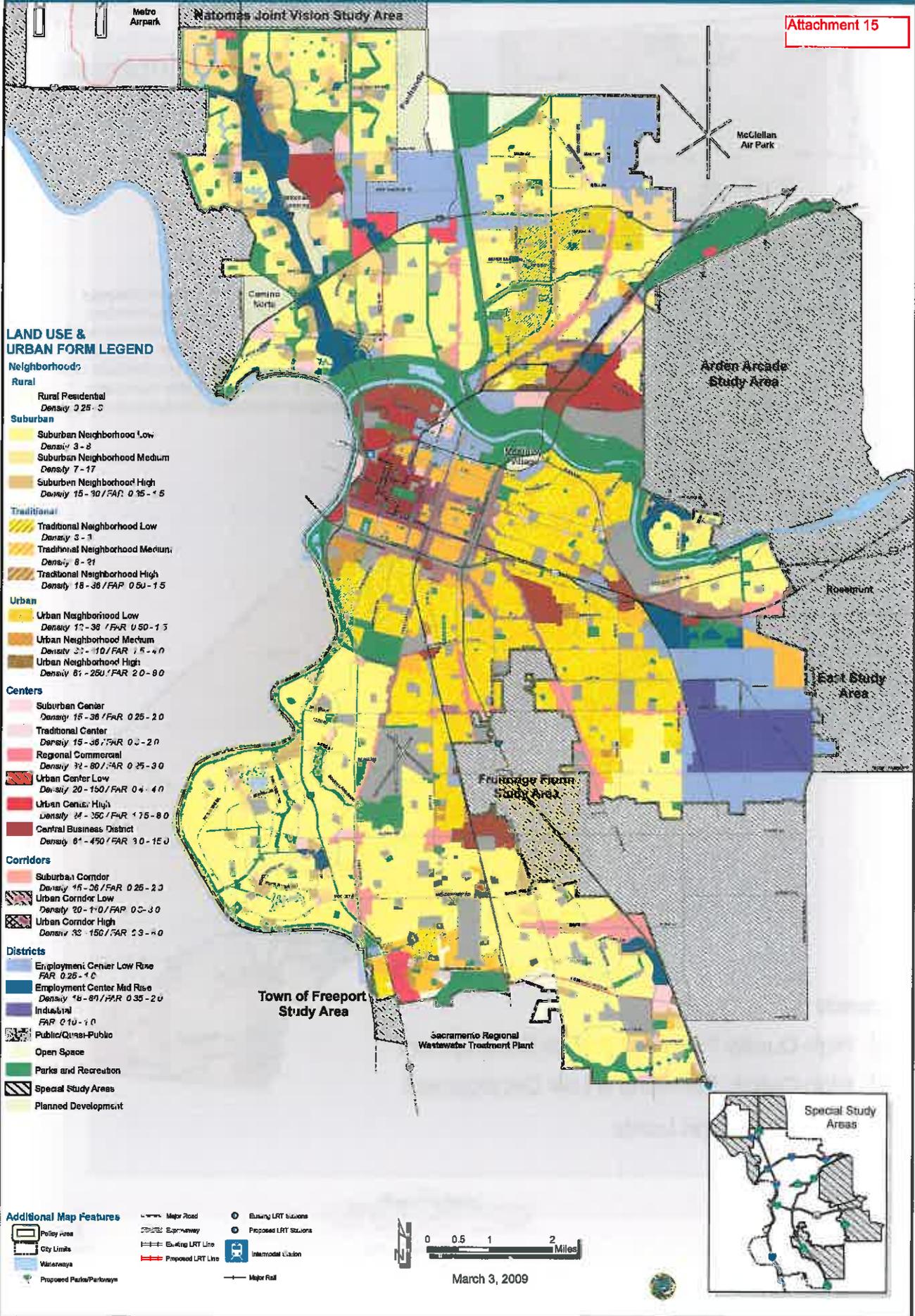
California

High-quality farmland areas have relatively large amounts of prime or unique farmland. High-development areas have relatively rapid loss of high-quality farmland to development. Other areas do not meet the two threshold tests. The relative measures compare sub-county areas against their respective statewide averages.



Legend:

- High-Quality Farmland & High Development
- High-Quality Farmland & Low Development
- Federal & Indian Lands
- Urban Areas
- Other Lands



LAND USE & URBAN FORM LEGEND

- Neighborhoods:**
- Rural**
 - Rural Residential
Density 0.25 - 0.3
 - Suburban**
 - Suburban Neighborhood Low
Density 3 - 8
 - Suburban Neighborhood Medium
Density 7 - 17
 - Suburban Neighborhood High
Density 15 - 30 / FAR 0.15 - 1.5
 - Traditional**
 - Traditional Neighborhood Low
Density 3 - 3
 - Traditional Neighborhood Medium
Density 8 - 21
 - Traditional Neighborhood High
Density 18 - 36 / FAR 0.50 - 1.5
 - Urban**
 - Urban Neighborhood Low
Density 17 - 38 / FAR 0.50 - 1.5
 - Urban Neighborhood Medium
Density 27 - 110 / FAR 1.5 - 4.0
 - Urban Neighborhood High
Density 61 - 250 / FAR 2.0 - 8.0
 - Centers**
 - Suburban Center
Density 15 - 38 / FAR 0.25 - 2.0
 - Traditional Center
Density 15 - 36 / FAR 0.2 - 2.0
 - Regional Commercial
Density 32 - 80 / FAR 0.25 - 3.0
 - Urban Center Low
Density 20 - 150 / FAR 0.4 - 4.0
 - Urban Center High
Density 34 - 350 / FAR 1.75 - 8.0
 - Central Business District
Density 61 - 450 / FAR 3.0 - 15.0
 - Corridors**
 - Suburban Corridor
Density 15 - 36 / FAR 0.25 - 2.0
 - Urban Corridor Low
Density 20 - 110 / FAR 0.2 - 3.0
 - Urban Corridor High
Density 32 - 150 / FAR 2.3 - 4.0
 - Districts**
 - Employment Center Low Rise
FAR 0.25 - 1.0
 - Employment Center Mid Rise
Density 18 - 81 / FAR 0.35 - 2.0
 - Industrial
FAR 0.10 - 1.0
 - Public/Quasi-Public
 - Open Space
 - Parks and Recreation
 - Special Study Areas
 - Planned Development

Additional Map Features

- Policy Area
- City Limits
- Waterways
- Proposed Paths/Parlways
- Major Road
- Expressway
- Existing LRT Line
- Proposed LRT Line
- Existing LRT Stations
- Proposed LRT Stations
- Intermodal Station
- Major Rail



March 3, 2009



DRAFT - Noise Study Report

Access Improvements from Railyards to Richards

Boulevard and Interstate 5

Sacramento, CA

4E8400EA

September, 2008

Prepared By: _____ Date: _____
David M. Buehler , P.E.
Phone Number 916 737 3000
Office Name ICF Jones & Stokes
District/Region 3

Approved By: _____ Date: _____
California Department of Transportation
Phone Number _____
Office Name _____
District/Region _____

**Table 6-2. Comparison of Measured to Predicted
Sound Levels in the TNM Model**

Measurement Location	Measured Sound Level (dBA)	Predicted Sound Level (dBA)	Measured minus Predicted (dB)
R-10	70.0	67.3	-2.4
R-10	68.7	67.2	-1.5
R-6	67.3	66.0	-1.3
R-6	67.4	66.2	-1.2

6.3. Noise Modeling Results

The existing noise environment in the Project area is characterized in Table 6-3, based on traffic noise modeling results at selected representative receiver locations in the Project area. Figure 5-1 shows the receiver locations evaluated.

Table 6-3. Traffic Noise Modeling Results for Existing Conditions

Receiver Location	Land Use	Activity Category	Worst Hour Leq (dBA)
R-1	commercial	C	75
R-2	commercial	C	75
R-3	motel	B	73
R-4	motel	B	71
R-5	restaurant	C	70
R-6	motel (pool)	B	71
R-7	motel	B	73
R-8	motel	B	74
R-9	commercial	C	70
R-10	motel (pool)	C	72
R-11	motel	B	73

[LINK TO THIS MAP](#)

GEOTRACKER

Attachment 17

LAYERS

- Leaking Underground Tank (LUST) Cleanup Sites
- Other Cleanup Sites
- Land Disposal Sites
- Military Sites
- Permitted Underground Storage Tank (UST) Facilities
- Monitoring Wells
- DTSC Cleanup Sites
- DTSC Haz Waste Permit

MAP SIZE

640x480

OPTIONS

Site List - [EXPORT TO EXCEL](#)

4 Sites

Map data ©2010 Sanborn, Google -

SHOW SITES WITHIN 1000 FEET OF THE FOLLOWING ADDRESS: 95811

SITE NAME	GLOBAL ID	CLEANUP STATUS	ADDRESS	CITY
<input checked="" type="checkbox"/> HOLIDAY INN	T0606700725	COMPLETED - CASE CLOSED	200 JIBBOOM ST	SACRAMENTO
<input checked="" type="checkbox"/> JIBBOOM BUILDING	34490056	CERTIFIED / OPERATION & MAINTENANCE	240 JIBBOOM STREET	SACRAMENTO
<input checked="" type="checkbox"/> SACRAMENTO COMMUNICATIONS CTR	17589		111 BERECUT DR	SACRAMENTO
<input checked="" type="checkbox"/> TEXACO SS (FORMER)	T0606700537	COMPLETED - CASE CLOSED	226 JIBBOOM ST	SACRAMENTO

MAP AN ADDRESS:

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
ENVIROSTOR

Attachment 18

JIBBOOM BUILDING (34490056)

240 JIBBOOM STREET
 SACRAMENTO, CA 95814
 SACRAMENTO COUNTY
SITE TYPE: VOLUNTARY CLEANUP

PROJECT MANAGER:
SUPERVISOR:
OFFICE:

STEVEN ROSS
 RICHARD HUME
 SACRAMENTO

Site Information

CLEANUP STATUS

CERTIFIED / OPERATION & MAINTENANCE AS OF 8/19/1998

SITE TYPE: VOLUNTARY CLEANUP

NATIONAL PRIORITIES LIST: NO

ACRES: 5 ACRES

APN: NONE SPECIFIED

CLEANUP OVERSIGHT AGENCIES:

DTSC - SITE CLEANUP PROGRAM - **LEAD**

ENVIROSTOR ID:

SITE CODE:

SPECIAL PROGRAM:

FUNDING:

ASSEMBLY DISTRICT:

SENATE DISTRICT:

34490056

101763

VOLUNTARY CLEANUP PROGRAM

SITE PROPONENT

09

0A

Regulatory Profile

PAST USE(S) THAT CAUSED CONTAMINATION

MANUFACTURED GAS PLANT, RECYCLING - SCRAP METAL

POTENTIAL CONTAMINANTS OF CONCERN

LEAD

POLYNUCLEAR AROMATIC HYDROCARBONS (PAHS)

POTENTIAL MEDIA AFFECTED

SOIL

Site History

DTSC has been overseeing the investigation of the Jibboom property that was not part of the NPL site. The site is contaminated with TPH and lead. Ongoing investigations limit the contamination to soils.

[Conditions of Use](#) | [Privacy Policy](#)

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0.125 seconds

State of California
The Resources Agency
Department of Water Resources
Division of Planning and Local Assistance
Site Assessment Unit
1020 Ninth Street, Third Floor
Sacramento, California 95814

FORMER PG&E POWER PLANT SITE

Sacramento County, California
September 10, 1999

REMEDIATION DOCUMENTATION:



REMEDIAL ACTION

Remedial Action Plan

SITE CERTIFICATION

Deed Restriction

Operations & Maintenance Agreement

Operations & Maintenance Plan

Remedial Action Certification Form

CalSites Report of Completion

WELL ABANDONMENT

Final Report

UST REMOVAL

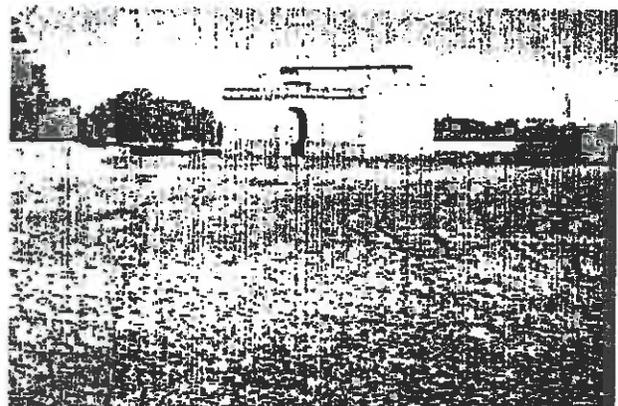
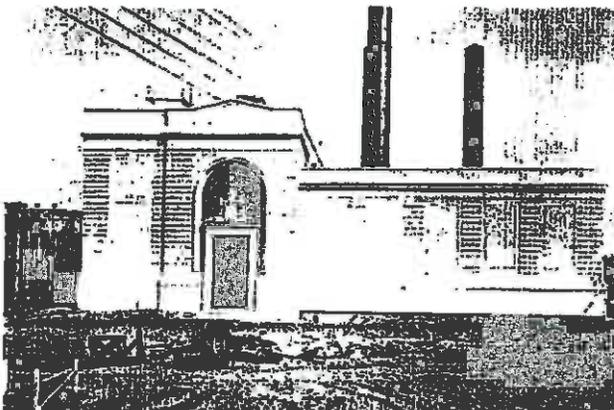
Closure Letter

CEQA COMPLIANCE

Initial Study / Negative Declaration

GROUNDWATER MONITORING

First Year O&M – Analytical Results





COUNTY OF SACRAMENTO
Environmental Management Department
Mel Knight, Director

Bonnie Coleman, Manager
Administrative Services
Raymond E. Hackett, Manager
Environmental Health
Jeanette M. Siewierski, Manager
Hazardous Materials

April 13, 1999

Mr. Derrick Adachi
Department of Water Resources
1416 9th Street
Sacramento, CA 94236

Dear Mr. Adachi:

SUBJECT: LOCAL OVERSIGHT PROGRAM SITE NO. 0422/71422
FORMER PG&E POWER PLANT FACILITY
JIBBOOM STREET, SACRAMENTO, CA 95814

This letter is being sent to provide you with the "No Further Action" letter, required by California's Underground Storage Tank Regulations, and the summary package used by the "Site Closure Committee" in approving the "No Further Action" status.

If there are any questions, please call me at (916) 875-8458.

Sincerely,

A handwritten signature in cursive script, appearing to read "Anita L. Benedict".

Anita L. Benedict
Hazardous Materials Division

ALB:mmr

Enclosure: NFA Letter
No Further Action Summary Package

c: James Brathovde - CVRWQCB (with enclosures)
Ed Cargile - CALEPA DTSC (with enclosures)

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COUNTY OF SACRAMENTO
Environmental Management Department
Mel Knight, Director

Bonnie Coleman, Manager
Administrative Services
Raymond E. Hackett, Manager
Environmental Health
Jeanette M. Siewierski, Manager
Hazardous Materials

April 13, 1999

Mr. Derrick Adachi
Department of Water Resources
1416 9th Street
Sacramento, CA 94236

Dear Mr. Adachi:

SUBJECT: LOCAL OVERSIGHT PROGRAM SITE NO. 0422/71422
FORMER PG&E POWER PLANT FACILITY
JIBBOOM STREET, SACRAMENTO, CA 95814

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks located at the above-referenced location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the underground storage tanks are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, no further action related to the underground tank release is required.

This notice is issued pursuant to a regulation contained in Section 2721(e) of the California Code of Regulations.

Please contact our office if you have any questions regarding this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Mel Knight", written over a horizontal line.

Mel Knight, Director
Environmental Management Department

MK:ALB:mmr

RECORDING REQUESTED BY

Department of Water Resources
Division of Planning and Local Assistance
1416 Ninth Street, P.O. Box 942836
Sacramento, California 94236-0001
Attention: Phillip Wandt

Recorded in the County of Sacramento
John Dark, Clerk/Recorder



No Fee

199807301260 1:31pm 07/30/98

605 20000472 02 14
R01 13 7.00 36.00 0.00 0.00 0.00 0.00 0.00
2.00

WHEN RECORDED MAIL TO

Department of Water Resources
Division of Planning and Local Assistance
1416 Ninth Street, P.O. Box 942836
Sacramento, California 94236-0001
Attention: Phillip Wandt

SPACE ABOVE THIS LINE RESERVED FOR RECORDER'S USE

COVENANT
TO RESTRICT USE OF PROPERTY
ENVIRONMENTAL RESTRICTION
FORMER PG&E POWER PLANT SITE, JIBBOOM STREET
"JIBBOOM BUILDING SITE"
Sacramento, Sacramento County, California

This Covenant and Agreement ("Covenant") is made on the first day of July, 1998, by the California Department of Water Resources ("Covenantor"), concerning certain real property situated in the City of Sacramento, County of Sacramento, State of California, described in Exhibit "A" ("the Property") and depicted in the map entitled Exhibit "B", both attached hereto and incorporated herein by this reference, and by the California Department of Toxic Substances Control ("DTSC") with reference to the following facts:

A. The State of California (State) is the owner of record of the Property. Covenantor has control and possession of the Property and is authorized with the approval of the Department of General Services to enter into this Covenant, Water Code section 11595 and Government Code section 11005.2.

B. Description of Facts.

The property identified as Exhibits A/B contains hazardous substances. This Jibboom Street site was operated as a steam power plant by the Pacific Gas and Electric Company (PG&E) and a metal salvage yard by Associated Metals. Lead has been found on the site and determined to be a Resource

waste under the National Oil and Hazardous Substances Pollution Contingency Plan. The final Remedial Action Plan ("RAP"), dated December 1996, therefore requires containment of the waste with an engineered earthen cap and grading the surrounding soils to prevent erosion of the cap. In addition, the RAP requires establishment of institutional controls through this deed restriction and an operation and maintenance agreement.

The area is zoned by the City of Sacramento for commercial use. It is bounded by a parcel owned by the City of Sacramento on the north side, another parcel owned by Covenantor on the south side, the Southern Pacific Railyards to the south and east, the Sacramento River bicycle trail to the west, and Jibboom Street and Interstate 5 to the east. North of the parcel owned by the City of Sacramento is another parcel owned by Covenantor which is bounded on the north by a motel.

C. Covenantor desires and intends that in order to protect the present or future public health and safety, the Property shall be used in such a manner as to avoid potential harm to persons or property which may result from hazardous substances which have been deposited on the Property.

D. Pursuant to Civil Code section 1471(c), DTSC has determined that this Covenant is reasonably necessary to protect present and future human health or safety or the environment as a result of the presence on the land of hazardous materials as defined in Health and Safety Code section 25260.

ARTICLE I

GENERAL PROVISIONS

1.01 Provisions to Run With the Land. This Covenant sets forth protective provisions, covenants, restrictions, and conditions, (collectively referred to as "Restrictions"), upon and subject to which the Property and every portion thereof shall be improved, held, used, occupied, leased, sold, hypothecated, encumbered, and/or conveyed. Each and all of the Restrictions shall run with the land, and pass with each and every portion of the Property, and shall apply to and bind the respective successors in interest thereof. Each and all of the Restrictions are imposed upon the Property shown in attached Exhibit "B" incorporated herein. Each and all

2.04 Owners. "Owner" shall mean the State of California or its successors in interest, including heirs, and assigns, who hold title to all or any portion of the Property.

2.05 Covenantor. "Covenantor" shall mean the Department of Water Resources or its successors in interest, including heirs and assigns who have control and possession over the property, and may include future owners and occupants other than the State of California.

ARTICLE III

DEVELOPMENT, USE AND CONVEYANCE OF THE PROPERTY

3.01 Restrictions on Use.

(a) Covenantor agrees not to use the Property for any of the following purposes without first applying for and receiving a written variance from the Department for that use pursuant to Article IV of this Covenant:

- (1) A residence, including any mobile home or factory built housing, constructed or installed for use as residential human habitation.
- (2) A hospital or convalescent home for humans.
- (3) A public or private school for persons under 21 years of age.
- (4) A group care facility for the physically and mentally handicapped.
- (5) A day care center for children.

(b) Covenantor shall not permit any use of or activity at the site which would disturb the integrity of any hazardous waste containment or monitoring system, including but not limited to the cap, without first applying for and receiving a written variance from the DTSC pursuant to Article IV of this Covenant and agreement.

3.02 Notice of Cap Disturbance.

The Owner(s) or Occupant(s), shall notify the Department of each of the following, upon discovery or specific knowledge of the disturbance by that Owner or Occupant: (1) the type, cause, location and date of any disturbance to the cap which could reasonably affect the ability of the cap to contain subsurface hazardous substances on the Property; and (2) the type and date of repair of such disturbance. Notification to the Department shall be made by telephone within seventy-two (72) hours of the

TO: "Covenantor"
Chief, Site Assessment Unit
Division of Planning and Local Assistance
Department of Water Resources
1416 Ninth Street, Post Office Box 942836
Sacramento, California 94236-0001
Attention: Derrick J. Adachi

COPY TO: Department of Toxic Substances Control
Site Mitigation Branch
10151 Croydon Way, Suite 3
Sacramento, California 96927-2106
Attention: Ed Cargile

5.03 Partial Invalidity. If any portion of the Restrictions set forth herein or terms is determined to be invalid for any reason, the remaining portion shall remain in full force and effect as if such portion had not been included herein.

5.04 Article Headings. Headings at the beginning of each numbered article of this Covenant are solely for the convenience of the parties and are not a part of the Covenant.

5.05 Recordation. This instrument shall be executed by the Covenantor and by the Director, California Department of Toxic Substances Control. This instrument shall be recorded by the Covenantor in the County of Sacramento within ten (10) working days of the date of execution by the parties and approval by the California Department of General Services.

5.06 References. All references to Code sections include successor provisions.

IN WITNESS WHEREOF, the parties execute this Covenant as of the date set forth above.

COVENANTOR,
CALIFORNIA DEPARTMENT OF WATER RESOURCES

By: Philip G. Wentz
Date: 7/11/98

Title: Chief, Water Quality Assessment Branch

CALIFORNIA DEPARTMENT OF TOXIC SUBSTANCES CONTROL

By: James Savold
Date: 6/22/98

Title: Chief, Northern California - Central Cleanup Operations Branch

COPY

In the matter of:)	
)	
)	
)	
Former Pacific, Gas,)	
and Electric Company)	
Power Plant Site)	
240 Jibboom Street)	ENFORCEABLE AGREEMENT
Sacramento, California)	
)	Health and Safety Code
A Hazardous Waste Site)	Section 25355.5(a)(1)(C)
)	

**AGREEMENT
OPERATION AND MAINTENANCE
RE: FORMER PACIFIC, GAS, AND ELECTRIC POWER PLANT SITE,
JIBBOOM STREET
SACRAMENTO, SACRAMENTO COUNTY, CALIFORNIA**

This Agreement is made and entered into, by and between the State Department of Toxic Substances Control ("Department") and the State Department of Water Resources, 1416 Ninth Street, P.O. Box 942836, Sacramento California ("DWR").

W H E R E A S;

1.0 Certain operation and maintenance of the cap and the groundwater monitoring system remain to be performed on the Former Pacific, Gas, and Electric Company ("PG&E") Power Plant Site (Site) for the remediation of lead contaminated soil. The Site is currently owned by the State of California. The Site is located at 240 Jibboom Street, north of downtown Sacramento, in Sacramento County, California. A site location map and the assessor's parcel map are attached as Exhibit A. A site map showing the locations of the cap and monitoring wells is attached as Exhibit B.

AGREEMENT

2.0 The parties hereto, based upon the foregoing and in exchange for the mutual performances and forbearances described below,

agree as follows:

3.0 Implementation of Operation and Maintenance Plan. DWR will implement the Operation and Maintenance Plan (OMP) dated June 1998 and approved by the Department on July 6, 1998, attached as Exhibit C, for the remediation of lead contaminated soil at the Site. The OMP defines the inspection, schedule, and maintenance requirements for the earthen clay cap over lead contaminated soil plus the monitoring schedules and maintenance requirements for the groundwater monitoring system. The OMP also covers inspection and maintenance requirements for the former power plant building and existing fencing. These systems shall be left in place, maintained, and operated by DWR until and except to the extent that the Department approves either upon DWR's request or at its discretion, in writing to DWR to discontinue, move, or modify some or all of the remediation systems because DWR has met the cleanup goals for the Site or because the modifications would better achieve the cleanup goals. The cleanup level for lead contaminated soil is 1000 mg/Kg.

4.0 Obligations of the Department. The Department will review and oversee the measures to be performed by DWR pursuant to this Agreement.

5.0 Modifications. DWR will provide the Department with reasonable written notice prior to any proposed modifications, discontinuation, or other disruption of the caps or groundwater monitoring system. The written notice to the Department will include a detailed description of the work to be done or modifications to be made and a map showing the exact location of the proposed work and the reasons for modification, disruption, or discontinuation.

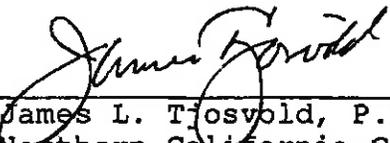
6.0 Environmental Monitoring. DWR will implement the groundwater monitoring plan and reporting requirements as described in the OMP.

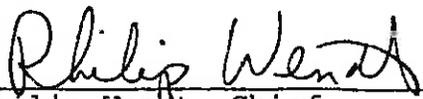
7.0 Site Summary Reports. Within thirty (30) days of the effective date of this Agreement and on a quarterly basis for one year, DWR will submit a Site Summary Report of its activities

the date of signature by the Department's authorized representative.

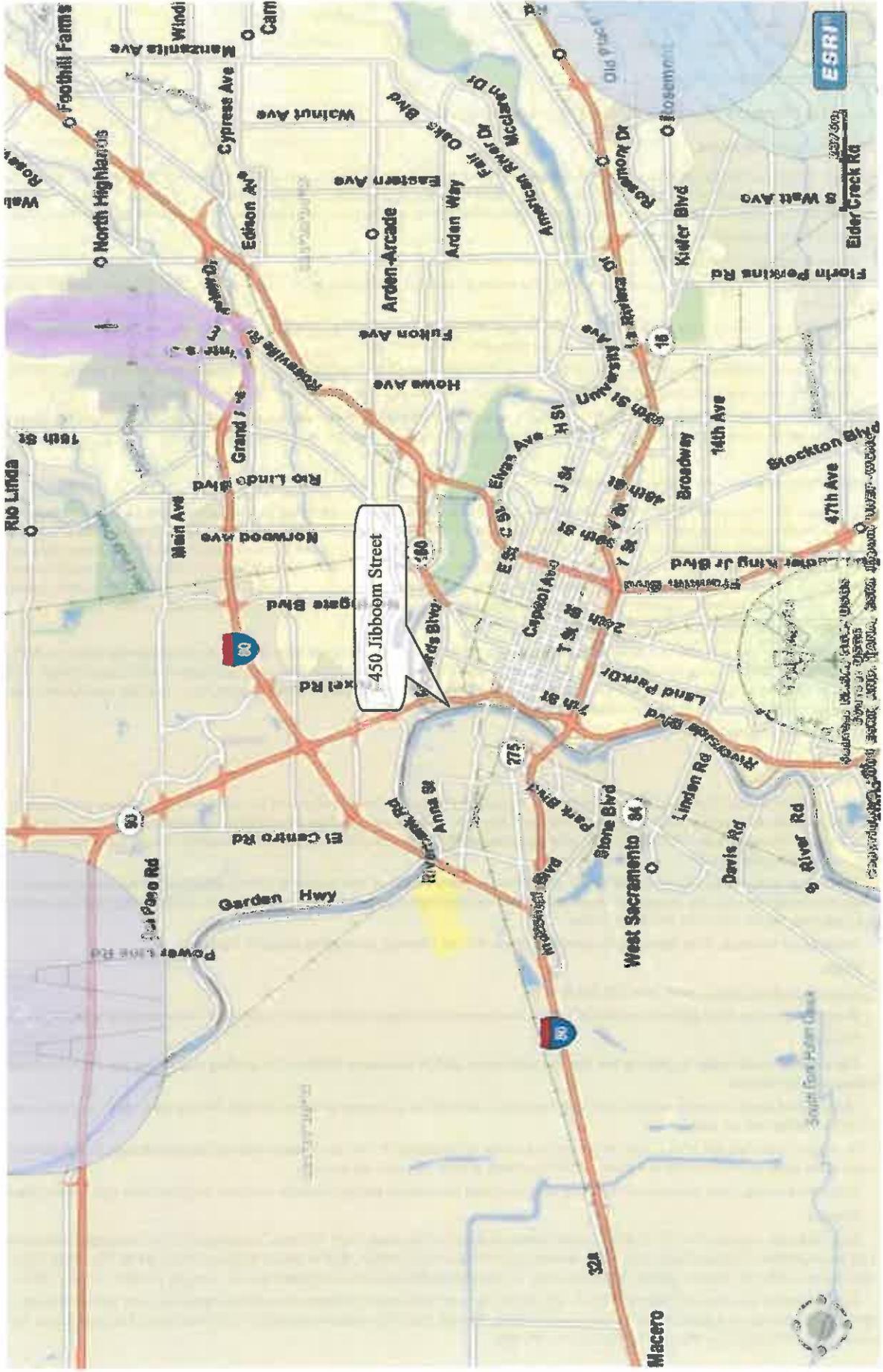
33.0 Representative Authority. Each undersigned representative of the parties to this Agreement certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind the parties to this Agreement.

Signed on the 12th day of August, 1998.


James L. Fosvold, P.E., Chief
Northern California-Central
Cleanup Operations Branch
Department of Toxic Substances Control


Philip Wenst, Chief
Water Quality Assessment Branch
Division of Planning and
Local Assistance
Department of Water Resources

Powerhouse Science Center Airport Clear Zones



Sacramento City Code

Up Previous Next Main Collapse Search Print No Frames

[Title 17 ZONING](#)[Division V. Special Districts](#)**Chapter 17.120 RICHARDS BOULEVARD SPECIAL PLANNING DISTRICT****17.120.010 Purpose and intent.**

The Richards Boulevard special planning district (SPD) consists of properties bounded by the Sacramento River on the west, the American River on the north, Southern Pacific rail line on the south and Sutter's Landing Park on the east. The Richards Boulevard special planning district is that area so designated on the map on Attachment A, set out at the end of this chapter. The SPD is intended to implement the development standards and design guidelines in the Richards Boulevard area plan.

The goals of the Richards Boulevard SPD are as follows:

- A. Allow for the retention and continued operation of industrial and service oriented uses;
- B. Provide opportunities for office and residential uses to be established over time when infrastructure improvements and community facilities are available to support these uses;
- C. Provide for the future creation of a significant residential population as industrial uses are replaced or relocated within the Richards Boulevard area to achieve housing objectives of the central city and provide a jobs/housing balance for future office growth;
- D. Provide for the intensification of commercial and office uses within close proximity to the intermodal transportation terminal and planned light rail extension;
- E. Provide for improved circulation, infrastructure and community facilities that will serve existing and future needs within the area;
- F. Ensure that properties with hazardous material contamination within the Richards Boulevard area are remediated to the extent necessary to protect the health and safety of all possible site users and users of adjacent properties, consistent with applicable laws and regulations. (Ord. 99-015 § 5-1.7-A)

17.120.020 Richards Boulevard special regulations.

Applications for development in the Richards Boulevard SPD shall be subject to the land use objectives, policies, development standards and design guidelines set forth in the Richards Boulevard area plan and the following special rules and regulations, in addition to the other regulations of this title. Development within a planned unit development (PUD) within the Richards Boulevard SPD shall also be subject to the requirements and restrictions contained in the PUD schematic plan and development guidelines for the development. Pursuant to Chapter 17.180, PUD development guidelines may modify the height, area, setback, and density standards set forth in this chapter. In addition, and notwithstanding any other provision of this chapter to the contrary, development in a PUD is exempt from design review as provided in Chapter 17.132. In the event of conflict between the provisions of this section and other provisions of this title, the provisions of this section shall prevail

A. Residential Mixed Use (RMX and RMX(PC)) Zone.

1. Uses. Except as otherwise provided herein, (1) uses permitted in the RMX zone outside the Richards Boulevard special planning district by this title shall be permitted in the RMX/RMX(PC) zone in the Richards Boulevard special planning district; and (2) if this title requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the RMX zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.

a. Conditionally Permitted Uses:

- i. Hotel;
- ii. Performing arts center.

2. Master Plan or Planned Unit Development Requirement. Applications for the development of sites of five acres or more shall concurrently submit a master plan or apply for a planned unit development (PUD) designation which includes a schematic plan and development guidelines pursuant to the provisions contained in Chapter 17.180 of this title. The master plan or PUD designation, schematic plan and PUD guidelines shall be processed concurrently with the special permit or planning director plan review application, if applicable.

a. The contents of the master plan or PUD schematic plan and development guidelines shall include an overall schematic plan designating acreage proposed for each parcel, location of proposed land uses, general description of the types and intensities of uses, building elevations, heights, square footage, parking, open space and the proposed pedestrian, bicycle and traffic circulation system.

3. Development Standards. Notwithstanding the provisions of this title, the following development standards shall apply:

a. Height.

- i. Buildings shall not exceed seventy-five (75) feet in height.
- ii. Within the American River parkway corridor (PC) zone, development shall comply with the height limitations of the American River parkway corridor zone.

b. Density.

- i. The permitted density range for property less than five acres in size shall be a minimum of fifteen (15) dwelling units per net acre and a maximum of sixty-five (65) dwelling units per net acre.
- ii. The permitted density range for property more than five acres in size shall be a minimum of twenty-five (25) dwelling units per net acre and a maximum of sixty-five (65) dwelling units per net acre.

(A) For property more than five acres in size, the density on a portion of the project site may be anywhere within the designated range, as long as the average density per net acre of the whole site is developed at a minimum average density of thirty (30) units per net acre.

iii. Within the American River parkway corridor designation residential development shall not exceed a maximum density of thirty (30) dwelling units per net acre.

c. Setbacks.

i. Street Setbacks. A twenty-five (25) foot landscaped setback shall be provided along North 7th Street. A fourteen (14) foot landscaped setback shall be provided along 12th Street (proposed Gateway Boulevard). A minimum ten (10) foot landscaped setback shall be provided along all other streets. The setback along Riverfront Drive shall not exceed the ten (10) foot setback requirement so as to encourage spatial definition and promote activity along the perimeter of the riverfront corridor.

ii. Rear and Interior Side Yard Setbacks. A minimum fifteen (15) foot rear setback and a minimum ten (10) foot interior side yard setback shall be required, provided that additional setbacks may be required to mitigate the effects of noise, light and glare from adjacent industrial or commercial uses. The setback area shall be landscaped and planted with fifteen (15) gallon trees, twenty-five (25) feet on center.

d. Noise Standards.

i. Interior Standards. Residential projects shall be evaluated in the context of the surrounding industrial uses, and shall comply with the interior noise standards set forth in the noise element of the general plan (Table 1, Section 8).

ii. Exterior Standards. For purposes of Section 8.68.060 of this code, and the exterior noise standard established pursuant thereto, and notwithstanding any provisions in Chapter 8.68 to the contrary, residential developments located within the area of the Richards Boulevard area plan designated "industrial/residential" shall be considered to be industrial and shall be subject to the exterior noise standards for the "industrial, manufacturing, utilities, agricultural" land use categories set forth in the noise element of the general plan (Figure 3, Section 8); provided that the exterior standards set forth in the noise element of the general plan (Table 1, Section 8) shall apply to interior courtyards and rear yard areas for residential developments.

e. Hazardous Materials. A hazardous material investigation shall be undertaken as part of the rezone or special permit application. A Phase I site investigation, and, if warranted, a Phase II site assessment and appropriate cleanup, shall be required prior to approval of the rezone or special permit.

f. Wall Requirements.

i. Residential Uses Abutting Nonresidential Uses. A minimum six foot high wall of solid brick, masonry or similar material shall be provided along all property lines abutting a nonresidential use or zone.

ii. Street Frontage. Fences greater than three feet in height shall be prohibited along street frontages.

(A) Exception-Wrought Iron/Open Iron Fencing. A decorative metal wrought iron or open iron fence, painted black or similarly unobtrusive color, not exceeding six feet in height may be placed on the property lines adjacent to street frontages.

iii. Chain link fencing is prohibited.

g. Open Space Requirements.

i. Onsite Open Space. Areas specifically designed for outdoor living, recreation or passive enjoyment of the outdoors are required for new residential development.

(A) A minimum of eighty (80) square feet of common usable open space per unit is required. Such areas may include courtyards, gardens, recreational and similar areas.

(B) A minimum of fifty (50) square feet of private usable open space per unit is required. This area is for the exclusive use of the unit. Such areas may include decks, balconies and patios. Private usable open space shall be directly accessible from the associated unit.

ii. Park Land Requirement. Park land shall be provided at a ratio of five acres per one thousand (1,000) residents.

(A) Park land, if not previously dedicated, shall be provided through dedication of land or through the payment of in-lieu fees thereof, at the option of the city for park or recreational purposes according to the standards and formula contained in Chapter 16.64 of this code.

h. Entrances from Alleys. Dwelling unit(s) located on an alley may have its main entrance off of the alley.

i. South Shore of American River. Development along the south shore of the American River shall demonstrate that all required permits have been obtained from all state and federal agencies with jurisdiction along the river.

j. Parking. Off-street parking requirements shall be provided as follows:

i. Ground floor commercial, retail or service uses as allowed by Chapter 17.28 of this title.

(A) No parking shall be required for a commercial, retail or service use provided that the use is a component of a residential project and provided that the use does not exceed five thousand (5,000) gross square feet per building. If parking is provided for the commercial, retail or service use the maximum amount of off-street vehicle parking permitted for such use shall be one space per four hundred fifty (450) gross square feet of floor area.

(B) One space per four hundred fifty (450) gross square feet shall be required for a commercial, retail or service use provided that the use is a component of a residential project and provided that the use does not exceed nine thousand six hundred (9,600) gross square feet per building. The maximum amount of off-street vehicle parking permitted shall be one space per four hundred (400) gross square feet of floor area.

(C) One parking space per four hundred (400) gross square feet shall be required for a commercial, retail or service use provided that the use is a component of a residential project and provided that the use exceeds nine thousand six hundred (9,600) gross square feet per building. The maximum amount of off-street vehicle parking permitted shall be one space per two hundred fifty (250) gross square feet of floor area.

ii. Restaurant. One parking space per four hundred fifty (450) gross square feet shall be provided for a restaurant use provided that the use is a component of a residential project. The maximum amount of off-street vehicle parking permitted shall be one space per one hundred (100) gross square feet of floor area.

iii. Other nonresidential uses or nonresidential uses not a component of a residential project shall be required to provide parking as set forth in Chapter 17.64 of this title.

iv. Along the south side of the American River parking areas shall be located no closer than one hundred (100) feet to the toe of the levee.

v. Minimum Bicycle Parking Requirements.

(A) Apartments. One bicycle parking facility is required for every ten (10) units. Fifty (50) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

(B) Commercial. One bicycle parking facility is required for every twelve thousand five hundred (12,500) gross square feet of occupied space. Twenty-five (25) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

(C) Restaurant. One bicycle parking facility is required for every fifty (50) seats. Twenty-five (25) percent of the required bicycle facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

k. Design Review. All development in the RMX zone shall be subject to design review and shall comply with all applicable design guidelines pursuant to Chapter 17.132 of this title.

B. Office Building (OB) Zone.

1. Uses. Except as otherwise provided herein, (1) uses permitted in the OB zone outside of the Richards special planning district by this title shall be permitted in the OB zone in the Richards special planning district; and (2) if this title requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the OB zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.

a. Office Use. Office use shall be permitted subject to the issuance of a special permit.

b. Additional Uses. The following additional uses shall be permitted in the OB zone in the Richards Boulevard special planning district:

i. Cafés, restaurants, delis.

ii. Ground floor commercial, retail or service uses as allowed by Chapter 17.28 of this title.

iii. Other Conditionally Permitted Uses. The following uses shall be permitted in the OB zone in the Richards Boulevard special planning district, subject to approval of a special permit:

- (A) Multiple-family residential;
- (B) Hotels/motels.

iv. Ground Floor Retail Requirement. Twenty-five (25) percent of the street level frontage of a building along Richards Boulevard and 7th Street shall be occupied by retail or personal service business uses as designated in Table 1 of Section 17.96.070 of this title.

2. Master Plan or Planned Unit Development Requirement. Applications for the development of sites of five acres or more shall concurrently submit a master plan or apply for a planned unit development (PUD) designation which includes a schematic plan and development guidelines pursuant to the provisions contained in Chapter 17.180 of this title. The master plan or PUD designation, schematic plan and PUD guidelines shall be processed concurrently with the special permit or planning director plan review application, if applicable.

a. The contents of the master plan or PUD schematic plan and development guidelines shall include an overall schematic plan designating the acreage proposed for each parcel, location of proposed land uses, general description of the types and intensities of uses, building elevations, heights, square footage, parking, open space and the proposed pedestrian, bicycle and traffic circulation system.

3. Development Standards. Notwithstanding the provisions of this title the following development standards shall apply:

a. Density and Intensity.

i. Minimum Floor Area Ratio (FAR).

(A) Office development shall be developed with a minimum net FAR of 1.0;

(B) Office development within the 7th Street Loop (one-eighth of a mile from the intermodal terminal) shall be developed with a minimum net FAR of 4.0.

ii. Maximum Floor Area Ratio (FAR).

(A) Office development shall be developed at a maximum FAR of 3.0,

(B) Office development within the 7th Street Loop (one-eighth of a mile from the intermodal terminal) shall be developed with a maximum FAR of 6.0;

iii. Residential Density. The permitted density range shall be a minimum of twenty-five (25) dwelling units per net acre and a maximum of sixty-five (65) dwelling units per net acre.

b. Height.

i. Buildings within the 7th Street Loop (one-eighth of a mile of the intermodal terminal) shall be permitted to a maximum height of four hundred (400) feet.

ii. Buildings outside the 7th Street Loop (one-eighth of a mile of the intermodal terminal) may not exceed eighty-five (85) feet in height, provided that a special permit may be granted to permit buildings of additional height if the project meets the following criteria:

(A) Either the building is located within six hundred sixty (660) feet of an existing or proposed light rail station (the six hundred sixty (660) foot distance shall be measured from the center point of the block designated for a station to the subject site); or the proposed project involves an expansion of an office use that is currently located in the Richards Boulevard area and served by public transportation that complies with RT service standards; and

(B) The project does not exceed the maximum FAR of 3.0; and

(C) Applicant agrees to enter into an owner participation agreement to meet city redevelopment and planning objectives for the area; and

(D) The project contributes to increased massing at important intersections; and

(E) Additional height (over eighty-five (85) feet) is stepped back from the building face so that the forty (40) foot base height is the most predominate portion of the building, similar to the urban design guidelines for the central business district as well as additional change in surface plane to break up long facades, orientation of building to transit facilities, transit enhancing amenities (e.g., colonnades, retail to serve patrons, etc.), and roof top treatments; and

(F) A minimum twenty (20) percent of the required open space is provided on site. The open space shall be incorporated into the building site to break up building mass, to enhance the pedestrian environment and promote arts in public places.

c. Setbacks.

i. Street Setbacks.

(A) No setbacks shall be required along 7th Street, south of Richards Boulevard except, that the tower portion above eighty-five (85) feet shall be set back fifteen (15) feet from the property line.

(B) Development along 7th Street, north of Richards Boulevard shall provide a twenty-five (25) foot landscaped setback.

(C) Setbacks from all other street frontages shall be ten (10) feet.

(D) Buildings which exceed the eighty-five (85) foot height limit shall provide a minimum fifteen (15) foot setback from the property line, except as noted in subsections (B)(3)(c)(i)(A) and (B) of this section. The portion of the tower above eighty-five (85) feet shall be stepped back an additional fifteen (15) feet from the property line as appropriate (e.g., 7th Street, north of Richards Boulevard forty (40) feet; 7th Street, south of Richards Boulevard fifteen (15) feet; all other streets twenty-five (25) feet).

ii. Rear and Interior Side Yard Setbacks. Buildings shall be set back fifteen (15) feet from the rear and interior side yard property line. The setback area shall be landscaped and planted with minimum fifteen (15) gallon trees planted thirty (30) feet on center.

d. Hazardous Materials. A hazardous material investigation shall be undertaken as part of the rezone or special permit application. A Phase I site investigation, and, if warranted, a Phase II site assessment and appropriate clean-up, shall be required prior to approval of the rezone or special permit.

e. Wall Requirements. Any development which abuts a residential use or zone or a lot zoned M-2, shall provide a minimum six foot high wall of solid brick, masonry or similar material along the property line.

f. Open Space Requirements.

i. Open space shall be provided at a ratio of one square foot of open space per ten (10) square feet of development.

ii. Open space shall be provided on-site; provided, that subject to approval of an owners participation agreement (OPA) by the redevelopment agency or a development agreement (DA) or other similar agreement or arrangement by the city, the open space may be provided off-site. Off-site open space provided pursuant to such agreements or arrangements shall be provided as part of the same development proposal, and shall be located within the Richards Boulevard area.

iii. Open space provided on-site shall be in the form of courtyards, public plazas or other spaces as determined by the planning commission.

iv. Office developments of one hundred thousand (100,000) square feet or more shall provide a minimum two thousand five hundred (2,500) square foot on-site courtyard or plaza area.

v. Courtyards and plazas shall be a minimum of two thousand five hundred (2,500) square feet and shall not exceed eighty-five thousand (85,000) square feet. Courtyard and plaza square footage requirement shall not include required landscaped setback areas, except that required landscaped setback areas may be counted towards the open space requirement provided that the landscape areas contribute to the active or passive enjoyment of employees of the office development as determined by the planning commission.

(A) Courtyards and plazas shall be oriented toward pedestrian linkages or located adjacent to people-oriented uses (such as retail or restaurants).

(B) Courtyards and plazas shall incorporate, but not be limited to, one or more of the following features:

1. Landscaping (i.e., turf, trees, flower gardens, etc.);
2. Decorative paving (i.e., tile, cobblestone, colored concrete, etc.);
3. Public art pieces;
4. Water features (i.e., ponds, reflecting pools, etc.);
5. Seating areas;
6. Canopies;
7. Lighting.

(C) Courtyard and plaza features shall be complimentary to the building architecture. Design elements, materials, colors, and lighting should be contextual with the proposed building or existing adjacent buildings.

g. Parking Requirements.

i. Office.

(A) Minimum Off-Street Parking. The minimum required off-street vehicle parking spaces for office is one space for every six hundred (600) gross square feet of floor area.

(B) Maximum Off-Street Parking. The maximum amount of off street vehicle parking permitted for office is one space for every five hundred (500) gross square feet of floor area.

(C) Parking Reduction Related to Trip Reduction Measures. Parking may be reduced to a minimum ratio of one parking space for every one thousand (1,000) gross square feet of floor area provided that additional TSM measures, beyond those mandated by the developer TSM ordinance, shall be implemented in order to support the minimum parking requirements. The developer transportation management plan (TMP) must be submitted concurrently with the special permit application to justify the requested parking reduction.

ii. Commercial or Retail.

(A) Vehicle parking shall not be required for a commercial or retail use provided that such use is a component of a residential or office project and provided that such use does not exceed five thousand (5,000) gross square feet per building. If parking is provided for the commercial or retail use the maximum amount of off-street vehicle parking permitted for such use shall be one space per four hundred fifty (450) gross square feet of floor area.

(B) One vehicle parking space per four hundred fifty (450) gross square feet shall be required for a commercial or retail use provided that such use is a component of a residential or office project and provided that such use does not exceed nine thousand six hundred (9,600) square feet per building. The maximum amount of off-street vehicle parking permitted shall be one space per four hundred (400) gross square feet of floor area for the commercial or retail use.

(C) One vehicle parking space per four hundred (400) gross square feet shall be required for a commercial or retail use provided that such use is a component of a residential or office project and provided that such use exceeds nine thousand six hundred (9,600) gross square feet per building. The maximum amount of off-street vehicle parking permitted shall be one space per two hundred fifty (250) gross square feet of floor area for the commercial or retail use.

iii. Restaurant.

(A) Minimum Off-Street Parking. The minimum required off-street vehicle parking spaces for a restaurant use, provided that the use is a component of a residential or office project is one space per four hundred fifty (450) gross square feet of floor area.

(B) Maximum Off-Street Parking. The maximum amount of off street vehicle parking permitted for a restaurant use, provided that the use is a component of a residential or office project is one space per one hundred (100) gross square feet of floor area.

iv. Other nonresidential uses or nonresidential uses not a component of a residential or office project shall be required to provide parking as set forth in Chapter 17.64 of this title.

v. Minimum Bicycle Parking Requirements.

(A) Office. One bicycle parking facility is required for every six thousand (6,000) gross square feet of building area. Fifty (50) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

(B) Commercial. One bicycle parking facility is required for every twelve thousand five hundred (12,500) gross square feet of occupied space. Twenty-five (25) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

(C) Restaurant. One bicycle parking facility is required for every fifty (50) seats. Twenty-five (25) percent of the required bicycle facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

(D) Apartments. One bicycle parking facility is required for every ten (10) units. Fifty (50) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

h. Design Review. All development shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.

C. Highway Commercial (HC and HC(PC)) Zone.

1. Uses. Except as otherwise provided herein, (1) uses permitted in the HC/HC(PC) zone outside of the Richards Boulevard special planning district by this title shall be permitted in the HC/HC(PC) zone in the Richards Boulevards special planning district; and (2) if this title requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the HC/HC(PC) zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.

a. Permitted Uses. The following additional uses shall be permitted in the HC/HC(PC) zone in the Richards Boulevard special planning district:

- i. Recreation-oriented retail, such as bicycle rental or fishing and tackle shop;
- ii. Visitor centers;
- iii. Office uses lawfully established and operational prior to July 1, 1994.

b. Additional Uses Allowed by a Zoning Administrator's Special Permit. Zoning administrator special permit may allow other similar recreation or visitor-serving

uses which enhance public access and recreational use of the riverfront.

2. Development Standards. Notwithstanding the provisions of this title the following development standards shall apply:

a. Height.

i. Buildings shall not exceed forty-five (45) feet in height.

ii. Within the American River parkway corridor (PC) zone, development shall comply with the height limitations of the American River parkway corridor zone.

b. Setbacks. A ten (10) foot landscaped setback shall be provided from all street frontages.

c. Minimum Bicycle Parking Requirements.

i. Commercial. One bicycle parking facility is required for every twelve thousand five hundred (12,500) gross square feet of occupied space. Twenty-five (25) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

ii. Restaurant. One bicycle parking facility is required for every fifty (50) seats. Twenty-five (25) percent of the required bicycle facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

d. Design Review. All development shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.

D. Heavy Commercial (C-4 and C-4(PC)) Zone.

1. Uses. Except as otherwise provided herein, (1) uses permitted in the C-4/C-4(PC) zone outside of the Richards Boulevard special planning district by the comprehensive zoning ordinance shall be permitted in the C-4/C-4(PC) zone in the Richards Boulevard special planning district; and (2) if the comprehensive zoning ordinance requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the C-4/C-4(PC) zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.

a. Office Uses. Office uses shall be permitted in the CA zone as follows:

i. Permitted as a Matter of Right. Office use, including medical clinic and medical offices, shall be permitted as a matter of right only if they are related to a commercial/industrial use located in the same building or on the same parcel and do not occupy more than twenty-five thousand (25,000) square feet or twenty-five (25) percent of the gross floor area of the building on the site, whichever is less. Where multiple buildings are located on a single parcel, the maximum amount of space that may be devoted to office use, which shall be related to the commercial/industrial use(s) on that parcel shall be twenty-five (25) percent of the total square foot floor area of all buildings on that parcel or twenty-five thousand (25,000) square feet, whichever is less.

ii. Office Use of Buildings in Existence on January 1, 1997-Special Permit Required. Subject to approval of a special permit by the zoning administrator or planning commission pursuant to the following provisions, buildings existing on January 1, 1997 may be devoted to office space that is unrelated to a commercial/industrial use or exceeds the limitations set forth in subsection (D)(1)(a)(i) of this section.

(A) Zoning Administrator Authority. The zoning administrator shall have the authority to approve a special permit to allow for office use of a building existing on January 1, 1997 where the office use is not related to a commercial/industrial use located in the same building or on the same parcel or where the office use will exceed the twenty-five thousand (25,000) square feet or twenty-five (25) percent limitation set forth in subsection (D)(1)(a) of this section, provided that the maximum amount of office space that the zoning administrator may approve for a single parcel shall be fifty thousand (50,000) square feet; and provided further that the establishment or expansion of office use shall be limited to tenant improvements of buildings existing on January 1, 1997, and shall not involve the addition or expansion of the square footage of such existing buildings or the construction of a new building.

(B) Planning Commission Authority. The planning commission shall have the authority to approve a special permit to allow for office use of a building existing on January 1, 1997 where the office use is not related to a commercial/industrial use located in the same building or on the same parcel or where the office use will exceed the twenty-five (25) percent or twenty-five thousand (25,000) square feet limitation set forth in subsection (D)(1)(a) of this section, and where the amount of office space exceeds that which the zoning administrator is authorized to approve pursuant to subsection (D)(1)(a)(i) of this section, provided that the maximum amount of office space that the planning commission may approve for a single parcel shall be one hundred thousand (100,000) square feet; and provided further that the establishment or expansion of office use shall be limited to tenant improvements of buildings existing on January 1, 1997, and shall not involve the addition or expansion of the square footage of such existing buildings or the construction of a new building.

b. Conditionally Permitted Uses. The following additional uses shall be permitted in the C-4/C-4(PC) zone in the Richards Boulevard special planning district, subject to approval of a special permit.

i. Single Room Occupancy (SRO) Housing Units. The units shall comply with the standards set forth in Section 17.24.050(50) of this title and other conditions the planning commission may add to ensure that the proposed use satisfies the requirements of Chapter 17.212 of this title.

2. Development Standards. Notwithstanding the provisions of this title, the following development standards shall apply:

a. Density. Residential development shall not exceed a maximum of sixty-five (65) dwelling units per net acre.

b. Setbacks.

i. Along North 12th Street (proposed Gateway Boulevard) a fourteen (14) foot landscaped setback shall be provided.

ii. Residential projects shall provide a minimum ten (10) foot landscaped setback along all street frontages.

iii. Rear and Interior Side Yard Setbacks. Lots which abut a residential use or zone shall provide a ten (10) foot landscaped setback. The setback area shall be landscaped, at a minimum fifteen (15) gallon trees planted twenty-five (25) feet on center.

(A) Residential development shall provide a minimum ten (10) foot setback along the rear and side property lines.

c. Wall Requirements. Lots which abut a residential use or zone, shall provide a minimum six foot high wall of solid brick, masonry or similar material along the property line.

d. Minimum Bicycle Requirements.

i. Commercial. One bicycle parking facility is required for every twelve thousand five hundred (12,500) gross square feet of occupied space. Twenty-five (25) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

ii. Restaurant. One bicycle parking facility is required for every fifty (50) seats. Twenty-five (25) percent of the required bicycle facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

e. Design Review. All development shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.

E. Heavy Industrial (M-2) Zone. Within the industrial zone in the Richards Boulevard special planning district, there shall be four geographic areas (Exhibit A), designated east, north, central and west which establish different development standards. The boundaries of the area are (1) east: east of 16th Street and south of Thornton

Avenue, as shown on Exhibit A; (2) north: extending from approximately three hundred seventeen (317) feet west of North 3rd Street on the west to the Dos Rios housing development on the east; American River on the north; and approximately three hundred fifty (350) feet north of Richards Boulevard east of the proposed light rail transit alignment, and Richards Boulevard for property west of the light rail transit alignment on the south, as shown on Exhibit A; (3) central; described as Southern Pacific rail lines on the south, North 10th Street on the east, lots fronting on Richards Boulevard on the north and the water treatment plant and the HC zone on the west, as shown on Exhibit A; and, (4) west: bounded by I-5 on the west, Southern Pacific rail lines on the south, Bannon Street on the north and proposed 5th Street on the east, as shown on Exhibit A.

1. Heavy Industrial (M-2 and M-2(PC)) Zone (East).

a. Uses. Except as otherwise provided herein, (1) uses permitted in the M-2/M-2(PC) zone outside of the Richards Boulevard special planning district by this title shall be permitted in the M-2/M-2(PC) zone (east) in the Richards Boulevard special planning district; and (2) if this title requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the M-2/M-2(PC) zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.

i. Prohibited Uses. The following uses are prohibited in the M-2/M-2(PC) zone (east) in the Richards Boulevard special planning district:

(A) Office use which exceeds twenty-five (25) percent of the gross floor area of the building(s) on the parcel on which they are located.

b. Development Standards. Notwithstanding the provisions of this title, the following development standards shall apply:

i. South Shore of American River. Development along the south shore of the American River shall demonstrate that all required permits have been obtained from all state and federal agencies with jurisdiction along the river.

ii. Minimum Bicycle Parking Requirements

(A) Industrial. One bicycle parking facility is required for every twenty-five thousand (25,000) gross square feet of building area. Fifty (50) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

(B) Commercial. One bicycle parking facility is required for every twelve thousand five hundred (12,500) gross square feet of building area. Twenty-five (25) percent of the required bicycle parking facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

(C) Restaurant. One bicycle parking facility is required for every fifty (50) seats. Twenty-five (25) percent of the required bicycle facilities shall be Class I. The remaining facilities may be Class I, Class II or Class III.

c. Design Review. All development shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.

2. Heavy Industrial (M2 and M2(PC)) Zone (North).

a. Uses. Except as otherwise provided herein, (1) uses permitted in the M-2/M-2(PC) zone outside of the Richards Boulevard special planning district by the comprehensive zoning ordinance shall be permitted in the M-2/M-2(PC) zone (north) in the Richards Boulevard special planning district; and (2) if the comprehensive zoning ordinance requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the M-2/M-2(PC) zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.

i. Office Uses. Office uses shall be permitted in the M-2/M-2(PC) zone as follows:

(A) Permitted as a Matter of Right. Office use, including medical clinic and medical offices, shall be permitted as a matter of right only if they are related to a commercial/industrial use located in the same building or on the same parcel and do not occupy more than twenty-five thousand (25,000) square feet or twenty-five (25) percent of the gross floor area of the building on the site, whichever is less. Where multiple buildings are located on a single parcel, the maximum amount of space that may be devoted to office use, which shall be related to the commercial/industrial use(s) on that parcel shall be twenty-five (25) percent of the total square foot floor area of all buildings on that parcel or twenty-five thousand (25,000) square feet, whichever is less.

(B) Office Use of Buildings in Existence on January 1, 1997—Special Permit Required. Subject to approval of a special permit by the zoning administrator or planning commission pursuant to the following provisions, buildings existing on January 1, 1997 may be devoted to office space that is unrelated to a commercial/industrial use or exceeds the limitations set forth in subsection (E)(2)(a)(i)(A) of this section.

(1) Zoning Administrator Authority. The zoning administrator shall have the authority to approve a special permit to allow for office use of a building existing on January 1, 1997 where the office use is not related to a commercial/industrial use located in the same building or on the same parcel or where the office use will exceed the twenty-five thousand (25,000) square feet or twenty-five (25) percent limitation set forth in subsection (E)(2)(a)(i)(A) of this section, provided that the maximum amount of office space that the zoning administrator may approve for a single parcel shall be fifty thousand (50,000) square feet; and provided further that the establishment or expansion of office use shall be limited to tenant improvements of buildings existing on January 1, 1997, and shall not involve the addition or expansion of the square footage of such existing buildings or the construction of a new building.

(2) Planning Commission Authority. The planning commission shall have the authority to approve a special permit to allow for office use of a building existing on January 1, 1997 where the office use is not related to a commercial/industrial use located in the same building or on the same parcel or where the office use will exceed the twenty-five (25) percent or twenty-five thousand (25,000) square feet limitation set forth in subsection (E)(2)(a)(i)(A) of this section, and where the amount of office space exceeds that which the zoning administrator is authorized to approve pursuant to subsection (E)(2)(a) of this section, provided that the maximum amount of office space that the planning commission may approve for a single parcel shall be one hundred thousand (100,000) square feet; and provided further that the establishment or expansion of office use shall be limited to tenant improvements of buildings existing on January 1, 1997, and shall not involve the addition or expansion of the square footage of such existing buildings or the construction of a new building.

ii. Conditionally Permitted Uses. The following additional uses shall be permitted in the M-2/M-2(PC) zone north in the Richards Boulevard special planning district, subject to approval of a special permit:

(A) Multiple-family residential;

(B) Single Room Occupancy (SRO) Housing Units. The units shall comply with the standards set forth in Section 17.24.050(50) of this title and other conditions the planning commission may add to ensure that the proposed use satisfies the requirements of Chapter 17.212 of this title;

(C) Hotels and motels;

(D) Live/work units.

iii. Prohibited Uses. The following uses are prohibited in the M-2/M-2(PC) zone (north) in the Richards Boulevard special planning district:

(A) Adult entertainment establishment or activity;

(B) Adult related establishments;

(C) Auto wrecking;

(D) Beverage bottling plant;

- (E) Bus and other transit vehicle maintenance and storage;
- (F) Boat building;
- (G) Cement or clay products manufacturing;
- (H) Concrete batch plant;
- (I) Dairy products processing;
- (J) Food processing, except as lawfully established and operational prior to July 1, 1994;
- (K) Fuel yard;
- (L) Junkyard;
- (M) Lumber yard;
- (N) Machine shop, except as lawfully established and operational prior to July 1, 1994;
- (O) Material recovery facility/yard waste composting facility (recycling plant);
- (P) Monument works-stone;
- (Q) Nonprofit organization food storage and distribution, food preparation for off-site consumption, meal service facility, as defined in Chapter 17.16 of this title;
- (R) Petroleum storage;
- (S) Planing mill;
- (T) Public utility yard;
- (U) Railroad yard or shop;
- (V) Terminal yard, trucking;
- (W) Towing service and storage yard;
- (X) Truck and tractor repair;
- (Y) Other heavy industrial uses, similar to the above uses, which the planning commission determines to inhibit future development consistent with the Richards Boulevard area plan.

iv. Exception—Existing Uses. A use otherwise prohibited by subsection (E)(2)(a)(iii) of this section, but which was lawfully in existence and operational on July 1, 1994 may be continued, and may be altered, modified and expanded on the parcel or parcel(s) on which it was located on July 1, 1994 in the same manner and to the same extent that this title allows for the alteration, modification and expansion of such use in the M-2 zone areas outside of the Richards Boulevard special planning district and other special planning districts; provided that to the extent the use is modified, altered or expanded, such modification, alteration or expansion shall meet the development standards set forth in subsection (E)(2)(b) of this section and shall be subject to design review pursuant to subsection (E)(2)(c) of this section.

- v. Residential projects shall be reviewed pursuant to the standards in the Richards Boulevard special planning district RMX zone, subsection A of this section.
- b. Development Standards. Notwithstanding the provisions of this title, the following development standards shall apply:
 - i. Setbacks.
 - (A) A twenty-five (25) foot landscaped setback shall be provided and maintained along North 7th Street.
 - (B) A ten (10) foot landscaped setback shall be provided and maintained on all other street frontages.
 - (C) A fifteen (15) foot setback shall be provided from all interior property lines. The setback area shall be landscaped with mounded turf and/or live ground cover and shrubs and at a minimum fifteen (15) gallon trees planted thirty (30) feet on center.
 - (D) For existing buildings which have been lawfully constructed with less than the required setback, additions to the building may follow the existing building plane, provided that the addition shall not encroach further into the required setback area.
 - ii. Wall Requirement. Lots which abut a vacant lot, residential zone or use, shall provide a minimum six foot high wall of solid brick, masonry or other similar material wall along the property line.
 - iii. South Shore of American River. Development along the south shore of the American River shall demonstrate that all required permits have been obtained from all state and federal agencies with jurisdiction along the river.
 - iv. Parking shall comply with the requirements in Chapter 17.64 of this title provided that along the south side of the American River parking areas shall be located no closer than one hundred (100) feet to the toe of the levee.
 - v. Expansion of Existing Buildings. Buildings or structures which are expanded shall comply with the following requirements:
 - (A) The proposed area of expansion shall conform to all current development standards, except as provided in subsection (E)(2)(b)(i)(D) of this section.
 - (B) All exterior improvements shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.
 - (C) Minor improvements to facades fronting on streets shall be required when an expansion occurs. Facade improvements, may include but are not limited to paint and awnings.
 - (D) Front landscaping shall be required, if determined to be appropriate and required by design review approval.
 - (E) Site improvements to fencing, signage, and trash enclosures shall be required to improve the appearance of the site which is in view of the public.
 - vi. Construction on vacant lots shall conform to the current development standards, provided that all uses shall be conducted wholly within a completely enclosed building or within an area enclosed on all sides by a solid fence (i.e., cyclone fence with slats, wood, etc.) or wall (i.e., masonry, brick, etc.) at least six feet in height. No material or supplies shall be stored within any required landscaped setback areas.
 - c. Design Review. All development shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.
- 3. Heavy Industrial (M-2) Zone (Central).
 - a. Uses. Except as otherwise provided herein, (1) uses permitted in the M-2 zone outside of the Richards Boulevard special planning district by the comprehensive zoning ordinance shall be permitted in the M-2 zone (central) in the Richards Boulevard special planning district; and (2) if the comprehensive zoning ordinance requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the M-2 zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.
 - b. Office Uses. Office uses shall be permitted in the M-2 zone as follows:
 - (A) Permitted as a Matter of Right. Office use, including medical clinic and medical offices, shall be permitted as a matter of right only if they are related to a

commercial/industrial use located in the same building or on the same parcel and do not occupy more than twenty-five thousand (25,000) square feet or twenty-five (25) percent of the gross floor area of the building on the site, whichever is less. Where multiple buildings are located on a single parcel, the maximum amount of space that may be devoted to office use, which shall be related to the commercial/industrial use(s) on that parcel shall be twenty-five (25) percent of the total square foot floor area of all buildings on that parcel or twenty-five thousand (25,000) square feet, whichever is less.

(B) Office Use of Buildings in Existence on January 1, 1997-Special Permit Required. Subject to approval of a special permit by the zoning administrator or planning commission pursuant to the following provisions, buildings existing on January 1, 1997 may be devoted to office space that is unrelated to a commercial/industrial use or exceeds the limitations set forth in subsection (E)(3)(a)(i)(A) of this section.

(1) Zoning Administrator Authority. The zoning administrator shall have the authority to approve a special permit to allow for office use of a building existing on January 1, 1997 where the office use is not related to a commercial/industrial use located in the same building or on the same parcel or where the office use will exceed the twenty-five thousand (25,000) square feet or twenty-five (25) percent limitation set forth in subsection (E)(3)(a)(i)(A) of this section, provided that the maximum amount of office space that the zoning administrator may approve for a single parcel shall be fifty thousand (50,000) square feet; and provided further that the establishment or expansion of office use shall be limited to tenant improvements of buildings existing on January 1, 1997, and shall not involve the addition or expansion of the square footage of such existing buildings or the construction of a new building.

(2) Planning Commission Authority. The planning commission shall have the authority to approve a special permit to allow for office use of a building existing on January 1, 1997 where the office use is not related to a commercial/industrial use located in the same building or on the same parcel or where the office use will exceed the twenty-five (25) percent or twenty-five thousand (25,000) square feet limitation set forth in subsection (E)(3)(a)(i)(A) of this section, and where the amount of office space exceeds that which the zoning administrator is authorized to approve pursuant to subsection (E)(3)(a) of this section, provided that the maximum amount of office space that the planning commission may approve for a single parcel shall be one hundred thousand (100,000) square feet; and provided further that the establishment or expansion of office use shall be limited to tenant improvements of buildings existing on January 1, 1997, and shall not involve the addition or expansion of the square footage of such existing buildings or the construction of a new building.

ii. Conditionally Permitted Uses. The following additional uses shall be permitted in the M-2 zone (central) in the Richards Boulevard special planning district, subject to approval of a special permit:

(A) Hotel/motel.

iii. Prohibited Uses. The following uses are prohibited in the M-2/M-2(PC) zone (central) in the Richards Boulevard special planning district:

(A) Auto wrecking;

(B) Beverage bottling plant;

(C) Cement or clay products manufacturing;

(D) Concrete batch plant;

(E) Dairy products processing;

(F) Food processing;

(G) Fuel yard;

(H) Junkyard;

(I) Material recovery facility/yard waste composting facility (recycling plant);

(J) Nonprofit organization food storage and distribution, food preparation for off site consumption, meal service facility, as defined in Chapter 17.16 of this title;

(K) Petroleum storage;

(L) Railroad yard or shop;

(M) Other heavy industrial uses, similar to the above uses, which the planning commission determines to inhibit future development consistent with the Richards Boulevard area plan.

b. Development Standards. Notwithstanding the provisions of this title the following development standards shall apply:

i. Setbacks.

(A) All street frontages shall provide a minimum ten (10) foot landscaped setback.

(B) A fifteen (15) foot setback shall be provided from all interior property lines.

(C) For existing buildings which have been lawfully constructed with less than the required setback, additions to the building may follow the existing building plane, provided that the addition shall not encroach further into the required setback area.

ii. Expansion of Existing Buildings. Buildings or structures which are expanded shall comply with the following requirements:

(A) The proposed area of expansion shall conform to all current development standards, except as provided in this section.

(B) All exterior improvements shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.

(C) Minor improvements to facades fronting on streets shall be required when an expansion occurs. Facade improvements, may include but are not limited to paint and awnings.

(D) Front landscaping shall be required, if determined to be appropriate and required by the design review approval.

(E) Site improvements to fencing, signage, and trash enclosures shall be required to improve the appearance of the site which are in view of the public.

iii. Construction on vacant lots shall conform to the current development standards, provided that all uses shall be conducted wholly within a completely enclosed building or within an area enclosed on all sides by a solid fence (i.e., cyclone fence with slats, wood, etc.) or wall (i.e., masonry, brick, etc.) at least six feet in height. No material or supplies shall be stored within any required landscaped setback areas.

c. Design Review. All development shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title.

4. Heavy Industrial (M-2) Zone (West).

a. Uses. Except as otherwise provided herein, (1) uses permitted in the M-2 zone outside of the Richards Boulevard special planning district by title shall be permitted in the M-2 zone (west) in the Richards Boulevard special planning district; and (2) if this title requires the approval of a special permit or other discretionary entitlement(s) to establish a particular use in the M-2 zone outside of the Richards Boulevard special planning district, approval of the same discretionary entitlement(s) shall be required to establish the use within the Richards Boulevard special planning district.

b. Development Standards. Notwithstanding the provisions of this title, the following development standards shall apply:

i. Setbacks. As permitted by this title, provided that a ten (10) foot landscaped setback shall be required from all street frontages.

c. Design Review. All development shall be subject to design review and shall comply with all applicable design requirements pursuant to Chapter 17.132 of this title. (Ord. 2007-070 § 1; Ord. 2006-065 § 21; Ord. 2000-028 § 3(i)(g)(a) (Exh. 1), 3(i)(g)(b), 3(i)(g)(iii) (Exh. 2), 3(i)(g)(iv) (Exh. 3), 3(i)(g)(f) (Exh. 5); Ord. 99-015 § 5-1.7-B)

17.120.030 Nonconforming use regulations.

A. General. Except as provided below, the nonconforming use regulations set forth in Chapter 17.88 of this title, shall apply to nonconforming uses, and to the use of nonconforming buildings, structures and lots, within the Richards Boulevard special planning district.

B. Discontinuance of Nonconforming Uses. Notwithstanding the provisions of Chapter 17.88 of this title, a nonconforming use of a lot, building or structure, or portion thereof, in the Richards Boulevard SPD may be restored and resumed if the period of vacancy and unoccupancy does not exceed four years; provided that pursuant to subsection (B)(1) of this section the planning commission may extend this period by a maximum of six years, for a total of ten (10) years. If the lot, building or structure becomes vacant or remains unoccupied for a continuous period of four years, or such longer period(s) as the planning commission may have approved pursuant to subsection (C)(1) of this section, the lot, building or structure shall not be thereafter occupied except by a use which conforms to the use regulations of the zone in which it is located.

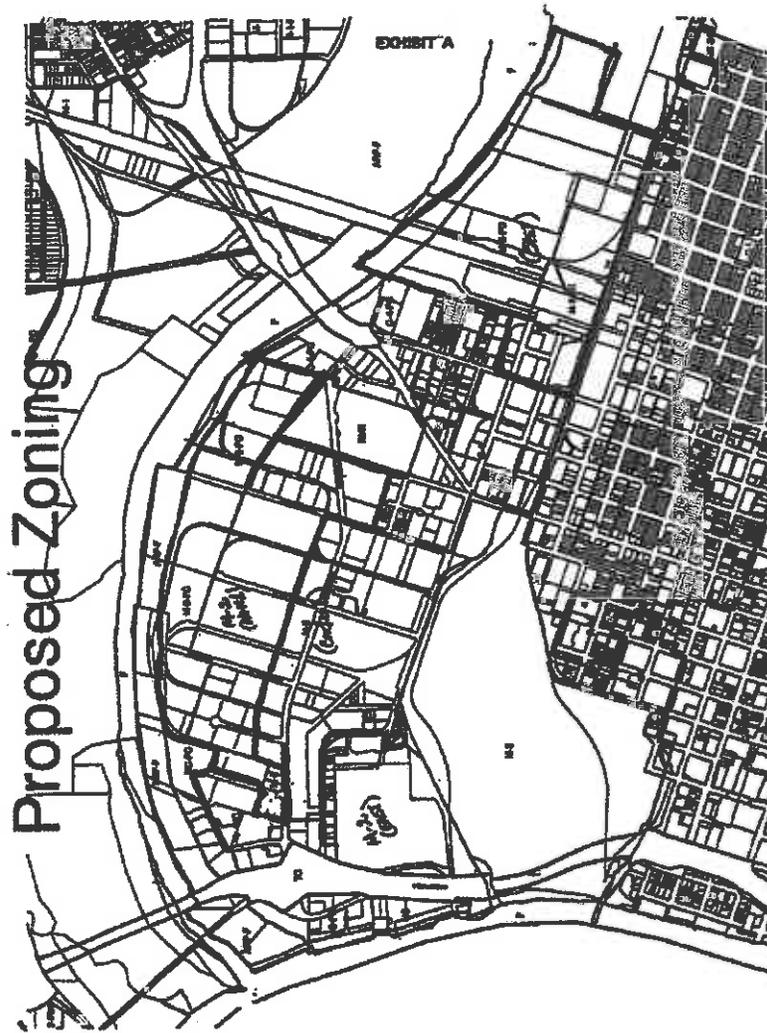
1. Extension of Time for Restoration of Nonconforming Use. Upon a showing of good cause and upon a determination that the applicant has made reasonable and diligent efforts to restore the nonconforming use, the planning commission may grant two extensions of time of not more than three years each, for a maximum of six years, of the time specified above for restoration of a nonconforming use. An application for extension of the time period in which a nonconforming use may be restored must be filed not less than thirty (30) days prior to expiration of the time period. An application for extension of time pursuant to this provision shall be noticed and heard, and shall be subject to appeal, in the same manner as an application for a planning commission special permit.

C. Restoration of Damaged or Destroyed Buildings. Subject to the restrictions set forth below, and notwithstanding the provisions of Chapter 17.88 of this title, a nonconforming building or structure, or any portion thereof, or a building or structure lawfully used for a nonconforming use, which is damaged or destroyed, either partially or completely, by fire, flood, wind, earthquake or other calamity, or by the public enemy, may be restored and the occupation or use of that building, structure or part thereof, which lawfully existed at the time of damage or destruction, may be rebuilt, restored or replaced, and devoted to the same use or uses that were in use prior to the damage or destruction. The restoration or replacement shall be commenced within a period of three years following the date of damage or destruction and shall be diligently prosecuted to completion, provided that, pursuant to subsection (C)(3) of this section, the planning commission may extend this period by a maximum of two years, for a total of five years. Commencement shall be deemed to occur when a building permit is obtained and construction thereunder physically commences. Any reconstruction or restoration shall be in accordance with the regulations of the building code existing at the time of reconstruction or restoration.

1. Same Level of Development. The right to rebuild, restore or replace shall be limited to rebuilding or replacing the building or structure with a building or structure that is of the same size as the original building or structure. Nothing in this provision shall prevent a property owner from rebuilding or replacing a damaged or destroyed building or structure with a building or structure which differs in terms of height, lot coverage, design or other feature but which has the same or less square footage than the original building or structure; and provided further that if the footprint of the building is changed from the footprint that existed prior to the event causing the damage or destruction, it shall comply with the development standards for new development in the Richards Boulevard SPD, including but not limited to setbacks, landscaping, and lot coverage requirements.

2. Design Review. The reconstruction, restoration or replacement of a building or structure pursuant to this provision shall be subject to design review pursuant to Chapter 17.132 of this title.

3. Extension of Time for Restoration of Damaged or Destroyed Buildings. Upon showing of good cause, and upon a determination that the applicant has made reasonable and diligent efforts to restore the damaged or destroyed building, the planning commission may grant one extension of time for a maximum of two years of the specified above for the restoration of a damaged or destroyed building. An application for extension of the time period in which a nonconforming use may be restored must be filed not less than thirty (30) days prior to expiration of the time period. An application for extension of time pursuant to this provision shall be noticed and heard, and shall be subject to appeal, in the same manner as an application for a planning commission special permit. (Ord. 2000-028 § 3(i)(g)(e) (Exh. 4))





River District Redevelopment Area

Attachment 24

The River District Redevelopment Area covers over 1,000 acres immediately adjacent to the heart of Downtown Sacramento, stretching from the Sacramento River on the west, the American River on the north, Sutter's Landing Regional Park on the east, and a varied border along North B and C Streets on the south.

Over the past 14 years the Redevelopment Agency and City have invested over \$100 million in Federal and local public dollars within the area which is transitioning from an industrial district to a diverse, urban mixed-use district. In response to new growth along the Richards Boulevard corridor, the City of Sacramento established the Richards Boulevard Redevelopment Area in 1990, and developed the Railyards Specific Plan and Richards Boulevard Area land use plans, adopted in 1994. These plans created a blueprint for the ultimate development of 15 million square feet of office use, 6,500 housing units, and 500,000 square feet of retail, as well as the preservation of key historic buildings, and development of new parks and open space. In 2007, the City created a separate Railyards Redevelopment Area and the Richards Boulevard Redevelopment Area was renamed the River District Redevelopment Area. Work on a new Specific Plan for the River District is underway, scheduled for completion in 2009.

Specific City Council approved objectives include:

- Complete linkages of the circulation system to the Central City
- Establish a mixed-use district (both Railyards and Richards Boulevard planning areas)
- Enhance the American and Sacramento River Corridors
- Preserve opportunities for industrial, service, and retail commercial businesses
- Create opportunities for new market rate housing

Redevelopment Strategy

The current Redevelopment Strategy assumes the City and Redevelopment Agency will act proactively to capture economic opportunities to realize revitalization objectives and policies. Specifically, the Agency and the City will partner to implement the following strategies:

STRATEGY #1: Pursue key infrastructure improvements

Focus on the development of new traffic circulation, public transportation, bikeway and pedestrian improvements, and public utility infrastructure. Financing will come from the City's capital improvement budget, development impact fees, tax increment, and other funding sources. The infrastructure program will "prime the pump" by creating capacity for the higher density urban scale development outlined in the approved land use plans.

STRATEGY #2: Support major office development projects

Within the next several years approximately 3 million square feet of new office use is anticipated to be developed in the Richards Boulevard and Railyards planning areas. These projects will help establish the Richards Boulevard office sub-market, and contribute both fee and tax revenues to finance the infrastructure program.

STRATEGY #3: Support "pioneering" residential development initiatives

Assist in the development of new "master-planned" residential neighborhoods along the American River within the Richards Boulevard and the Railyards planning areas. This residential development will be pioneering in nature, and require significant public involvement in order to create the residential-supporting amenities necessary to market urban housing.

STRATEGY #4: Support service and retail commercial development

The Richards Boulevard commercial corridor and the Gateway District provide opportunities for attracting new service and retail commercial businesses. Proximity to downtown and easy access to the freeway system are key factors in attracting new businesses to the area. The established industrial sub-market of available warehouse and flex space will continue to be a strong focus for economic development efforts.

STRATEGY #5: Pursue development of the riverfront to create both a sense of place and a regional recreation resource

The area is bounded by both the Sacramento and American Rivers, offering miles of natural and urban riverfront. The plan will create a continuous urban recreation trail, Two River's Trail, connecting Old Sacramento to Sutter's Landing Parkway. Initial efforts will focus on creating public access to the park-like setting of the American River. Along the Sacramento River, public access improvements will also include commercial development in the Jibboom Street area. Riverfront development is a key strategy for both establishing a sense of place for the district, and creating a recreation asset for the entire Sacramento region.

Richards Boulevard Redevelopment Area

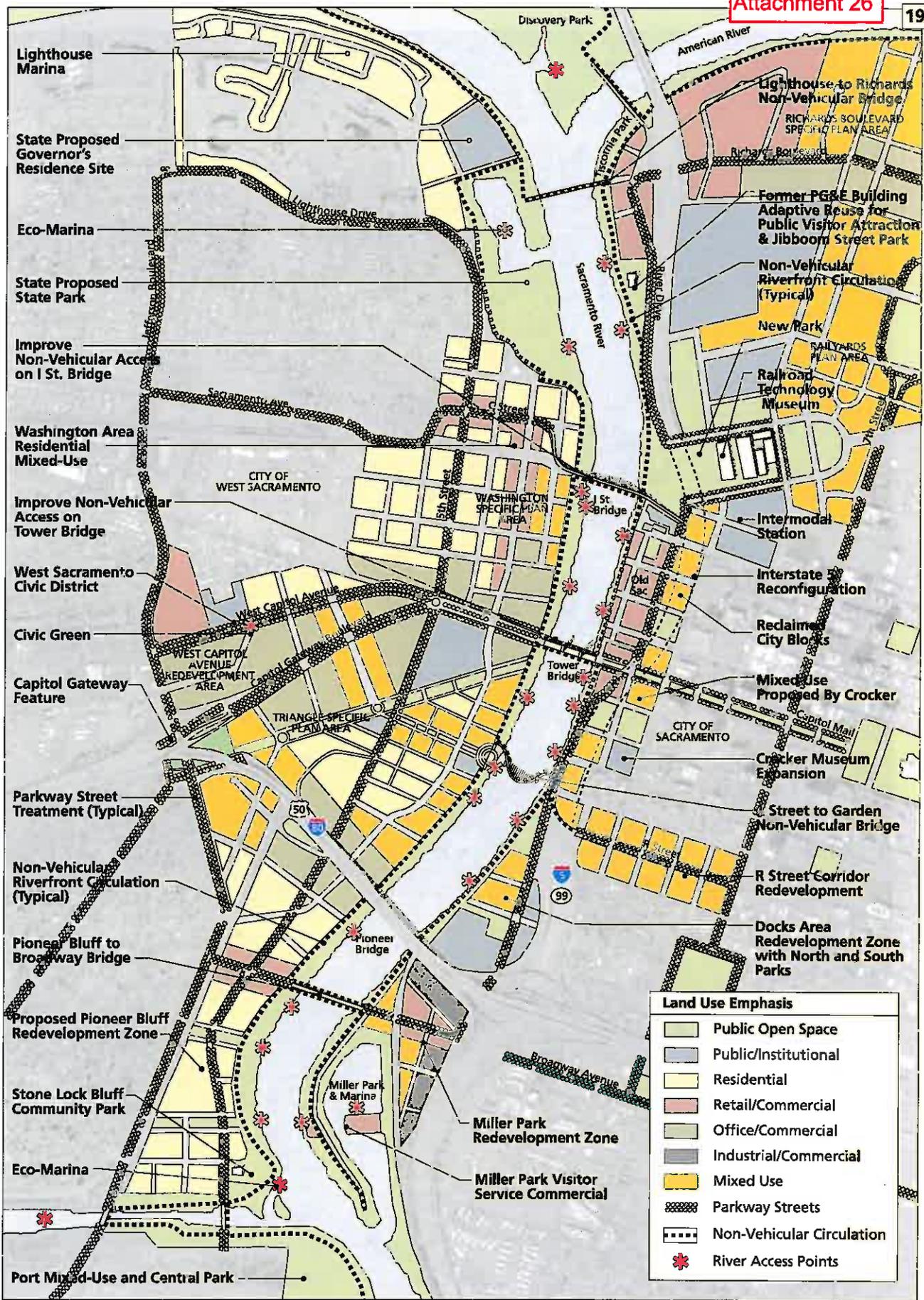


**Aerial Photo View
of
Richards Boulevard
Redevelopment Area**

PLANNING DEPARTMENT
CITY OF DENVER

0 100 200 300 400 500 Feet

Source: 2001 Aerial Photography



Sacramento Riverfront Master Plan

RIVERFRONT CONCEPT



0 450 900 1800 feet



July 2003







City of Sacramento
Economic Development and
Regional Enterprise Department
Department of Utilities

PACIFIC GAS AND ELECTRIC
JIBBOOM STREET
PG&E POWER PLANT
SITE STUDY

Final Report

6 April 2000



ARCHITECTS

been declared surplus by the State. Acquisition of the site is now a consideration for proceeding with the intake structure.

Since 1994, the City has adopted at least five different planning documents that consider and/or govern this site. These documents describe appropriate uses and general design intent for future improvement projects in varying terms, but they are very consistent in one regard: ***Riverfront development should enhance public access to and enjoyment of the River.***

Environmental Analysis

From the 1850's through 1965 this site was used for heavy industrial purposes. A variety of toxic materials were introduced and left in the building and surrounding soils. In the 1980's the site was placed on the Environmental Protection Agency's (EPA) National Priority List (NPL) also known as Superfund list. Removal and remediation work was conducted throughout the decade. In 1991 the EPA removed the site from NPL listing.

In 1997 two clay caps were installed, South and East of the existing building, to encase hydrocarbon and lead containing soils respectively (the building itself acts as a cap as well). This will allow either commercial or industrial land use with no substantial exposure risk to users, provided the caps are not disturbed. Annual sampling and reporting are required, as well as maintenance of clay caps. Any future owner will likely assume these responsibilities. To date, no measurable ground water contamination has been detected.

Residential and recreational uses will likely require a separation from the existing soil. The Federal standard used for lead cleanup at the site was 500 ppm, while recent State standards for recreational uses are on the order of 200 ppm.

The concepts presented here utilize either clean fill to raise the site (similar to the approach used in the Rail Yard Specific Plan) or a structured deck to raise occupants above the ground level.

Geotechnical Analysis

The geotechnical characteristics of this site are well documented. Numerous studies have been performed on this site, principally by DWR. In general, the surface soils are capable of bearing lightly loaded structures - 1 to 3-story wood frame buildings with

Geotechnical Analysis

Purpose

The purpose of the geotechnical investigation was to review existing documentation regarding the geotechnical conditions at the site and to prepare a summary of preliminary foundation options that may be appropriate for the site. Our analysis of potential environmental concerns at the site is included in a separate report.

Numerous geotechnical studies were performed on the site when the site was being considered for the State of California Department of Water Resources California Water Operations Center (CWOC). The City of Sacramento is considering developing the site, and the existing abandoned PG&E power plant would be rehabilitated and remain as a part of the project.

Our work has included reviewing geotechnical and seismic reports prepared for the CWOC as well as existing in-house information. Based on this review, we have prepared this report containing preliminary foundation construction options for each of the proposed uses of the site – a park, a motel/hotel, an office building or mixed-use residential.

Site Conditions

The subject 4.6 acre site is located along the west side of Jibboom Street about one-quarter mile south of Richards Boulevard. The triangular shaped site is bounded by Jibboom Street on the east, the Sacramento River levee on the west, and an existing motel on the north. The existing PG&E power plant building is located on the middle of the north half of the site. The remainder of the site is vacant. The levee crest elevation is at about +39 feet (City datum) and site elevation is about +30 feet. A City of Sacramento water intake pipeline crosses the north end of the site and leads from an intake structure located offshore in the Sacramento River to the City of Sacramento Water Treatment Plant.

Soils on the site generally consist of a surface layer of fill underlain by soft silts, loose clean to silty sands, and medium dense to dense silty sand and sandy gravels. The fill generally consists of loose to medium dense silty sand with minor rubble that was believed to have been either placed during hazardous materials cleanup operations or was associated with the PG&E power plant. The fill was generally observed to depths of 10 to 15 feet below site grade. The fill was underlain by loose sandy silts and soft to firm clayey silts with some interlayered silty clay to depths of about 25 feet

below site grade (about elevation +5 feet). At this depth, a loose to medium dense silty to clean sand was observed. This sand was observed to about a depth of 70 feet below the then existing site grade (about elevation -40 feet). This material was underlain by a dense to very dense sandy gravel to the maximum depth of the borings reviewed for this study.

Groundwater at the site will be influenced by the levels of the adjacent Sacramento River. The river elevation fluctuates from about elevation +5 feet during low-flow periods to within about nine feet of the top of the levees (elevation +29 feet), river flood stage is at +31 feet. During prolonged periods of high river levels, groundwater could rise to near the ground surface.

Summary of Existing Recommendations

Based upon our review of the existing reports, the upper soils are likely suitable for support of only lightly loaded structures. Structures with heavy, concentrated structural loads will require the use of deep foundations. Additionally, the loose sand layers were determined to be potentially liquefiable. Since the CWOC was classified as an essential service facility, extensive studies were conducted to analyze the affect of liquefaction on the site. This effort was performed since the California Building Code requires that essential service facilities must remain operational after the maximum design seismic event. This criterion is more stringent than the requirements of the Uniform Building Code which allows damage to structures as long as life safety of the building occupants is preserved. Due to the potential for liquefaction at the site, the foundation solution for the CWOC consisted of supporting the building on driven piles and densifying the underlying soils through either compaction grouting or stone columns. Additionally, a slurry wall reinforced with steel H-piles anchored with deadmen was located between the west edge of the building and the levee. The purpose of this feature was to provide additional protection against potential lateral spreading resulting from liquefaction.

The existing PG&E power plant was not an essential service facility and the structural retrofit was designed to meet the requirements of the Uniform Building Code. Grout columns installed by triple-rod jet grouting replaced the decomposed timber pile foundations for this structure. A successful load test was performed on a test grout column to verify the design loads were being achieved in the

**Initial Site Assessment
Richards to Railyards Access Improvement
Sacramento, California**

Prepared by:

**BLACKBURN CONSULTING
West Sacramento, California**

For:

**David Evans & Associates
Roseville, California**

October 2008

2 PROJECT DESCRIPTION AND LOCATION

2.1 Description and Location

The proposed Richards Boulevard to Railyard Boulevard Access Improvement project is located in Sacramento, California and generally consists of road improvements along I-5 ramps, Jibboom Street, Richards Boulevard, Railyards Boulevard (between Jibboom Street and Bercut Drive) and Bercut Drive, and is designed to update access and improve traffic flow to the Sacramento Railyard. Figure 1 presents the Vicinity Map, and Figure 2 presents the Site Plan.

Specific project elements at the I-5/Richards Boulevard interchange include widening off-ramps to improve storage and reduce queuing, adding ramp metering to northbound on-ramp, widening of Richards Boulevard between Jibboom Street and Bercut Drive to provide added lane capacity, and modifying signals, bike lanes and sidewalks. Along Jibboom Street project elements include reducing lane widths, restriping to add a two-way left turn lane for vehicle access, removal of existing sidewalks on the east side, completing the sidewalk along the west side and providing Class 2 bike routes. Along Bercut Drive project elements include adding lanes at the Richards Boulevard intersection, and realigning sidewalks and bike paths. A short segment of Railyards Boulevard will be constructed. This new roadway will connect Bercut Drive to Jibboom Street with a crossing beneath I-5. New signalizations include left-turn moves at Railyards Boulevard/Jibboom Street, Railyards Boulevard/Bercut Drive, and Bercut Drive/South Park Street. The existing signalized intersections would be modified at both ramp intersections with Richards Boulevard, as well as the Richards Boulevard/Bercut Drive intersection.

David Evans & Associates (DEA) has indicated that the project will utilize existing public right of way outside the Railyards property. Right of way within the Railyards would be accomplished via agreement between the landowner and City. No new right of ways will be acquired along Jibboom Street, Bercut Drive or any other location.

2.2 Regional Geology and Physical Setting

The site lies within the Great Valley geomorphic province of California. The Cascade and Klamath Ranges border the Great Valley to the north, the Coast Ranges to the west, the Sierra Nevada to the east, and the Transverse Ranges to the south. The Valley formed by tilting of the Sierran Block with the western side dropping to form the valley and the eastern side being uplifted to form the Sierra Nevada. The valley is characterized by a thick sequence of alluvial, lacustrine and marine sediments. The thickness of the sediments varies from a thin veneer at the edges of the valley, to several thousand feet in the central portion of the valley.

The study area is located on an alluvial plain approximately 0.2 miles south-southeast of the confluence of the American and Sacramento Rivers. The underlying deposits are mapped by Wagner et al. (1981) as Quaternary Levee and Channel deposits. The topography within the study area is generally flat with the site elevation approximately 20 to 25 feet above mean sea level (msl) based on the USGS 7.5 Minute Topographic Map, Sacramento East Quad, 1992.

Groundwater beneath the site is hydraulically connected to the Sacramento River. The river serves as a hydraulic connection, and presumably a barrier, to the potable groundwater that is on the western side of the Sacramento River. The groundwater beneath the site rises to within five feet of the ground surface for up to six month of the year. Depth to groundwater during the rest of the year is approximately 15-30 feet below ground surface. Flow direction is presumed to fluctuate semiannually according to the river stage.

2.3 Current Land Use

The project corridor consists of existing roadway, curb, gutter, and/or sidewalk areas associated with portions of Interstate 5, Jibboom Street, Richards Boulevard, and Bercut Drive. Surrounding land use includes the historic PG&E building, water intake facilities, the Sacramento River Treatment Plant, service stations, restaurants, motels and the former Union Pacific Railyard (UPRR). The site vicinity is bordered by the Sacramento River to the west and the American River to the north. Open space areas along these rivers are developed as parks and bicycle paths and are heavily vegetated.

2.4 Historic Land Use

During the mid 1800's, this area was primarily undeveloped due to the swampy characteristic of the area. Sutter Lake existed immediately south and east of the project corridor and a promontory from Sutter Lake to the American river, named Slater's Addition was shown to exist in 1848. This promontory was crisscrossed by a number of streets (Sycamore, First, Broad, Lake) that no longer exist. Many ships anchored off Slater's Addition giving rise to the name of Jibboom Street for its waterfront area. This area did not develop as rapidly as the central business district between I and M streets or the UPRR which developed along Sutter Lake. By 1910, Sutter Lake had been filled and the railyard was further developed which led to the development of the area to the north (project area).

2.4.1 Aerial Photograph Review

BCI reviewed aerial photos from 1952, 1961, 1971, 1984, 1993, 1998, and 2005 as listed below:

1952 Photo by Pacific Air, Scale 1"=555'
1961 Photo by Cartwright, Scale 1"=555'
1971 Photo by Cartwright, Scale 1"=333'
1984 Photo by WSA, Scale 1"=690'
1993 Photo by USGS, Scale 1"=666'
1998 Photo by USGS, Scale 1"=666'
2005 Photo by EDR, Scale 1"=484'

We reviewed historic aerial photography in an attempt to identify significant changes in site use that may indicate the potential for hazardous materials within or adjacent to the project corridors. Copies of aerial photographs are provided in Appendix A. The following is a summary of notable features observed within the overall project area.

DRAFT
**AERIALY DEPOSITED LEAD/
PHASE II ASSESSMENT**
Railyard to Richards Boulevard
Access Improvement Project
Sacramento, California

Prepared by:
Blackburn Consulting
August 2009

Prepared for:
David Evans & Associates

Safety Plan (HASP) and a project-specific Hazardous Waste Operations and Emergency Response Plan.

PHASE II REVIEW OF SERVICE STATION SITES

To evaluate potential hazardous material impacts to the project from Leaking Underground Storage Tank (LUST) sites, we reviewed available documentation from the Geotracker website for the existing Valero (Arco) and Shell stations as well as the former Texaco station. The status of each is summarized below:

- Valero (222 Jibboom St.) – Documented petroleum hydrocarbon impacts to soil and groundwater. Case closed by Sacramento County Environmental Management as low risk site.
- Shell (225 Jibboom St.) – Documented petroleum hydrocarbon impacts to soil and groundwater. Ongoing groundwater monitoring with recent (January 2009) detections of total purgeable petroleum hydrocarbons, MTBE and TBA.
- Former Texaco (226 Jibboom St.) – Documented petroleum hydrocarbon impacts to soil. Case closed by Sacramento County Environmental Management as low risk site.

In addition to the ongoing detections at the Shell site, there is the potential to have residual soil and/or groundwater contamination associated with the two closed sites. Groundwater has been documented to fluctuate seasonally to within 5 feet of the ground surface in the area of these LUST sites. Consequently, there is the potential to encounter a “smear zone” of soil contamination and/or contaminated groundwater if excavation depths extend beyond approximately 5 feet.

Dewatering

If construction occurs during a period of high groundwater, improvements, including underground utilities, deeper than 3 to 5 feet bgs may require dewatering. The final determination regarding the need for dewatering should be assessed immediately prior to issuing final bid documents. If the final schedule indicates improvements will be constructed during a period of high groundwater, the construction documents should reflect the potential for dewatering.

This is particularly important along Jibboom Street where there is known groundwater contamination. Recent groundwater monitoring data from the Shell Station suggests that impacted groundwater extends under Jibboom Street along the western boundary of the site. As a result, dewatering in this area is likely to encounter impacted groundwater. Further, dewatering close to the existing plume has the potential to affect the flow characteristics of impacted groundwater. Consequently, if it appears that dewatering will be needed, within approximately 500 feet of the Shell station, proper coordination with representatives of that station is essential. This includes the responsible party (station owner?), the regulatory oversight agency, and the consultant. Depending upon the depth and location of dewatering, they may

determine that dewatering will not affect their plume, but their involvement in the assessment is key.

Further, although no other actively monitored plumes of impacted groundwater are identified in project corridor, given the historic industrial nature of the area it is possible that dewatering could encounter impacted water. Planning for the handling and disposition of extracted water should account for this possibility.

LIMITATIONS

BCI performed these services in accordance with generally accepted environmental engineering principles and practices currently used in Northern California. We do not warranty our services.

Our scope does not include evaluation of other hazardous materials or a determination of their potential presence on the site.

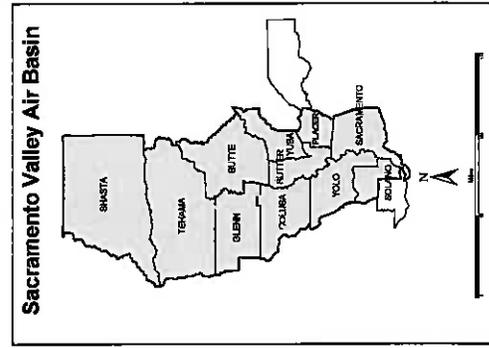
This report is not a comprehensive site characterization and shall not be so construed. The findings presented in this report are predicated on the results of limited sampling and laboratory analyses. In addition, the obtained information is not intended to address potential impacts related to sources other than those specified herein. Therefore, we deem the report conclusive only with respect to the information presented.

CHAPTER 4

Historical Basinwide Emissions and Air Quality

Sacramento Valley Air Basin

Introduction – Area Description



The Sacramento Valley Air Basin is home to California's State capital. Located in the northern portion of the Great Central Valley, the Sacramento Valley Air Basin includes Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties, the western urbanized portion of Placer County, and the eastern portion of Solano County. The Sacramento Valley Air Basin occupies 15,040 square miles and has a population of more than two million people. Because of its inland location, the climate of the Sacramento Valley Air Basin is more extreme than the climate in the San Francisco Bay Area Air Basin

or South Coast Air Basin. The winters are generally wet and cool, while the summers are hot and dry.

Emissions from the Sacramento metropolitan area dominate the emission inventory for the Sacramento Valley Air Basin, and on-road motor vehicles are the primary source of emissions in the metropolitan area. While pollutant concentrations have generally declined over the years, additional regulations will be needed to attain the State and national ambient air quality standards.

Figure 4-41

location, the climate of the Sacramento Valley Air Basin is more extreme than the climate in the San Francisco Bay Area Air Basin

Sacramento Valley Air Basin PM₁₀ Air Quality Trend

The maximum annual geometric mean PM₁₀ concentrations in the Sacramento Valley Air Basin show a fairly steady decline over the trend period. The maximum annual geometric mean shows a decrease of about 31 percent from 1988 to 1997, when the value was below the level of the State annual standard. The number of exceedance days also decreased. During 1988, there were 33 State standard exceedance days, compared with 11 days during 1997. The national 24-hour PM₁₀ standard has not been exceeded since 1987. PM₁₀ data for the Sacramento Valley area exhibit a pattern that is typical of many areas in California, where the 24-hour PM₁₀ standards are usually achieved before the annual standards. Because many of the sources that contribute to ozone also contribute to PM₁₀, future ozone emission controls should improve PM₁₀ air quality.

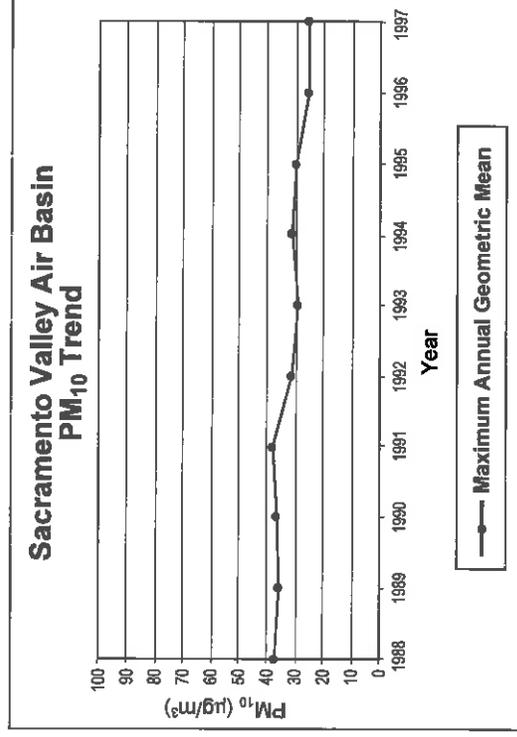


Figure 4-47

SMAQMD Thresholds of Significance Table

Construction Phase		Operational Phase
Mass Emission Thresholds (dealing with Ozone precursors)		
NO _x	85 pounds/day	65 pounds/day
ROG	NONE	65 pounds/day
Concentration Thresholds (based on the California Ambient Air Quality Standard, identical threshold for both phases of development)		
PM ₁₀	50 µg/m ³ 24-hour standard; 20 µg/m ³ Annual Arithmetic Mean	
PM _{2.5}	12 µg/m ³ Annual Arithmetic Mean	
CO	20 ppm 1-hour standard; 9 ppm 8-hour standard	
NO ₂	0.18 ppm 1-hour standard; 0.03 ppm Annual Arithmetic Mean	
SO ₂	0.25 ppm 1-hour standard; 0.04 ppm 24-hour standard	
Lead	1.5 µg/m ³ 30-day average	
Visibility Reducing Particles	Extinction coefficient of 0.23 per kilometer - visibility of ten miles or more due to particles when relative humidity is less than 70 percent	
Sulfates	25 µg/m ³ 24-hour standard	
H ₂ S	42 µg/m ³ or 0.03 ppm 1-hour standard	
Vinyl Chloride	26 µg/m ³ or 0.01 ppm 24-hour standard	

Notes:

The SMAQMD Board of Directors adopted the air quality thresholds of significance on March 28, 2002, via resolution AQMD2002018. A project is considered significant if emissions exceed a CAAQS or contribute substantially to an existing or projected violation of a CAAQS. A substantial contribution is considered an emission that is equal to or greater than 5% of a CAAQS. Revisions to the CAAQS are automatically adopted as revisions to these thresholds. Official citation for the CAAQS: California Code of Regulations, Title 17, Section 70200, Table of Standards.

Stationary Sources

Toxic Air Contaminant (TAC) Thresholds	
Cancer Risk	An incremental increase in cancer risk greater than 10 in one million at any off-site receptor.
Non-cancer (Hazard Index)	Ground-level concentration of project-generated TACs that would result in a Hazard Index greater than 1 at any off-site receptor.

Notes:

The TAC thresholds were developed as part of the SMAQMD's AB2588 program. The SMAQMD Board of Directors has not established a threshold for mobile source or non-permitted sources of TAC, see Chapter 5. The SMAQMD Board of Directors has not established a threshold for GHG emissions, see Chapter 6.



Guide to Air Quality Assessment

in Sacramento County

July 2004

SACRAMENTO METROPOLITAN



AIR QUALITY
MANAGEMENT DISTRICT

products should be specified for use. Heavy-duty diesel powered construction equipment emits relatively low levels of ROG, and ROG emissions from other construction phases such as architectural coating can also be regulated by District rule.

NO_x is considered a major contributor to construction-related ozone precursor emissions, which is predominately generated from heavy-duty, mobile construction equipment. The strategies contained in the 1994 Sacramento Area Regional Ozone Attainment Plan include a local commitment to reduce NO_x by 5 tons per day from mobile sources. To reduce NO_x from heavy-duty vehicles, the Air Districts along with other government agencies provide financial incentives programs (*i.e.*, Carl Moyer and SECAT) to:

- Replace diesel powered vehicles with vehicles powered by cleaner fuels.
- Replace older, more polluting diesel engines with newer, cleaner diesel engines.
- Repower existing construction equipment with newer, lower-emitting engines or emissions control technologies.
- Retrofit existing construction equipment with low-emissions emissions control equipment.
- Encourage the fuel industry to make cleaner fuels more available and more competitive.

SMAQMD has adopted a construction emissions threshold of 85 pounds per day of NO_x. The Air District's report "Justification for Construction Threshold" explains the basis for determining the threshold. Interested parties may obtain copies of the report by contacting the SMAQMD.

3.2 Construction Emissions Screening

SMAQMD generally accepts the following screening level assumption for determining the construction activity emissions' level of significance.

If the project's NO_x mass emissions from heavy-duty, mobile sources is determined not potentially significant using the recommended methodologies for estimating emissions described below, then the Lead Agency may assume that exhaust emissions of other pollutants from operation of equipment and worker commute vehicles are also not significant. In such an event, the steps for estimating exhaust emissions of other pollutants in Section 3.3 need not be undertaken. Note that the potential health risk analysis for diesel exhaust particulate matter must still be addressed as described in Chapter 6.

The District may determine that the screening level assumption stated above should not apply to a given project due to project-specific considerations, such as the construction schedule, equipment use, or unique meteorological or soil conditions. SMAQMD recommends that Lead Agencies contact the District early in the CEQA process to confirm whether construction emissions screening may be used for a given project.

(Adopted May 7, 1976) (Amended November 6, 1992)
(Amended July 9, 1993) (Amended February 14, 1997)
(Amended December 11, 1998)(Amended April 2, 2004)
(Amended June 3, 2005)

RULE 403. FUGITIVE DUST

(a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

(b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

(c) Definitions

- (1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.
- (2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.
- (3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.
- (4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.
- (5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.

- (31) **STABILIZED SURFACE** means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to wind-driven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.
 - (32) **TRACK-OUT** means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
 - (33) **TYPICAL ROADWAY MATERIALS** means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.
 - (34) **UNPAVED ROADS** means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.
 - (35) **VISIBLE ROADWAY DUST** means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
 - (36) **WIND-DRIVEN FUGITIVE DUST** means visible emissions from any disturbed surface area which is generated by wind action alone.
 - (37) **WIND GUST** is the maximum instantaneous wind speed as measured by an anemometer.
- (d) **Requirements**
- (1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

- (A) the dust remains visible in the atmosphere beyond the property line of the emission source; or
 - (B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.
- (2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.
- (3) No person shall cause or allow PM₁₀ levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM₁₀ monitoring. If sampling is conducted, samplers shall be:
- (A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM₁₀.
 - (B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.
- (4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.
- (5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.
- (A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

FEDERAL AGENCIES SHOULD CONSIDER CLIMATE CHANGE WHEN REVIEWING ENVIRONMENTAL EFFECTS OF PROJECTS, SAYS COUNCIL ON ENVIRONMENTAL QUALITY

The Council on Environmental Quality (CEQ) published draft guidance on February 23, 2010, advising federal agencies how to consider climate change and greenhouse gas (GHG) emissions in their review of the environmental effects of proposed projects under the National Environmental Policy Act (NEPA). Increased attention to climate change may complicate and lengthen the environmental review process, raise the prospect of disputes and litigation, and increase pressure for project modifications or other measures to reduce GHG emissions or mitigate effects relating to climate change.

NEPA is the nation's most extensive environmental law. Other laws typically focus on specific media (such as air, water, or land), specific activities (such as surface mining or releases of hazardous substances), or specific places, flora, or fauna (such as wilderness areas or endangered species). NEPA regulates the actions of all federal agencies in all of these areas. It requires federal agencies to ascertain, disclose, and consider the environmental implications of actions they propose to undertake, fund, or permit. While NEPA directly governs only federal agencies, it effectively regulates many actions of private persons as well as state and local governments, since their activities often entail federal funding or approval.

Generally, NEPA calls on federal agencies to discuss the environmental effects of proposed projects and alternatives to such projects either in a relatively brief Environmental Assessment (EA) or, if the project may significantly affect the environment, in a much longer Environmental Impact Statement (EIS). EAs typically are prepared in less than a year, while EISs commonly require two, three, or more years to prepare.

Since 2003, several federal courts have ruled that, in some circumstances at least, federal agencies should consider GHG emissions in their NEPA analyses. In its draft guidance, CEQ, the agency charged with advising other federal agencies on implementation of NEPA, offers more detailed advice on when and how they should perform that analysis. CEQ calls on federal agencies to consider GHG emissions and climate change in two respects: (1) the effect of a proposed project's GHG emissions on climate and (2) the effect of climate change on the proposed project. It emphasizes that the aim is to "provide meaningful information to decision makers and the public" and "avoid[] useless bulk and boilerplate documentation, so that the NEPA document may concentrate attention on important issues."

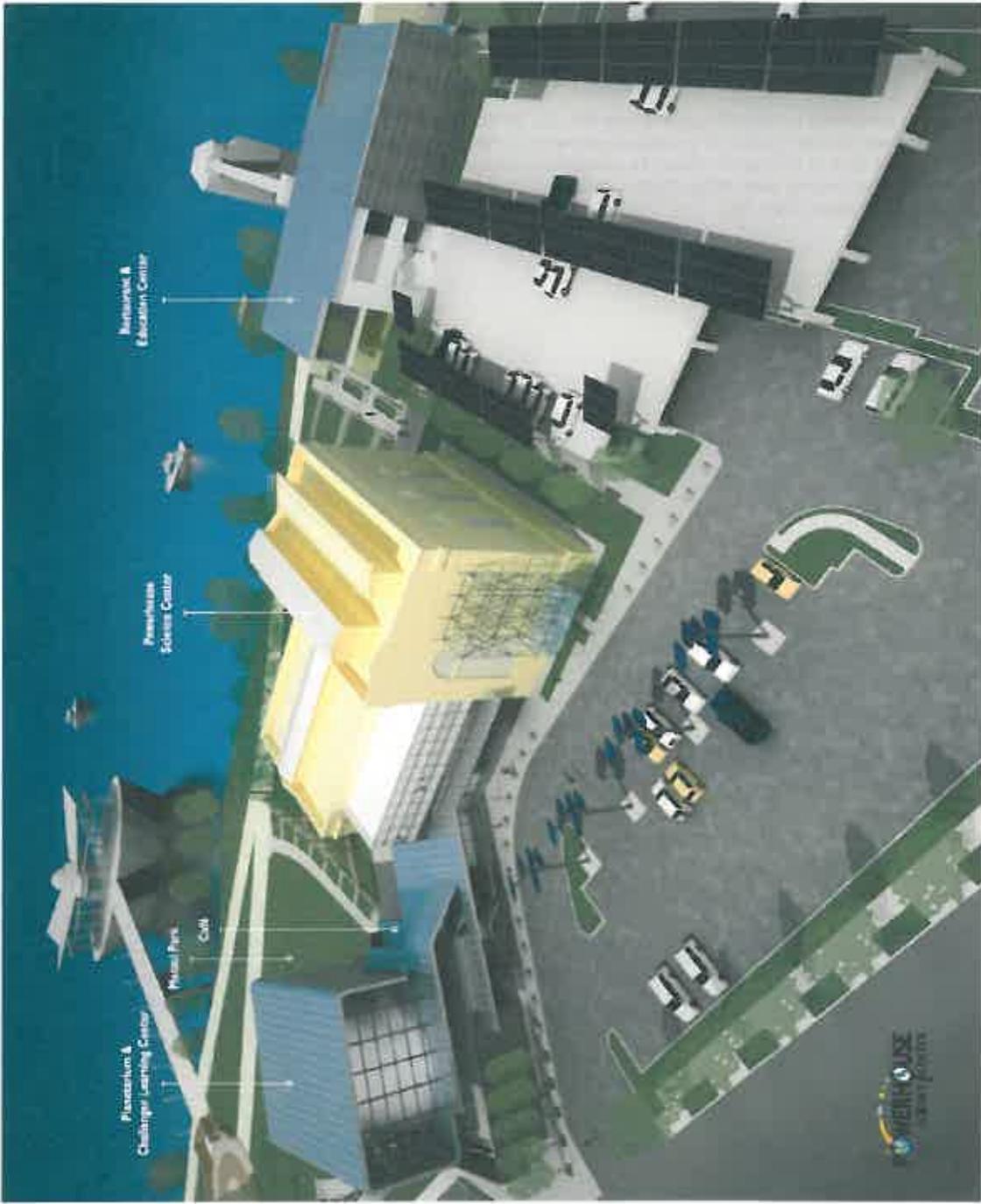
With respect to the effects of a proposed project on climate, the draft guidance suggests that for projects "reasonably anticipated" to cause direct emissions of 25,000 tons or more of carbon dioxide (CO₂) equivalent annually, federal agencies should consider this threshold "an indicator that a quantitative and qualitative assessment may be meaningful to decision makers and the public." (That amount—corresponding roughly to annual GHG emissions of 4,500 to 5,000 cars—is the threshold the EPA uses for triggering reporting requirements under the Clean Air Act.) For projects emitting less, CEQ still encourages agencies to consider whether the project's emissions should receive similar analysis. CEQ clarifies, though, that it does not propose this reference for use as a measure of indirect effects, the analysis of which, it says, "must be bounded by limits of feasibility in evaluating upstream and downstream effects" of projects. Nor does it propose it for use as a threshold of "significance" for determining whether to prepare an EIS rather than an EA. In analyzing direct effects, CEQ advises it would be appropriate to "(1) quantify cumulative emissions over the life of the project; (2) discuss measures to reduce GHG emissions, including consideration of reasonable alternatives; and (3) qualitatively discuss the link between such GHG emissions and climate change." "[I]t is not currently useful," though, says CEQ, "for the NEPA analysis to attempt to link specific climatological changes, or the environmental impacts thereof, to the particular project or emissions, as such direct linkage is difficult to isolate and understand."

CEQ also recommends, rather cryptically, that where an agency discusses cumulative effects of GHG emissions related to a proposed project, it should "do so in a manner that meaningfully informs decision makers and the public regarding the potentially significant effects in the context of the proposed agency action," which "would most appropriately focus on an assessment of annual and cumulative emissions of the proposed action and the difference in emissions associated with alternative actions." CEQ also encourages federal agencies to consider particular climate change impacts on vulnerable communities.

With respect to the effects of climate change on projects, CEQ observes that climate change may affect a proposed project in a variety of ways, including exposing it to a greater risk of floods, storm surges, or higher temperatures. It offers the example of a facility drawing water from a stream that is dwindling as a result of decreased snowpack in the mountains or that is becoming warmer owing to increasing atmospheric temperatures. Climate change effects should be considered, CEQ advises, in analyzing projects designed for long-term utility and located in areas vulnerable to specific effects of climate change, such as increasing sea level or ecological shifts.

Pointing to NEPA's rule of reason, CEQ adds that "agencies need not undertake exorbitant research or analysis of projected climate change impacts in the project area or on the project itself, but may instead summarize and incorporate by reference the relevant scientific literature." Agencies should as well, CEQ cautions, be mindful of "the uncertainties associated with long-term projections from global and regional climate change models" and "disclose these limitations in explaining the extent to which they rely on particular studies or projections."

CEQ invites comments on its draft guidance by May 24, 2010, and poses several specific questions, including whether it should provide guidance on determining whether GHG emissions are "significant" for NEPA purposes and, if so, what level of emissions should be considered to have significant "cumulative effects." Any such guidance could effectively determine which of thousands of projects federal agencies fund or approve each year will require preparation of an EIS.





Attachment 38

Transfer Station Profile for Sacramento Recycling & Transfer Station (34-AA-0195)

Overview
Contacts
Map
Help

[Profiles Home](#)

Overview Profile

General Information

Jurisdiction: Sacramento
County: Sacramento
Size: 96.0 Sq.Miles
Geographic Area: Central Valley
Rural/Urban: Urban
(L)EA: [County of Sacramento](#)
Board Action (Recent Agenda Item) [Search by Name](#)
[Search by Swis Number](#)

Site Information [\(More\)](#)

Latitude: 38.52667 **Longitude:** -121.39306
Name: Sacramento Recycling & Transfer Station
Location: 8491 Fruitridge Road Sacramento CA, 95826
Telephone: (805) 278-8220

Operator(s)

BLT Enterprises Of Oxnard, Inc.
 511 Spectrum Circle Oxnard, CA 93030
Phone: (805) 278-8220 **Fax:** N/R

Owners(s)

BLT Enterprises Of Oxnard, Inc.
 511 Spectrum Circle Oxnard, CA 93030
Phone: (805) 278-8220 **Fax:** N/R

Operational Information

Open to Public:
Actual Capacity (tons):
Permitted Capacity (tons):
Per Day Capacity (Tons/day): 2,500
Permitted Acreage: 19
Actual Acreage:

Waste Types Accepted/Permitted

Mixed municipal

Note: Please contact the site to verify this information and special handling instructions, if any.

State Water and Air Resource Boards

Water Resources Control Board <http://www.swrcb.ca.gov>
Air Resources Board <http://www.arb.ca.gov>

Waste Stream Information Profiles <http://www.calrecycle.ca.gov/Profiles/>
 CalRecycle Webmaster: Webmaster@calrecycle.ca.gov (916) 341-6141 [Disclaimer Information](#)

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New Transfer Station

State Representatives

1 Senate District [Mar...](#) **Senate District 06**
[Steinberg, Darrell \(D\)](#)
2 Assembly District [Mar...](#) **Assembly District 10**
[Huber, Alyson \(R\)](#) **Assembly District 05**
[Niello, Roger \(R\)](#)

Permit Information (View Copy of Permit)

Permit Type: Solid Waste Facility
Permit Status: Permitted
Permitted Activities: Large Volume Transfer/Proc Facility
Operational Status: Active
Permitted Maximum Daily Disposal: 2,500 Tons/day
CIWMB Board Concurrence Date: 9/2006
Next Permit Review Date: 9/2011
Permitted Site Area (acres): 19

Inspections (last three recorded) [Contact LEA for Additional Information](#)

Yes	Inspection Period	Monthly
N/R	Inspection Date:	12/15/2009
N/R	Inspection Date:	11/19/2009
2,500	Inspection Date:	11/19/2009
19	Inspection Date:	11/19/2009

California Environmental Quality Act (CEQA) Information - (CERES)

State Clearing House Number 2006012072
Lead CEQA Agency Planning Department
Document Name/Project Title Mitigated ND for changes at SRTS
Date Received 1/15/2006
CIWMB Comment Date 2/14/2006



Transfer Station Profile for North Area Transfer Station (34-AA-0002)

Overview Contacts Map

Profiles Home Overview Profile

New Transfer Station

Help

General Information

Jurisdiction: Sacramento-Unincorporated County
 County: Sacramento
 Size: 978.0 Sq./Miles
 Geographic Area: Central Valley
 Rural/Urban: Rural
 (L)EA: [County of Sacramento](#)
 Board Action (Recent Agenda Item): [Search by Name](#)
[Search by Swis Number](#)

Site Information [\(More\)](#)

Latitude: 38.64632 Longitude: -121.39500
 Name: North Area Transfer Station
 Location: 4450 Roseville Road North Highlands CA, 95660
 Telephone: (916) 875-6789

Operator(s)

County Of Sacramento, Public Works Dept.
 9850 Goethe Road Sacramento, CA 95827-3500
 Phone: (916) 875-6789 Fax: N/R

Owners(s)

County Of Sacramento, Public Works Dept.
 9850 Goethe Road Sacramento, CA 95827-3500
 Phone: (916) 875-6789 Fax: N/R

Operational Information

Open to Public: Yes
 Actual Capacity (tons): N/R
 Permitted Capacity (tons): 2,400
 Per Day Capacity (Tons/day): 2,400
 Permitted Acreage: 23
 Actual Acreage: N/R

Waste Types Accepted/Permitted

Construction/demolition: Green Materials
 Industrial: Mixed municipal
 Tires: Wood waste

Note: Please contact the site to verify this information and special handling instructions, if any.

State Water and Air Resource Boards

Water Resources Control Board <http://www.swrcb.ca.gov>
 Air Resources Board <http://www.arb.ca.gov>

Waste Stream Information Profiles <http://www.calrecycle.ca.gov/Profiles/>
 CalRecycle Webmaster: webmaster@calrecycle.ca.gov (916) 341-8141 [Disclaimer Information](#)

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State Representatives

2 Senate District(s) [\(More\)](#)
[Cox, Dave \(R\)](#)
[Steinberg, Darrell \(D\)](#)
 2 Assembly District(s) [\(More\)](#)
[Gaines, Ted \(R\)](#)
[Niño, Roger \(R\)](#)

Senate District [01](#)
 Senate District [06](#)
 Assembly District [04](#)
 Assembly District [05](#)

Permit Information (View Copy of Permit)

Permit Type: Solid Waste Facility
 Permit Status: Permitted
 Permitted Activities: Large Volume Transfer/Proc Facility
 Operational Status: Active
 Permitted Maximum Daily Disposal: 2,400 Tons/day
 CIWMB Board Concurrence Date: 11/2005
 Next Permit Review Date: 11/2010
 Permitted Site Area (acres): 23

Inspections (last three recorded) Contact LEA for Additional Information

Inspection Period	Monthly
Inspection Date:	12/8/2009
Inspection Date:	11/17/2009
Inspection Date:	11/17/2009

California Environmental Quality Act (CEQA) Information - CERES

[State Clearing House Number](#) 2005092118
 Lead CEQA Agency: Planning Department
 Document Name/Project Title: ND for the North Area Transfer Station Permit Revision
 Date Received: 9/19/2005
 CIWMB Comment Date: 10/19/2005



Attachment 40

Jurisdiction Profile for City of Sacramento

Profiles Home Diversion Profile **Overview** Waste Flows Planning Assistance Contacts Map Help

Overall Waste Stream: Diversion

County Disposal and Trends

[Jurisdiction Trends](#)

Board Reviewed Diversion Rates for Sacramento

Annual Diversion Rates

1995 Diversion Rate:	45%
1996 Diversion Rate:	45%
1997 Diversion Rate:	49%
1998 Diversion Rate:	47%
1999 Diversion Rate:	42%
2003 Diversion Rate:	48%
2004 Diversion Rate:	49%
2005 Diversion Rate:	43%
2006 Diversion Rate:	52%

[Preliminary Rates for later years...](#)

Diversion Programs Summary for Sacramento in 2007 [\[More...\]](#)

	Number of Programs Operating	Average Jurisdiction
Composting	1	3
Facility Recovery	2	2
HHW	5	3
Policy Incentives	2	1
Public Education	4	3
Recycling	7	6
Source Reduction	6	5
Special Waste Materials	7	5

Overall Waste Stream: Disposal (2008)

	Amount (Tons)	Integrated Waste Management Fees Paid (\$)
Solid Waste Landfilled (buried):	310,993	416,731
Solid Waste Transformed/Waste-to-Energy (burned)	87	-
Solid Waste Exported from the State for Disposal	0	-
Total Disposed	311,080	416,847

Disposal Facilities Used By Sacramento in 2008

Landfills: [Altamont Landfill & Resource Recovery](#) (Alameda), [American Avenue Disposal Site](#) (Fresno), [Anderson Landfill, Inc.](#) (Shasta), [Azusa Land Reclamation Co. Landfill](#) (Los Angeles), [Bakersfield Metropolitan \(Bena\) SLF](#) (Kern), [Fink Road Landfill](#) (Stanislaus), [Foothill Sanitary Landfill](#) (San Joaquin), [Forward Landfill, Inc.](#) (San Joaquin), [Guadalupe Sanitary Landfill](#) (Santa Clara), [Hay Road Landfill, Inc. \(B + J Landfill\)](#) (Solano), [Keller Canyon Landfill](#) (Contra Costa), [Kettleman Hills - B10 Nonhaz Codisposal](#) (Kings), [L and D Landfill Co](#) (Sacramento), [North County Landfill](#) (San Joaquin), [Potrero Hills Landfill](#) (Solano), [Recology \(Narcgal\) Ostrom Road LF Inc.](#) (Yuba), [Recology Pacheco Pass](#) (Santa Clara), [Redwood Sanitary Landfill](#) (Marin), [Sacramento County Landfill \(Kiefer\)](#) (Sacramento), [Vasco Road Sanitary Landfill](#) (Alameda), [Western Regional Landfill](#) (Placer), [Yolo County Central Landfill](#) (Yolo)

Transformation Facilities (Waste-to-Energy): [Commerce Refuse-To-Energy Facility](#) (Los Angeles), [Covanta Stanislaus, Inc.](#) (Stanislaus)

Disposal Facilities Located Within Sacramento In 2008

Landfills: [L and D Landfill Co](#) (Sacramento), [Florin-Perkins \(Inert\) Landfill, Inc.](#) (Sacramento)

Transformation Facilities [none]
(Waste-to-Energy):

Disposal Destination



This disposal destination data shows the total amount and percentages of waste from the selected county disposed within its boundaries, in other counties, and/or exported out of state.

[Disposal OutFlow Destination\(s\)](#) The disposal outflow destination maps show the total amount and percentages of waste from the selected county that this jurisdiction is a portion of disposed outside its boundaries, in other counties, and/or exported out of state.

[Disposal InFlow Destination\(s\)](#) The disposal inflow destination maps show the total amount and percentages of waste the selected county that this jurisdiction is a portion of received within its boundaries from other counties, and/or imported from out of the state.

Disposal data for the maps was compiled from the board's disposal reporting system (DRS). The DRS tracks the amount of solid waste disposed by each jurisdiction in California. Counties in California must submit quarterly disposal reports to the Board showing the amount of waste disposed by each jurisdiction in a county. Waste disposed by a county for 2008 was calculated by totaling a county's four quarters of disposal data for all the jurisdictions in the county. Waste received by a county was determined by totaling four quarters of disposal data by piece of origin received by a county's landfills.

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CalRecycle Webmaster: Webmaster@calrecycle.ca.gov (916) 341-6141 [Disclaimer information](#)

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Alejandro Huerta

From: Dana Allen [DAllen@cityofsacramento.org]
Sent: Monday, February 22, 2010 9:12 AM
To: Alejandro Huerta
Subject: Fwd: Re: Powerhouse Science Center
Attachments: Powerhouse Science Center.xls

FYI

>>> Tony Bertrand 1/28/2010 10:18 AM >>>
Dana,

I have calculated the flows from the proposed site as 7,468/gal/day. Based on this a sewer service size would be 6". The Combined Sewer Mitigation fees calculate on the form would likely be waived based on the Living Machine. I hope this is what you needed.

Tony

>>> Dana Allen 01/25/2010 9:45 AM >>>
Good morning Tony

Thanks for reviewing this for me. Attached is the project description. I'd appreciate your feedback on the quantity of flow projected for this project and what type/size connection would be required if the living machine was not in place.

Please let me know if you have questions.

Dana

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2008-0142

NPDES NO. CAS082597

WASTE DISCHARGE REQUIREMENTS

CITIES OF CITRUS HEIGHTS, ELK GROVE, FOLSOM, GALT, RANCHO CORDOVA,
SACRAMENTO, AND COUNTY OF SACRAMENTO
STORM WATER DISCHARGES FROM
MUNICIPAL SEPARATE STORM SEWER SYSTEM
SACRAMENTO COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Regional Water Board) finds that:

1. The Cities of Citrus Heights, Elk Grove, Folsom, Galt, Rancho Cordova, Sacramento and the County of Sacramento, hereafter jointly referred to as Permittees, submitted a completed Report of Waste Discharge (ROWD) on 1 June 2007, requesting reissuance of waste discharge requirements under the National Pollutant Discharge Elimination System (NPDES) area-wide municipal separate storm sewer system (MS4) permit to discharge storm water runoff from storm drains within their jurisdictions. Included with the ROWD was the Permittees' Stormwater Quality Improvement Plans (SQIPs, a.k.a. Storm Water Management Plan (SWMP)). The SQIP is required as part of the ROWD pursuant to 40 CFR 122.26(d)(2)(iv); therefore it is an integral and enforceable component of the MS4 permit. In addition, the California Superior Court ruled, "*Because the Storm water Management Plan is incorporated and is deemed an integral part of the Permits...any changes to the Plan are actually changes to the Permits. Because these are changes to the Permits, the notice and comment requirements must be complied with.*" (*San Francisco Baykeeper vs. Regional Water Quality Control Board, San Francisco Bay Region, Consolidated Case No. 500527, California Superior Court, 14 November 2003*).
2. The Permittees have chosen the title of Stormwater Quality Improvement Plan (SQIP) to refer to any SWMP requirements or references in this Order.
3. Prior to issuance of this Order, the Permittees were covered under the NPDES area-wide MS4 permit, Order No. R5-2002-0206 (NPDES No. CAS082597), adopted on 6 December 2002. The MS4 permit was originally issued in 1990 and this will be the Permittees fourth permit term.
4. The County and the City of Sacramento (population approximately 1.4 million) are defined as large municipalities (i.e., those with populations greater than 250,000) in the Code of Federal Regulations (40 CFR 122.26(b)(7)). As such, the County and the City of

Sacramento must obtain an NPDES municipal storm water permit. The City of Sacramento has a population of approximately 468,000.

5. The City of Folsom is an urbanized area with a population of about 71,000. Because of its proximity to the urbanized areas of the County, and the location of its storm sewer system discharges relative to discharges from the County's system, Folsom was designated in 1990 as part of the large MS4 (40 CFR 122.26(b)(4)(iii)).
6. The City of Galt is an urbanized area with a population of about 24,000. Galt is unlike the other Permittees in that its MS4 is non-contiguous with the other MS4s; it is also surrounded by rural and agricultural areas that are not subject to the NPDES regulations. Galt became part of the Phase I Sacramento Storm Water Management Program voluntarily in 1990.
7. The Cities of Citrus Heights and Rancho Cordova have a population of less than 100,000 with contiguous urbanized areas within the County. Therefore, the Cities of Citrus Heights and Rancho Cordova are designated as part of the large MS4.
8. The City of Elk Grove has a population of approximately 137,000 and has the nation's fastest growth rate among large cities (100,000 or more population) between July 1, 2004, and July 1, 2005, according to new U.S. Census Bureau population estimates. The City is a contiguous urbanized area within the County. Therefore, the City of Elk Grove is designated as part of the large MS4.
9. Additional cities located in Sacramento County may be incorporated during the life of this Order. If that occurs, the Order may be reopened to consider designating those cities as part of the large MS4, and subject to the requirements of the Order.
10. The MS4 Permit does not apply to all areas within Sacramento County. The MS4 permit covers the land within the Sacramento County Urban Service Area boundary, as well as the City of Galt and the Sacramento International Airport. Land designated within the Urban Service Area includes the Cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, Sacramento and unincorporated Sacramento County.
11. The Permittees have jurisdiction over and/or maintenance responsibilities for their respective MS4s that they own and operate in the Sacramento Urbanized Area. The storm water discharge consists of urban runoff generated from various land uses discharging from MS4s into smaller tributary watercourses and the primary rivers flowing through the area. The quality and quantity of these discharges varies considerably due to the effects of land use, season, geology, and the sequence and duration of hydrologic events.
12. Development which is not guided by water quality planning policies and principles can result in increased pollutant load discharges, flow rates, and flow durations, which can impact receiving water beneficial uses. Construction sites without adequate best management practices (BMPs) implementation result in sediment runoff rates which can

Alejandro Huerta

From: Neal Joyce [njoyce@cityofsacramento.org]
Sent: Tuesday, February 23, 2010 4:56 PM
To: Alejandro Huerta
Cc: Dana Allen
Subject: Re: Water Services Information Request

Alejandro,

Hello, my name is Neal Joyce, I work for the City Department of Utilities and during the planning and entitlement phase of this project I will work with you to answer all City Utilities (water, drainage and sewer) questions. Solid waste questions can be directed to Chris Thoma (cthoma@cityofsacramento.org or 916 808-4833).

As far as water is concerned, there is an existing 12" water main that runs along Jibboomb Street which can be tapped for domestic, irrigation and fire services. Due to the projects close proximity to the water treatment facility there is excellent water pressure of roughly 60 psi as indicated by our static pressure model. There is adequate water supply to support this project.

There is no sewer main that fronts this project. A sewer main extension in Jibbom street would be required. There is an existing 8" sewer main that ends in front of 236 Jibboom St. (Best Western) that has capacity to support this project, however it is only about 5' deep which may or may not be an issue depending on the length of the main extension and the site elevation of the project property.

Drainage is of more concern, as there is also no drainage main fronting the property, and there is no master plan directing where an extension or connection would be required/allowed. There appears to be two possibilities for drainage main extensions. The first would be a main installation flowing south in Jibbom St. which would connect to an existing 30" concrete main that collects drainage from the Water Treatment Plant and outfalls to the river. However, there is some concern that this line may not have capacity to support this project and will need to be looked at more closely before a decision can be made about whether this site can connect to it or not. The second possibility is a 12" drainage main in Jibbom St. that ends near 226 Jibboom Street. (Comfort Suites). This main connects to a Caltrans drainage system. To connect to this system, the existing system capacity would have to be determined and approval from Caltrans would be required.

I am in the process of researching plans for the Water Treatment Plant to see if I can find information regarding how the 30" concrete drainage main serving the plant was sized, how deep it is and what its slope is. What I have learned so far is that during heavy storm events 4 to 5 thousand gallons per minute are pumped into the main, which may cause surcharging.

If you have any questions please let me know.
Thanks,
Neal

Neal Joyce, P.E.
Associate Engineer
Department of Utilities
916 808-1912

>>> "Alejandro Huerta" <Alejandro@dceplanning.com> 02/10/2010 12:07 PM >>>
Dear Tony Bertrand:

2/24/2010

I hope this message finds you well. Rochelle (Shelly) Amrhein and Dana Allen from the Sacramento Housing & Redevelopment Agency and the City, respectively, referred me to you. I am consulting with Shelly to complete an environmental assessment for the proposed Powerhouse Science Center at 450 Jibboom Street. The project would attract approximately 250,000 annual visitors to the site and consists of the following:

1. Renovation of the former PG&E Power Station building to serve as the science center. The existing 19,250 square foot (s.f.) building would be renovated, and two floors would be added to accommodate interpretive exhibits, education programs and learning labs. A lobby, café, and gift shop would be included. The resulting building would have approximately 36,400 s.f. of interior space.
2. A new Planetarium and Challenger Learning Center would be constructed. This 13,218 s.f. two-story building would accommodate the Challenger Learning Center and a 150-seat Planetarium. It would be fifty-seven feet in height.
3. Education Center and Restaurant: This new 14,500 s.f. two-story building would accommodate meeting space for conferencing and education, along with a riverfront restaurant. The education center would occupy 3,953 s.f. on the entry floor, the restaurant would occupy 6,336 s.f. and accommodate 100 patrons, and offices would occupy 4,211 s.f. on the second floor.
4. Parking to accommodate 298 cars.

Would there be adequate water supply to serve the project? Would there be sufficient provisions for sewage, waste water and storm water disposal, and a system of solid waste collection and disposal (i.e. would the design capacity of the treatment plant be exceeded; does the local storm water system have capacity to accommodate additional runoff)?

Please refer me to appropriate departments or agencies if you are unable to answer these questions.

Sincerely,
ALEJANDRO HUERTA| PLANNER

Design, Community & Environment
1625 Shattuck Avenue, Suite 300
Berkeley, CA 94709
P 510-848-3815
F 510-848-4315
www.dceplanning.com <blocked::http://www.dceplanning.com/>

From: Chris Taylor ([mailto:ctaylor@pd.cityofsacramento.org])
Sent: Thursday, February 11, 2010 3:44 PM
To: Alejandro Huerta
Subject: Re: Police Services Information Request

Hi Alejandro,

Sergeant Chris Taylor
Sacramento Police Department
Metro Division
916.808.0867

>>> "Alejandro Huerta" <Alejandro@dceplanning.com> 2/11/2010 1:02 PM
>>>

Would you please answer the following questions:

1. How many sworn officers are in the Sacramento Police Department?
The Sacramento Police Department's authorized staffing is 799 sworn police officers. This amounts to 1.66 officers per thousand residents. However, the department is in the process of developing a 10 year plan to increase the ratio to 2 to 2.5 officers per thousand residents.

2. In what division/service area/patrol area would the project site be located?
This project will be located in the Central Division, District 3, Beat 3A.

3. What police station would serve the project site; is Central Command at 300 Richards Boulevard still the closest station?
Yes. The station at 300 Richards is approximately .5 miles from the project site. This station presently houses patrol officers, forensic investigations (CSI), detectives, administrative staff, SWAT, K9, bicycle officers and traffic officers who respond to calls for service mainly in the downtown area, but also citywide.

4. Does the Sacramento Police Department anticipate that there would be negative impact from the proposed project? Here are some questions to consider:
Would the SPD have adequate access to the site?
Yes. We will be accessing this site by car, bike, and horse. If there is an access for us to get up onto the levee, that would be a plus.

Are there adequate police protection services to serve the project?
We believe that we have the ability to provide adequate service if the project construction incorporates design principles that prevent crime, namely video cameras. With a high number of children going through the site every day, and a high number of transients living immediately adjacent to the site along the levee, crime deterring aids will be very important.

Does the area have a high crime rate?
This area experiences significant crime with a high number of calls for police.

Would the project create a burden on existing facilities in terms of personnel and/or equipment?

Not if crime preventing principles are incorporated into the design as mentioned above.

5. What would be the response time to the site?

The Sacramento Police Department responds to calls based upon a prioritization system. I included a PDF which shows our average response times to calls according to priority for this beat surrounding the project site during 2006, 2007, and 2008. The average response times for 2009 are not yet available.

Priority 1 and 2 calls are the most urgent, life-threatening situations, requiring significant allocation of resources. Examples include in-progress felonies like car-jacking, rape, child abuse, or a pursuit. These calls are infrequent, but when they occur they can easily consume a majority of available police resources for several hours.

Priority 3 calls are serious crimes that have just occurred but are not immediately in-progress at the time the call is received. Examples include car accidents with a seriously injured person or robbery when the suspect has just fled from the scene.

Priority 4 and 5 calls are typically disturbance, suspicious circumstances, or report calls. The majority of calls for police service fall within these priorities.

I will be out of the office tomorrow, if you need me to answer more questions. However, I am intending to be in the office despite the Presidents Birthday holiday on Monday.

Alejandro Huerta

To: King Tunson
Subject: RE: Fire Services Information Request

From: King Tunson [mailto:ktunson@sfd.cityofsacramento.org]
Sent: Wednesday, February 10, 2010 11:27 AM
To: Alejandro Huerta
Subject: Re: Fire Services Information Request

Alejandro,

The answers are in red.

King Tunson
Program Analyst
Planning & Land Use
Sacramento Fire Department
5770 Freeport Blvd Suite 200
Sacramento, Ca 95822
Office (916) 808-1358
Fax (916) 808-1677
email: ktunson@sfd.cityofsacramento.org

>>> "Alejandro Huerta" <Alejandro@dceplanning.com> 02/10/2010 10:22 AM >>>
Dear King Tunson:

I hope this message finds you well. I was referred to you by Rochelle (Shelly) Amrhein and Dana Allen from the Sacramento Housing & Redevelopment Agency and the City, respectively. I am consulting with Shelly to complete an environmental assessment for the proposed Powerhouse Science Center at 450 Jibboom Street. The project would attract approximately 250,000 annual visitors to the site and consists of the following:

1. Renovation of the former PG&E Power Station building to serve as the science center. The existing 19,250 square foot (s.f.) building would be renovated, and two floors would be added to accommodate interpretive exhibits, education programs and learning labs. A lobby, café, and gift shop would be included. The resulting building would have approximately 36,400 s.f. of interior space.
2. A new Planetarium and Challenger Learning Center would be constructed. This 13,218 s.f. two-story building would accommodate the Challenger Learning Center and a 150-seat Planetarium. It would be fifty-seven feet in height.
3. Education Center and Restaurant: This new 14,500 s.f. two-story building would accommodate meeting space for conferencing and education, along with a riverfront restaurant. The education center would occupy 3,953 s.f. on the entry floor, the restaurant would occupy 6,336 s.f. and accommodate 100 patrons, and offices would occupy 4,211 s.f. on the second floor.
4. Parking to accommodate 298 cars.

2/16/2010

Can you please confirm that the closest fire station to this site is Fire Station #14 at 1341 North C Street? Would this station be able to serve the project site and the project? Would there be adequate access for fire vehicles? Would there be enough water supply and water pressure for fighting fires?

A: Station 2 which is located at 1229 I Street would be the first in station to respond to an incident at this location. If you haven't already, you would need to submit plans to the city and obtain a water supply test which will provide what water your working with. Since all the building will be required to be sprinklered, this test will be important.

Finally, how many sworn officers are in the Sacramento Fire Department, and what is the response goal? Would there be enough equipment and personnel to serve the project? The city's goal is maintain appropriate response times to adequately provide fire protection and medical aid services. The city is also committed to maintain optimum staffing levels for sworn, civilian, and support staff in order to provide fire protection and emergency services to the community. The response goal is to arrive on scene within a 4 minute response time 90 percent of the time for fire suppression and medic units within 8 minutes 90 percent of the time.

Sincerely,

ALEJANDRO HUERTA | PLANNER

Design, Community & Environment
1625 Shattuck Avenue, Suite 300
Berkeley, CA 94709
P 510-843-3815
F 510-848-4315
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~ We enhance the health and well-being of people in the communities we serve through compassion and excellence. ~



Sutter Medical Center, Sacramento

Sutter Medical Center, Sacramento (SMCS) has two acute care hospital campuses, Sutter General and Sutter Memorial, and has provided health care to residents of Sacramento since 1923. Sutter Medical Center, Sacramento also includes Sutter Center for Psychiatry, providing psychiatric, mental health and chemical dependency services since 1958, and Sutter Oaks Midtown, a 100 bed skilled nursing facility. With 823 licensed beds, SMCS is not-for-profit and fully accredited by the Joint Commission on Accreditation of Healthcare Organizations. SMSC received a superior rating for overall patient satisfaction on calhospitalcompare.org, a consumer online report card.

Patient Services ~

Services at both Sutter General and Sutter Memorial campuses include: 24-hour emergency services, surgery, respiratory therapy, intensive care, diagnostic imaging, rehabilitation, cardiopulmonary, occupational health, laboratory, physical therapy, home health and hospice services.

Highlights of New Programs/Services/Facilities ~

Sutter General: Computer-Assisted total joint replacement • da Vinci Robotic Surgical Procedure • eICU® • Expanded Epilepsy Program • Gliasite® Procedure to Treat Brain Cancer • Telemetry Unit • New Language Interpretation and Translation Service • Bariatric Surgery • Deep Brain Stimulation • Enhanced Nuclear Medicine Capabilities • Expanded Emergency Department • Gamma Knife Radiosurgery • 3-Dimensional Angiography
Sutter Memorial: Healing Garden • Outpatient Congestive Heart Failure Clinic • Electrophysiology Lab • Pediatric Lifestyles Program • Interventional Observational Unit • Brachytherapy Treatment for cardiac patients

Specialized Care at Sutter Memorial and Sutter General ~

Cancer • Cardiac • Clinical Research Trials • Endosurgery • Gynecology • Maternal-child • Neonatal Intensive Care • Neuroscience • Orthopedic • Pediatric Cardiac • Pediatric Intensive Care • Solid Organ and Bone Marrow Transplant Services

Sampling of Community Partnerships/Programs ~

In 2006, Sutter Medical Center, Sacramento provided \$ 71.9 million in support of charity care and various community programs and services such as:

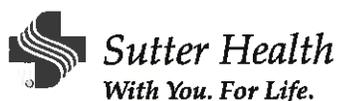
- Oak Park Neighborhood Multiservice Center—a collaboration between Sacramento County Department of Health and Human Services, Sutter Medical Center, Sacramento and other health partners that bring health care services to area residents.

Facts at a Glance (2006)

Active Physicians on Staff: 950
 Discharges: 32,915
 Births: 5,804
 Outpatient Visits: 181,029
 Emergency Department Visits: 70,544
 Employees: 4,431
 Facility Payroll: \$215.9 million
 Net Patient Revenue: \$674.5 million
 Community Benefit
 Contribution: \$71.9 million

Specialized Care at Sutter Center for Psychiatry ~

Adult Inpatient Care
 Child and Adolescent Services



Building the Workforce ~

Sutter Health Sacramento Sierra Region has committed more than \$15 million over the next several years to programs at local colleges that will help train and potentially add hundreds of nurses and other health professionals to the Sacramento region's health care job market.

Training the Doctors of Tomorrow ~

In affiliation with the University of California, Davis, Sutter Medical Center, Sacramento offers an excellent three-year residency program in Family Practice. The program trains physicians in the care of all family members throughout their lifespan. The residency program focuses on the increasingly diverse biomedical skills that are needed by family physicians today, with comprehensive attention to the many psychological and social issues that affect health, illness and healing.

Research Capabilities ~

Sutter Institute for Medical Research includes an internationally recognized research and training facility, a clinical trials outpatient clinic, and a grant program that awards Sutter investigators with funds to conduct research.



Sutter Medical Center, Sacramento

A Sutter Health Affiliate

With You. For Life.

Sutter General Hospital
2801 L Street • Sacramento, CA 95816
(916) 454-2222

Sutter Memorial Hospital
5151 F Street • Sacramento, CA 95819
(916) 454-3333

Sutter Center for Psychiatry
7700 Folsom Blvd. • Sacramento, CA 95826
(916) 386-3000

www.suttermedicalcenter.org

- **Project TEACH**—a program developed to help homeless children stay in school. Free tutorial and remedial assistance is provided.

Improving Facilities and Access ~

The Sutter Health network of physicians and not-for-profit hospitals will invest billions of dollars over ten years to rebuild, replace and expand much of Northern California's health care infrastructure. Locally, plans (or completed projects) include:

- Construct an 8-story women's and children's hospital campus in Midtown Sacramento, featuring neonatal and pediatric intensive care units, the latest labor and delivery services and a helistop.
- Remodel Sutter General Hospital campus to feature one entire floor dedicated to cardiovascular and transplant services.
- Medical office building to house ambulatory surgery, imaging services and physician offices and multi-level parking garage to provide 1,100 parking spaces.

Advancing Patient Safety ~

Sutter Medical Center, Sacramento and our Sutter Health network are raising the bar on patient safety. We are the first network on the West Coast to use early warning software as well as advanced video and electronic monitoring to allow physician specialists to keep an even closer eye on critically ill patients 24 hours a day, seven days a week. We continue to be a pioneer in using bar-coding and expert databases to track medication orders to help prevent errors. To further improve clinical outcomes, enhance patient safety and reduce the cost of high-quality care, Sutter Health also is investing \$450 million to deploy an electronic health record (EHR) system as well as \$1.2 billion in a broad range of patient safety initiatives over the next 10 years.

Guiding Us in Our Mission ~

Sutter Medical Center, Sacramento is locally governed by a volunteer board of trustees that lends its expertise, knowledge and commitment to guide the hospital toward its mission.

Mary Powers Antoine • William Au, MD • John Barnsdale, MD • Ed Bonner • Mike Dourgarian • Patrick Fry • Daniel Kenendy, MD • Dick Kramer • Sarah Krevans • David Lucchetti • Pam Marrone • Mike Newell • Felicenne Ramey • Joan Smith-Maclean, MD • Scott Syphax

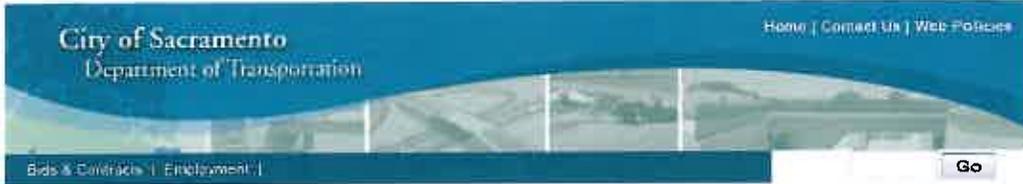
Community Support ~

Sutter Medical Center Foundation, the charitable and fund-raising arm of Sutter Medical Center, Sacramento, has been able to enhance services for the community through generous contributions of individuals and organizations throughout the Sacramento area.

About Sutter Health ~

Sutter Medical Center, Sacramento is part of the Sutter Health family of not-for-profit hospitals, physician organizations and other medical services that share resources and expertise to advance health care quality. Serving more than 100 communities in Northern California, Sutter Health is a regional leader in cardiac care, cancer treatment, orthopedics, obstetrics, and newborn intensive care, and is a pioneer in advanced patient safety technology. For more information, visit www.sutterhealth.org.

Attachment 47



- Divisions
- Director's Office & Business Services
- Engineering Services
- Parking Services
- Street Services
- Related Sites/Links
- Contact Us
- Site Map
- Home Page

Engineering Services

Traffic Counts Database

[Traffic Operations Center](#) / [Neighborhood Traffic Management Program \(NTMP\)](#) / [Neighborhood Preservation Transportation Program \(NPTP\)](#) / [Captain Jerry Program](#) / [Traffic Counts](#) / [Red Light Running Program](#) / [Traffic Calming Devices](#)

These pages show information about Traffic Counts done by/for the City of Sacramento. The traffic counts on this web page are 24 hour Average Daily Traffic (ADT) counts. An ADT count is the number of vehicles that traveled along a specified road for a typical day, considered to be Tuesday, Wednesday, or Thursday.

There are 5 records . This list shows all counts where the Street name is 'JIBBOOM ST'.

Helpful Hints & Information

- You can limit the number of records displayed by select a Street name from the list.
- Click on a column heading to sort the data by that column.
- Search for a specific street using the search boxes on the right.

Maps	Is the street in the City? Map of City boundaries.
Mail	Send mail with your questions to Traffic Engineering Services.
FAQ	See our Frequently Asked Questions.
Favorites	Add this site to your Favorites.

Search for Streets

Select a Street Name from this list

JIBBOOM ST

Check to include this street if it also:

- Intersects with this street
- Is bounded by this street

Start Search

Show All Streets

The Traffic Count List was last updated on 1/5/2010 at 8:35 AM

Count Date	Street Name	Intersects with	Bounded By	DIR	ADT	AM PEAK VOL	PM PEAK VOL
09/12/2007	JIBBOOM ST	I ST	RICHARDS BL	N/S	9,383	728	970
03/29/1993	JIBBOOM ST	I ST	RICHARDS BL	N/S	7,607	503	654
03/01/2001	JIBBOOM ST	RICHARDS BL	BERCUT DR	N/S	7,256	561	713
01/31/1995	JIBBOOM ST	RICHARDS BL	BERCUT DR	N/S	5,893	395	532
01/26/2005	JIBBOOM ST	RICHARDS BL	I ST	N/S	385	37	48



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Attachment 49

From: Jason A. Silva, AIA [jsilva@db-arch.com]
Sent: Wednesday, February 17, 2010 3:49 PM
To: Nicola Swinburne
Cc: Debora Fee; Courtney McLeod Golden
Subject: Fwd: Construction plans and contamination location
 Nicola:

Per the following response from the structural engineer, we will be able to determine the extent of contaminated soil excavation, upon further investigation.

If an estimation is required, please let us know and we'll come up with something.

Jason A. Silva AIA LEED AP
 Partner

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----- Forwarded Message -----

From: "Larry E. Jones" <ljones@bbse.com>
To: jsilva@db-arch.com
Cc: "Courtney McLeod Golden" <cmgolden@db-arch.com>, "Debora Fee" <DFee@ottoconstruction.com>
Sent: Wednesday, February 17, 2010 3:42:33 PM GMT -08:00 US/Canada Pacific
Subject: RE: Construction plans and contamination location

Hi Jason; Our schematic design narrative describes the existing building on jet grouted soil column deep foundations. Support for the modifications to the existing exterior wall would be pin piles placed at depth according to the soils report and site testing. New two story building footings were also assumed to be pile supported using a 48" deep pilecap approximately 5'-6" below slab level. If the clay cap cannot be penetrated, we will need the geotechnical engineer to give us design parameters for a shallow mat foundation. Soils engineer will need to confirm that clay cap and fill were adequately compacted to provide for building support. Call me to discuss if necessary..thx...LEJ

From: jsilva@db-arch.com [mailto:jsilva@db-arch.com]
Sent: Wednesday, February 17, 2010 1:10 PM
To: Larry Jones
Cc: Courtney McLeod Golden; Debora Fee
Subject: Fw: Construction plans and contamination location

Larry:
 For the Powerhouse entry addition (east side of (e) bldg.), what would be the minimum depth foundation for the two story steel framed entry structure (about 2000 sf footprint). We need to give a general grading depth for the environmental review. See below:

Thanks,

Jason A. Silva, AIA
 Dreyfuss & Blackford Architects

916.453.1234
Sent via BlackBerry by AT&T

From: "Debora Fee" <DFee@ottoconstruction.com>
Date: Wed, 17 Feb 2010 07:50:25 -0800
To: Nicola Swinburne<Nicola@dceplanning.com>
Cc: <jsilva@db-arch.com>; Courtney McLeod Golden<cmgolden@db-arch.com>; Jennifer Costa<jcosta@db-arch.com>
Subject: RE: Construction plans and contamination location

Nicola,

I've attached our "basic" schematic drawings, calculations showing the size of the existing cap and the draft for the APE and Project Description for Section 106.

There are several items in these documentations that may help answer your questions. I've also copied Dreyfus and Blackford (our Architects) for their assistance in order to speed up the process.

Thank you and let me know if you have any further questions.

Debora Fee, Project Manager
916.441.6870 TEL
916.441.6138 FAX
916.417.9339 CELL
www.ottoconstruction.com

From: Nicola Swinburne [mailto:Nicola@dceplanning.com]
Sent: Tuesday, February 16, 2010 4:41 PM
To: Debora Fee
Cc: Rachel Hazlewood; ramrhein@shra.org; jwitz@cityofsacramento.org; Alejandro Huerta; Steve Noack
Subject: Construction plans and contamination location

Hello Deb, I am the PM at DC&E for the Powerhouse EA. We'd like to submit it tomorrow, on schedule, but we think we need some more info about the past contamination. Rachel has sent me the RI/FS (dated Feb 13, 1995) and the July 30, 1998 Deed Restriction, Operation and Maintenance Agreement, and there is a figure taken from the Final RAP (Dec 12, 1996) in the Draft IS but there are a few things that still don't make sense that I was hoping you could clarify.

As I understand it, there are two areas with clay caps on the site. One is west of the Powerhouse building, and extends slightly north. The second is south of the building and extends slightly east and west.

The area to the west was the site of the lead contamination from the site's history as a PG&E plant or as a metal salvage plant. The clay cap that was installed over the top of it was documented in the July 30, 1998 Deed Restriction. The covenant prevents disturbance that would affect integrity of the containment or monitoring system without a variance from DTSC.

The area to the south was contaminated with Bunker fuel oil from two USTs. An earthen cap and vegetation was installed over the top so that the contaminated soils would be at least 15 feet below grade and not a threat to site workers. As the leaky tanks contaminated groundwater, the purpose of the earthen cap was to direct runoff away from the hydrocarbon area. (The Deed Restriction did not include an Operations and Maintenance Agreement for the hydrocarbon-contaminated area.)

I have one figure that shows me the proposed new site plan - it's very generalized so I'm not sure of the detail. (It's the one with labels 1-34 and a legend down the left hand side.) This seems to show that a part of the Science Center Entrance would be built over the western clay cap and that the Cafe could intersect with the southern clay cap. The site would also require some grading to accommodate the other features on these areas

including the parking area.

- Can you give us some details of the grading depth in these areas?
- How much fill is present over the clay cap in these areas?
- Are the proposed construction plans to be reviewed by DWR and/or DTSC and do they need their approval?

Thanking you for your time.

Nicola

Nicola Swinburne, Ph.D.

Design Community & Environment

1625 Shattuck Avenue, Suite 300

Berkeley, CA 94709

Phone: 510-848-3815 X 352

Fax: 510-848-4315

Nicola@dceplanning.com

www.dceplanning.com

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April 4, 2000
File: 23-484194-ENV

To: John Webre, AIA
From: Pamela Wee

SUBJECT: Preliminary Environmental Evaluation of Jibboom Street Property

This preliminary environmental evaluation summarizes the environmental remediation activities conducted at the Jibboom Street property and addresses potential environmental constraints that remaining toxic contaminants may pose to site development. Some possible mitigation measures are suggested for each of the proposed reuse alternatives. For this evaluation, we have assumed that the historical PG&E power plant building will remain on-site, the structural integrity of the building must be maintained, and the building will be integrated into whatever land use is selected.

We understand that the City is looking for some assurance that the proposed development can occur in a way that is consistent with protection of public health and safety, without incurring extensive mitigation costs. In summary, the three land uses currently under consideration, commercial development (offices), hotel, and recreation (park or open space), appear feasible with varying degrees of mitigation. Costs estimates for mitigation measures are beyond the scope of this preliminary evaluation.

Document Review

The following documents were reviewed to provide information used in this preliminary evaluation:

Agreement, Operation and Maintenance RE: Former Pacific, Gas, and Electric Power Plant Site, Jibboom Street, Sacramento, Sacramento County, California, July 6, 1998.

California Department of Health Services, Toxic Substances Control Division, January 2, 1990. Certification Package-Jibboom Junkyard Site.

Covenant to Restrict Use of Property, Environmental Restriction, Former PG&E Power Plant Site, Jibboom Street, Sacramento, Sacramento County, California, July 1, 1998.

Memorandum of Understanding Among the Department of Toxic Substances Control, City of Sacramento, and Southern Pacific Transportation Company Concerning Remediation and Redevelopment of the Sacramento Locomotive Works, Sacramento, California. December 2, 1994

Radian Corporation, 1996. Remedial Action Plan for the Former PG&E Power Plant Facility on Jibboom Street.

Radian Corporation, 1995. Remedial Investigation/Feasibility Study for the Former PG&E Power Plant Facility on Jibboom Street.

ROMA Design Group, April 1997. Railyards Specific Plan.

State of California Department of Water Resources, December 1996. Final Negative Declaration for the Soil Remediation Project at the Former PG&E Power Plant Site on Jibboom Street.

State of California Department of Water Resources, June 1998. Final Operations and Maintenance Plan, Former PG&E Power Plant Site, Sacramento County, California.

Site History

The site reportedly was used as a municipal dump between 1850 and 1930. PG&E operated a power station for electrical generation at the site from 1912 to 1954. Bunker fuel oil used to fire the boilers was contained in two underground storage tanks (USTs) located at the south end of the power plant building. Multiple fuel leaks developed in this system over the life of the power plant and contaminated soil around the building.

Associated Metals Corporation of California (AMCC) operated a salvage yard on the northern portion of the site from the early 1950's until 1965. They purchased the property in 1957, following the decommissioning of the PG&E power plant. Since 1965, the site has been owned by the State of California except for a strip of land at the north end of the site that is owned in fee by the City of Sacramento. The Department of Water Resources has controlled the property since 1988, intending to use it for a new California Water Center, which was never built. The site is currently vacant except for the historical PG&E power plant building.

Nature and Extent of Contamination

The nature and extent of contamination are reported in detail in the RI/FS (Radian, 1995) and Remedial Action Plan (Radian, 1996), and are briefly summarized below.

- The southern portion of the property (Jibboom Street Junkyard) was designated as an NPL site in the 1980's.
- The State of California conducted a soil characterization from 1981 through 1985, prior to the NPL site clean up. Contaminants of concern detected were polychlorinated biphenyls (PCBs) and heavy metals.

- Between 1987 and 1989, the Department of Water Resources conducted investigations to characterize contamination inside the former PG&E power plant building. Additional investigations were conducted between 1991 and 1994. Petroleum hydrocarbons were found both inside and outside the south building wall of the former PG&E power plant, and high concentrations of lead were found in soil between the eastern side of the building and the property line, as follows:
 - TPH (Bunker C) concentrations were typically less than 200 mg/kg in soil outside the building, and were generally limited to a depth of 3 feet. However, outside the southeast corner of the building, TPH concentrations were greater than 1,000 mg/kg at depths of approximately 15 feet in the vicinity of the former USTs.
 - In the basement of the building, TPH (Bunker C) levels typically were less than 500 mg/kg within the first three feet. TPH was most prevalent near the southeast corner of the building basement, with concentrations in the range of 10,000 to 140,000 mg/kg, to depths of approximately 30-35 feet. At the southwest corner of the building, concentrations exceeding 1,000 mg/kg were detected to a depth of 7-8 feet, dropping to less than 100 mg/kg at depths of 12-15 feet.
 - Lead concentrations exceeded 200-500 mg/kg near the site boundary east of the building (at depths up to 10-12 feet), at a few locations near the northwest corner and west of the building, and in the basement of the building.

Groundwater has been monitored since 1987. TPH was detected at less than 10 mg/l in wells near the south end of the PG&E building. Migration to groundwater is not expected because the TPH (Bunker C fuel oil) is relatively insoluble and tends to remain bound up within soil. Lead has not been detected above the drinking water action level of 0.015 mg/l. Soluble lead tests exceeded the STLC; however, soluble lead tests using deionized water (to simulate rainfall condition) indicated that lead was not likely to leach to groundwater.

Remedial Actions

U.S. EPA designated the portion of the property formerly owned by AMCC, and part of the property formerly owned by PG&E as an NPL site. Cleanup activities followed. U.S. EPA and the California Department of Health Services began remedial action of the property to the south and east of the old power plant in 1986. Soils and debris contaminated with heavy metals and PCBs were removed from the site. Cleanup levels of 500 ppm lead and 50 ppm PCBs were established. The final remedial action was completed in May 1987.

In 1988, the Office of State Architect (OSA) removed the two underground fuel storage tanks and 6,200 tons of soil affected by tank and pipe leakage from outside the south wall of the former PG&E power plant building. They also removed debris, piping and soils containing asbestos, metals, and petroleum hydrocarbons from within the building.

EPA certified cleanup of the NPL portion of the site in 1988, with the concurrence of DHS, and the site was deleted from the NPL in September 1991. The certification of cleanup did not include the removal of the two USTs at the former power plant.

Additional remediation of contamination outside the former power plant building took place in 1997. An earthen (compacted clay) cap was constructed over the hydrocarbon containing soil south of the building. The cap was covered with topsoil and seeded to provide a vegetative cover. TPH contaminated soils remain approximately 15 feet below grade. A second cap was placed over the lead-contaminated soil east of the building. Lead remains approximately 3 feet below grade.

Site grading controls drainage away from the building. Prior to the site grading and capping, the building sat in a depression that collected runoff from surrounding areas and water tended to flood the basement of the building during periods of heavy rainfall. The building itself acts as a cap over the hydrocarbon-contaminated soils in the basement of the building. No other remedial action has been conducted to date.

Health Risks

The results of the risk assessment reported in the Remedial Action Plan (Radian, 1996) showed that capping of hydrocarbon and lead-containing soils would eliminate exposure to casual site users or office workers by eliminating surface exposure to contaminated soils. They concluded that capping would allow future light industrial and commercial land use with no substantial exposure or risk to anticipated site users, since it is unlikely that the cap would be disturbed with this type of land use. However, if the cap is disturbed, potentially exposed individuals such as a groundskeeper or trench worker (construction worker) could be unacceptably impacted. Potential exposure pathways would include inhalation of fugitive dust, ingestion of soil, and dermal contact with soil. The vapor pressure of Bunker C is sufficiently low that volatilization is not considered a significant pathway. This would also be the case within the building, where contamination remains in the basement. Since there is no cap directly over the soil in the basement, there is a potential for direct exposure if the building is used. Health risks from inhalation of fugitive dust, ingestion of soil and dermal contact with soil should be evaluated if no mitigation is planned.

Potential health risks for open space/recreational or residential uses were not evaluated. However, recreational and residential land use typically are handled more conservatively than commercial uses.

O&M Requirements/Land Use Restrictions

There is a covenant in place that restricts the use of the property for residences, hospitals, schools, group care facilities or day care facilities. No activities are allowed that will disturb the cap without a written variance from the California Department of Toxic Substances Control (DTSC).

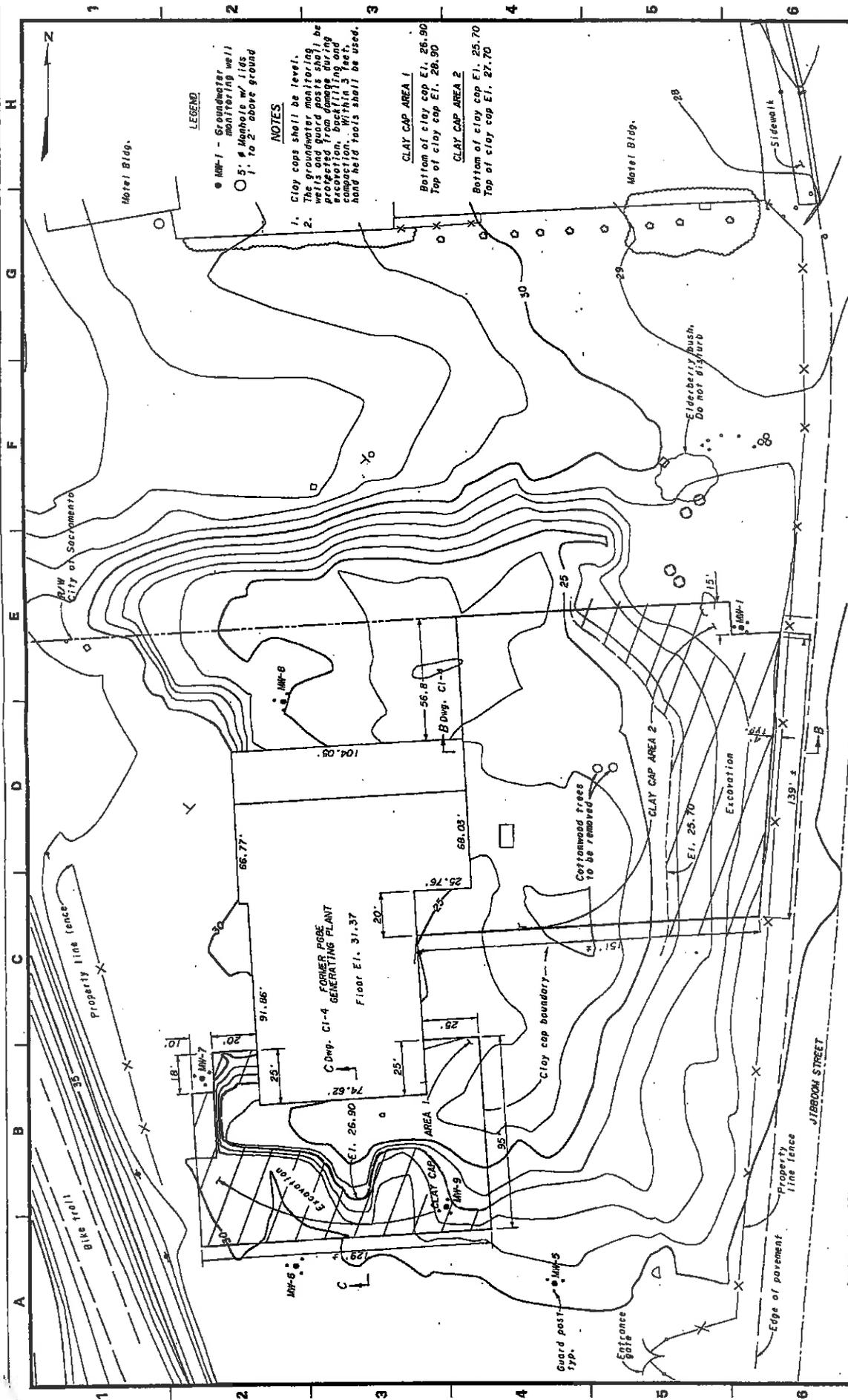
The July 6, 1998 O&M Agreement defines inspection, schedule, and maintenance requirements for the groundwater monitoring system, the former power plant building, and the cap that covers lead-contaminated soil. DWR is required to conduct one year of quarterly groundwater sampling and reporting, followed by annual sampling thereafter. After 5 years, DWR must evaluate the results and present conclusions to DTSC. Quarterly sampling results reported for the July 1998, October 1998, April 1999, and July 1999 monitoring found no lead above the action level of 15 ug/l. Thus, to date there is no evidence that contaminants are migrating into groundwater.

DWR is also required to review and reevaluate the remedial action five years after its completion and every five years thereafter. In addition to evaluating any analytical data collected, any changes in laws/regulations, regulatory agency policies or remediation technologies that may affect the implemented remedy must be evaluated.

Mitigation

- Groundwater: Monitoring data collected to date indicate that groundwater is currently not contaminated, and due to the nature of the contaminants on site, migration to groundwater is not likely. Furthermore, groundwater use is not planned as part of any reuse scenario and therefore, no mitigation is necessary. DWR has a requirement to conduct annual groundwater sampling. This requirement and associated costs will likely be passed on to the City at the time of property transfer unless DTSC agrees to eliminate the requirement.
- Development of the site for a hotel or office space is not likely to be restricted because exposure to affected soils has been eliminated by the capping, and activities typical of hotel/commercial use will not disturb the cap. If the property is developed for hotel or offices, decisions regarding type of construction, placement of facilities, and landscaping will need to consider the integrity of the cap so that exposure does not occur. DWR has been responsible for maintaining the cap, and this requirement and associated costs will likely be passed on to the City unless DTSC agrees to eliminate the requirement. The annual cost for maintaining the cap was estimated at \$2,000 in the Remedial Action Plan.
- Development of the site as a park or open space will be of greater concern because there is a perceived potential for human contact. The site cleanup level for lead (500 ppm) established at the time of the NPL site remediation may not be considered low enough for recreational land use. DTSC more recently has used a lead soil cleanup level for residential/recreational uses of 174 mg/kg, based on childhood exposure. Confirmation data from the NPL site cleanup should be reviewed to assess whether mitigation will be required for recreational development. A health risk assessment may be required.
- The depth of the existing cap may not be considered adequate for play areas or parks. In the Railyards Specific Plan, a minimum of 5 feet of clean fill is proposed for open space land use. Additional fill may be required over the lead-contaminated soil east of the former power plant to increase the depth, which is currently about 3 feet.

- Soil in the basement of the historical power plant building is contaminated with Bunker C fuel oil, and was not part of the capping remedial action. The building itself temporarily has acted as a "cap" until future use of the building is determined. When the building is remodeled or structural improvements are made, this area should be excavated or capped if the public will be potentially exposed to soils in the basement. Accumulation of vapors in the building is not expected due to the low volatility of Bunker C and its tendency to remain bound to soil.
- DWR currently has a requirement to review and re-evaluate the remedial action at five-year intervals. This requirement and associated costs will likely be passed on to the City unless DTSC agrees to eliminate the requirement.



LEGEND

- MW-1 - Groundwater monitoring well
- 5' x 6" Manhole w/ lids

NOTES

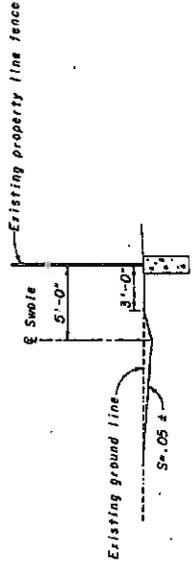
1. Clay caps shall be level.
2. The groundwater monitoring wells shall be protected from damage during excavation, backfilling and compaction. Within 5 feet, hand held tools shall be used.

CLAY CAP AREA 1
 Bottom of clay cap El. 25.90
 Top of clay cap El. 26.90

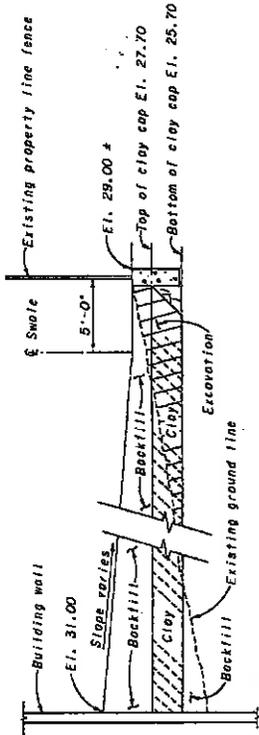
CLAY CAP AREA 2
 Bottom of clay cap El. 25.70
 Top of clay cap El. 27.70

<p>Scale: 1" = 20'</p>		<p>PROPERTY INFORMATION</p> <p>OWNER: AS BULLY</p> <p>ADDRESS: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 27, 29, 31, 33, 35, 37, 39, 41, 43, 45, 47, 49, 51, 53, 55, 57, 59, 61, 63, 65, 67, 69, 71, 73, 75, 77, 79, 81, 83, 85, 87, 89, 91, 93, 95, 97, 99, 101, 103, 105, 107, 109, 111, 113, 115, 117, 119, 121, 123, 125, 127, 129, 131, 133, 135, 137, 139, 141, 143, 145, 147, 149, 151, 153, 155, 157, 159, 161, 163, 165, 167, 169, 171, 173, 175, 177, 179, 181, 183, 185, 187, 189, 191, 193, 195, 197, 199, 201, 203, 205, 207, 209, 211, 213, 215, 217, 219, 221, 223, 225, 227, 229, 231, 233, 235, 237, 239, 241, 243, 245, 247, 249, 251, 253, 255, 257, 259, 261, 263, 265, 267, 269, 271, 273, 275, 277, 279, 281, 283, 285, 287, 289, 291, 293, 295, 297, 299, 301, 303, 305, 307, 309, 311, 313, 315, 317, 319, 321, 323, 325, 327, 329, 331, 333, 335, 337, 339, 341, 343, 345, 347, 349, 351, 353, 355, 357, 359, 361, 363, 365, 367, 369, 371, 373, 375, 377, 379, 381, 383, 385, 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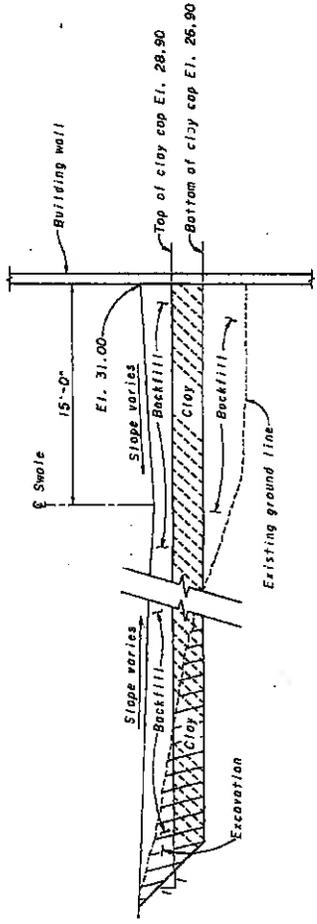
A B C D E F G H



SECTION A-A
Scale: 1/4" = 1'-0"
DMG, CI-2



SECTION B-B
Scale: 1/4" = 1'-0"
DMG, CI-2 AND CI-3



SECTION C-C
Scale: 1/4" = 1'-0"
DMG, CI-2 AND CI-3

SHEET NO. 97-04 SHEET OF 14 ALL TYPICAL		SECTION AB B	
MICHIGAN STREET SITE GRADING			
STATE OF CALIFORNIA THE RESOURCES AGENCY DEPARTMENT OF WATER RESOURCES DIVISION OF ENGINEERING STATE WATER FACILITIES			
DESIGNER L. J. BISHOP CIVIL ENGINEER No. 10489 State of California Exp. 12/31/88		CHECKED BY J. R. RAY CIVIL ENGINEER No. 10489 State of California Exp. 12/31/88	
DATE: APRIL 7, 1988			
PROJECT NO. 97-04			
DRAWING NO. 97-04			
AS BUILT			
1/8" = 1'-0"			



Attachment 52



Linda S. Adams
Secretary for
Environmental Protection

Department of Toxic Substances Control

Maziar Movassaghi
Acting Director
8800 Cal Center Drive
Sacramento, California 95826-3200



Arnold Schwarzenegger
Governor

November 30, 2009

Ms. Rachel Hazlewood
Senior Project Manager
City of Sacramento
Economic Development Department
915 I Street, 3rd Floor
Sacramento, California 95814

12-01-09P04:48 RCV

OPERATIONS AND MAINTENANCE AGREEMENT, FORMER PG&E POWER PLANT,
240 JIBBOOM STREET, SACRAMENTO, CALIFORNIA

Dear Ms. Hazlewood:

The Department of Toxic Substances Control (DTSC) is pleased to provide an Operations and Maintenance Agreement for the former PG&E Power Plant site located in the City of Sacramento, California. DTSC's authority for entering into this agreement is specified in California Health and Safety Code, Section 25355.5(a)(1)(C). This document incorporates all requested changes in your October 26, 2009 version sent by e-mail on November 20, 2009.

Please arrange for the City Manager to sign two copies of the document. Once received, DTSC will sign both copies and transmit one original to your attention.

If you have any questions, please contact me at (916) 255-3694.

Sincerely,

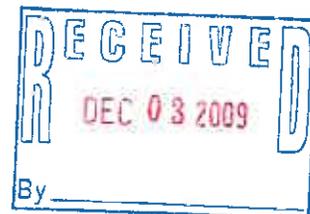
Steven Ross
Hazardous Substances Engineer
Brownfields and Environmental Restoration Program

Enclosure

cc: See next page.

Ms. Rachel Hazlewood
November 30, 2009
Page 2

cc: Ms. Kim Gazzaniga
Environmental Scientist
Department of Water Resources
Environmental Compliance and Evaluation Branch
3500 Industrial Boulevard
West Sacramento, California 95691



In the matter of:)	Docket No.: _____
)	
Former PG&E Power Plant)	OPERATION AND MAINTENANCE
240 Jibboom Street)	AGREEMENT
Sacramento, California 95814)	
)	
Proponent:)	
)	Health and Safety Code
The City of Sacramento)	Sections 25355.5(a)(1)(C)
Economic Development Department)	
915 I Street, New City Hall, 3 rd Floor)	
Sacramento, California 95814)	
Attn: Rachel Hazlewood)	
_____)	

The California Department of Toxic Substances Control (DTSC) and the City of Sacramento, a municipal corporation (Proponent) enter into this Operation and Maintenance Agreement (Agreement) for the site located at 240 Jibboom Street in the City of Sacramento, Sacramento County, California (Site) and agree as follows:

1. Jurisdiction. This Agreement is entered into by DTSC and Proponent pursuant to Health and Safety Code section 25355.5(a)(1)(C) which authorizes DTSC to enter into an enforceable agreement to oversee the investigation and/or remediation of a release or threatened release of any hazardous substance at or from the Site, and to oversee the operation and maintenance of any remediation system installed at the Site. DTSC agrees to the Proponent's assumption of all operation and maintenance obligations from the State of California, Department of Water Resources, as agreed to between the Proponent and the State of California, Department of Water Resources (DWR) by way of City Agreement No. 2002-012. This City Agreement was entered on January 22, 2002 for the acquisition of the Site.

2. Remediation System. A DTSC-approved Remediation System has been installed at the Site by DWR for the remediation of soil (Remediation System). The Remediation System consists of site grading for drainage control in conjunction with the construction of an engineered vegetative covered earthen clay cap over lead contaminated soil to eliminate exposure and minimize percolation of rainwater, the groundwater monitoring wells, and the surveyed former power plant building footprint described in the Covenant To Restrict Use of Property Environmental Restriction recorded in the County of Sacramento as Document No. 199807301260. The Site is now owned by the City of Sacramento. A site location map and site diagram showing the Remediation System is attached as Exhibit A and Exhibit B.

3. Operation and Maintenance of Remediation System. Operation and maintenance of the Remediation System are required at the Site, and shall be left in place, operated and maintained by Proponent until and except to the extent that DTSC authorizes Proponent in writing to discontinue or modify part or all of the Remediation System.

4. Implementation of Operation and Maintenance Plan. Proponent shall fully implement the DTSC-approved Operation and Maintenance Plan dated June 1998 prepared by the California Department of Water Resources (DWR), attached as Exhibit C, including any requirements for inspections, monitoring, reporting and record keeping.

5. Modification or Discontinuation of Remediation System. Proponent shall submit a written request for DTSC's authorization for any modification or discontinuation of the Remediation System or any part thereof at least 60 days, to the extent feasible, prior to the intended date of any proposed modification or discontinuation. Proponent may seek modification or discontinuation of the Remediation System or any part thereof if (a) Proponent has met the remediation objectives for the Site; (b) the modification would better achieve the remediation objectives; (c) the location of a monitoring well interferes with the Proponent or tenant of Proponent's operation on the site and a suitable alternate location can be accommodated; (d) the Remediation System could not achieve the remediation objectives and other cleanup methods will be implemented; or (e) it has been demonstrated that the maximum achievable remediation has occurred. The written request to DTSC shall include the reasons for the request, a detailed description of any work to be done or modification to be made, and a map showing the exact location of the proposed work. In addition, Proponent may request DTSC approval to relocate or abandon the monitoring well if it interferes with the Proponent's or its tenant's use of the Site or if groundwater monitoring is no longer required.

6. DTSC-Required Modification. DTSC may require modification, replacement, or additions to the Remediation System if the Remediation System or part of thereof is not achieving the remediation objectives or is not protecting human health or the environment. DTSC may require additional evaluations, designs and the construction and operation of facilities to achieve these objectives.

7. Five-Year Review. DWR has informed DTSC that it intends to start the first five year review of the Remediation System after July 1, 2009. In the event DWR fails to complete the first five-year review by March 31, 2010, Proponent agrees to conduct the first five-year review within 150 days of written notification by DTSC. Proponent will reevaluate the Remediation System every five years thereafter as long as such reevaluation is required by DTSC. The review and reevaluation shall be conducted to determine if human health and the environment are being adequately protected by the Remediation System. Within 30 days of the end of each five-year period, Proponent shall submit a report of the results of the five-year review. The report shall describe the results of all sampling analyses, tests and other data generated or received by Proponent and evaluate the adequacy of the implemented remedy in protecting human health and the environment. As a result of any review work performed under this Agreement, DTSC may require Proponent to perform additional review work or modify the review work previously performed by Proponent.

8. Quality Control/Quality Assurance (QC/QA). All sampling and analysis conducted by Proponent under this Agreement shall be performed in accordance with standard QA/QC procedures and conducted by qualified consultants with expertise in hazardous substance testing and evaluation as described in paragraph 16.

9. Cost Recovery and Payment.

9.1. Prior to Proponent's commencement of a five-year review or at Proponent's request, DTSC shall provide Proponent with a cost estimate for DTSC's cost to review the report. Proponent shall be liable for all of DTSC's costs incurred in implementing this Agreement, including costs of overseeing the work performed by Proponent, and in responding to any contamination at the Site. Cost recovery may be pursued by DTSC pursuant to applicable state or federal laws or common law. DTSC will invoice Proponent for DTSC's costs on a quarterly basis.

9.2. All payments made by Proponent pursuant to this Agreement shall be by check payable to the "Department of Toxic Substances Control", and bearing on its face the project code for the Site (Site #100258) and the docket number of this Agreement. Upon request by Proponent, DTSC may accept payments made by credit cards. Payments by check shall be sent to:

Department of Toxic Substances Control
Accounting Office
1001 I Street, 21st Floor
P.O. Box 806
Sacramento, California 95812-0806

9.3. DTSC shall retain all cost records associated with the work performed under this Agreement as may be required by state law. DTSC will make all documents that support DTSC's cost determination available for inspection upon request in accordance with the Public Records Act, Government Code section 6250 et seq.

10. Endangerment During Implementation.

10.1. Proponent shall notify DTSC's Project Manager immediately upon learning of any condition that may pose an immediate threat to public health or safety or the environment. Within seven days of the onset of such a condition, Proponent shall furnish a report to DTSC, signed by Proponent's Project Manager, setting forth the conditions and events that occurred and the measures taken in response thereto.

10.2. In the event DTSC determines that any activity (whether or not pursued in compliance with this Agreement) may pose an imminent or substantial endangerment to the health or safety of people on the Site or in the surrounding area or to the environment, DTSC may order Proponent to conduct additional activities or to stop further implementation of this Agreement for such period of time as may be needed to abate the endangerment. DTSC may request that Proponent implement interim measures to address any immediate threat or imminent or substantial endangerment.

11. Site Access. Proponent shall provide, and/or obtain access to the Site and take all reasonable efforts to obtain access to offsite areas to which access is necessary to implement the Agreement. Such access shall be provided to DTSC's employees, contractors, and consultants at all reasonable times with at least forty eight hours advance notice, excepting in the event of an emergency. Access may be limited to business hours and DTSC's inspections shall not unnecessarily interfere with Proponent

or Proponent's tenant's business operations at the Site. Nothing in this paragraph is intended or shall be construed to limit in any way the right of entry or inspection that DTSC or any other agency may otherwise have by operation of law. Proponent agrees to cooperate with any other entity under DTSC oversight which may require access to the Site to undertake monitoring of off-site contamination which may be impacting the Site.

12. Sampling, Data and Document Availability. When requested by DTSC, Proponent shall make available for DTSC's inspection, and shall provide copies of, all data and information concerning contamination at or from the Site, including technical records and contractual documents, sampling and monitoring information and photographs and maps, whether or not such data and information was developed pursuant to this Agreement. For all final reports, Proponent shall submit one hard (paper) copy and one electronic copy with all applicable signatures and certification stamps as a text-readable Portable Document Formatted (pdf) file Adobe Acrobat or Microsoft Word formatted file.

13. Record Preservation. Proponent shall retain, during the implementation of this Agreement and for a minimum of six years after its termination, all data, reports, and other documents that relate to the performance of this Agreement. If DTSC requests that some or all of these documents be preserved for a longer period of time, Proponent shall either comply with the request, deliver the documents to DTSC, or permit DTSC to copy the documents at Proponent's expense prior to destruction.

14. Notification of Field Activities. Proponent shall inform DTSC at least seven days in advance of all field activities pursuant to this Agreement and, upon request, shall provide DTSC or its authorized representatives with duplicates of any samples collected by Proponent pursuant to this Agreement.

15. Project Managers. Within 14 days of the effective date of this Agreement, DTSC and Proponent shall each designate a Project Manager and shall notify each other in writing of the Project Manager selected. Each Project Manager shall be responsible for overseeing the implementation of this Agreement and for designating a person to act in his/her absence. All communications between DTSC and Proponent, and all notices, documents and correspondence concerning the activities performed pursuant to this Agreement shall be directed through the Project Managers. Each party may change its Project Manager with at least seven days prior written notice.

16. Proponent's Consultant and Contractor. All work performed pursuant to this Agreement shall be under the direction and supervision of a professional engineer or professional geologist, licensed in California, with expertise in hazardous substances site cleanup. Proponent's Project Manager, contractor or consultant shall have the technical expertise sufficient to fulfill his or her responsibilities. Within 14 days of the effective date of this Agreement, Proponent shall notify DTSC's Project Manager in writing of the name, title, and qualifications of the professional engineer or professional geologist and of any contractors or consultants and their personnel to be used in carrying out the work under this Agreement in conformance with applicable state law, including but not limited to, Business and Professions Code sections 6735 and 7835.

17. DTSC Review and Approval. All work performed pursuant to this Agreement is subject to DTSC's review and approval. If DTSC determines that any report, plan, schedule or other document submitted for approval pursuant to this Agreement fails to comply with this Agreement or fails to protect public health or safety or the environment, DTSC may (a) return comments to Proponent with recommended changes and a date by which the Proponent must submit to DTSC a revised document incorporating or addressing the recommended changes; or (b) modify the document in consultation with Proponent and approve the document as modified. All DTSC approvals and decisions made regarding submittals and notifications will be communicated to Proponent in writing by DTSC's Unit Chief or his/her designee. No informal advice, guidance, suggestions or comments by DTSC regarding reports, plans, specifications, schedules or any other writings by the Proponent shall be construed to relieve Proponent of the obligation to obtain such written approvals.

18. Amendments. This Agreement, including the attached Operation and Maintenance Plan, may be amended in writing by mutual agreement of DTSC and Proponent. Such amendment shall be effective the third business day following the day the last party signing the amendment sends its notification of signing to the other party. The parties may agree to a different effective date.

19. Termination of Agreement. This Agreement may be terminated by either party by providing written notice and specifying the effective date of termination after DTSC has determined that the five year reviews as set out in paragraph 7 are no longer required.

20. Incorporation of Exhibits, Plans and Reports. All exhibits are incorporated into this Agreement by reference. All plans, schedules and reports that require DTSC's approval and are submitted by Proponent pursuant to this Agreement are incorporated in this Agreement upon DTSC's approval.

21. Reservation of Rights. DTSC reserves all of its statutory and regulatory powers, authorities, rights, and remedies under applicable laws to protect public health or the environment, including the right to recover its costs incurred therefore. Proponent reserves all of its statutory and regulatory rights, defenses and remedies available to Proponent under applicable laws.

22. Non-Admission of Liability. By entering into this Agreement, Proponent does not admit to any finding of fact or conclusion of law set forth in this Agreement or any fault or liability under applicable laws.

23. Proponent Liabilities. Nothing in this Agreement shall constitute or be considered a covenant not to sue, release or satisfaction from liability by DTSC for any condition or claim arising as a result of Proponent's past, current, or future operations or ownership of the Site.

24. Government Liabilities. The State of California or DTSC shall not be liable for any injuries or damages to persons or property resulting from acts or omissions by Proponent or by related parties in carrying out activities pursuant to this Agreement, nor

shall the State of California or DTSC be held as a party to any contract entered into by Proponent or its agents in carrying out the activities pursuant to this Agreement.

25. Third Party Actions. In the event that Proponent is a party to any suit or claim for damages or contribution relating to the Site to which DTSC is not a party, Proponent shall notify DTSC in writing within 10 days after service of the complaint in the third-party action. Proponent shall pay all costs incurred by DTSC relating to such third-party actions if DTSC is required to undertake any work, including but not limited to responding to subpoenas.

26. California Law. This Agreement shall be governed, performed and interpreted under the laws of the State of California.

27. Severability. If any portion of this Agreement is ultimately determined not to be enforceable, that portion will be severed from the Agreement and the severability shall not affect the enforceability of the remaining provisions of the Agreement.

28. Parties Bound. This Agreement applies to and is binding, jointly and severally, upon Proponent and its agents, receivers, trustees, successors and assignees, and upon DTSC and any successor agency that may have responsibility for and jurisdiction over the subject matter of this Agreement. Proponent shall ensure that its contractors, subcontractors and agents which may be undertaking any activities at the Site comply with the terms of this Agreement in regards to not altering or interfering with the Remediation System.

29. Effective Date. The effective date of this Agreement is the date of signature by DTSC's authorized representative after this Agreement is first signed by Proponent's authorized representative. Except as otherwise specified, "days" means calendar days.

30. Representative Authority. Each undersigned representative of the party to this Agreement certifies that she or he is fully authorized to enter into the terms and conditions of this Agreement and to execute and legally bind the party to this Agreement.

31. Counterparts. This Agreement may be executed and delivered in any number of counterparts, each of which when executed and delivered shall be deemed to be an original, but such counterparts shall together constitute one and the same document.

_____ Date: _____
Richard Hume, P.E.
Supervising Hazardous Substances Engineer
Brownfields and Environmental Restoration Program
Department of Toxic Substances Control

_____ Date: _____
Ray Kerridge, City Manager
City of Sacramento, a municipal corporation



EXHIBIT A: Site Location Map
 Former PG&E Power Plant Site @ Jibboom Street

Access Improvements from Railyards to Richards Boulevard and I-5 Project

Sacramento, California
03-SAC-5
EA 4E8400
Federal Aid # 03-928-866L

April 2009

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

THE STATE OF CALIFORNIA
Department of Transportation

Prepared By: _____ Date: _____

John Howe
(916) 737-3000
ICF Jones & Stokes
630 K Street, Suite 400
Sacramento, CA 95814

Approved By: _____ Date: _____

Professional Content Reviewer, Title [Caltrans, please provide
guidance on contact information for this signature]
Phone Number
Office Name
Cooperating Agency Name

Approved By: _____ Date: _____

Management Content Reviewer, Title [Caltrans, please provide
guidance on contact information for this signature]
Phone Number
Office Name
Cooperating Agency Name

Chapter 4 Results: Biological Resources, Discussion of Impacts, and Mitigation

4.1 Plant Species Listed/Proposed under the Federal Endangered Species Act

No plant species listed under the federal ESA were identified by the USFWS list as potentially occurring in the Sacramento West quadrangle. A review of the CNDDDB revealed seven listed plant species occurring within the region; these species include succulent owl's clover (*Castilleja campestris* ssp. *succulenta*), palmate-bracted bird's-beak (*Cordylanthus palmatus*), Colusa grass (*Neostaffia colusana*), Antioch Dunes evening-primrose (*Oenothera deltoides* ssp. *howellii*), slender Orcutt grass (*Orcuttia tenuis*), Sacramento Orcutt grass (*Orcuttia viscida*), and Crampton's tuctoria (*Tuctoria mucronata*). The ICF Jones & Stokes botanist concluded that the study area does not meet the habitat and/or microhabitat requirements (e.g., vernal pools, alkali grasslands, sand dunes) for any of these species. Therefore, plant species listed under the federal ESA are unlikely to occur in the study area.

4.2 Occurrences of Animal Species Listed/Proposed under the Federal Endangered Species Act

Species distribution and habitat suitability requirements indicate that 10 of the species on the USFWS list do not occur in the study area (Appendix A). One listed wildlife species, VELB, was identified as having the potential to occur in the study area. This species is discussed below.

4.2.1 Discussion of Valley Elderberry Longhorn Beetle

VELB is listed under the federal ESA as a threatened species; critical habitat was designated by USFWS on August 8, 1980 (45 Federal Register [FR] 52803). On October 2, 2006, USFWS proposed removal of VELB from the endangered species list; however, the species remains listed until a final determination is made. The biological study area is not located within critical habitat for VELB.

VELB is closely associated with elderberry shrubs (*Sambucus* spp.), an obligate host for beetle larvae. It is a hardy shrub that grows successfully in a variety of riparian habitat types. Where there is a source of water, elderberry shrubs grow in non-riparian habitats. However, most VELB occurrences are known from elderberry shrubs in or adjacent to riparian communities.

VELB's life history is assumed to follow a sequence of events similar to those of related taxa. Adult VELB live for a few days to a few weeks between mid-March and mid-May (Talley et al. 2006). Adults feed on elderberry leaves and mate within the canopy. Female beetles deposit

eggs on the surface of leaves or in crevices of bark or stem/petiole junctions (Talley et al. 2006). Eggs hatch within a few days, and the larvae soon after bore to the center of the elderberry stem where they create a feeding gallery in the pith at the center of the stem. When larvae are ready to pupate, they move through the pith of the plant, open an emergence hole through the bark, and return to the pith for pupation. Adults exit through the emergence holes and can sometimes be found on elderberry foliage, flowers, or stems or on adjacent vegetation. The entire life cycle of VELB is thought to encompass 2 years from the time eggs are laid and hatch to the time adults emerge and die (U.S. Fish and Wildlife Service 1984).

The presence of exit holes in elderberry stems indicates previous use by VELB. Exit holes are circular to oval and range in size from 4 to 10 millimeters (0.16 to 0.39 inch) in diameter. Exit holes can be found on stems that are 25 to 203 millimeters (1 to 8 inches) in diameter. On the stems, holes may be located from a few millimeters (inches) above the ground to about 2.74 to 3.05 meters (9 to 10 feet) above the ground (Barr 1991).

4.2.1.1 Survey Results

Thirteen elderberry shrubs/shrub groups were identified within the biological study area (Figure 3). Only one shrub, located along the bank of the Sacramento River just west of Jibboom Street, occurs in riparian habitat. Associated vegetation in this area consists of large cottonwoods and willows. The remaining 12 shrubs were identified within non-riparian habitat, which consists primarily of landscaped rights-of-way. These shrubs appear to be volunteers among mostly non-native landscape vegetation, but some native vegetation, consisting of oaks, cottonwoods, and willows, does occur in these areas. Eight of the 13 shrubs were observed with exit holes. Table 4-1 summarizes the results of the elderberry shrub survey.

There are no CNDDDB records of VELB occurring within the biological study area. However, there are numerous CNDDDB records for VELB along the Sacramento and American Rivers. The nearest recorded occurrence is less than 0.40 kilometer (0.25 mile) from the biological study area.

Table 4-1. Results of Elderberry Shrub Survey

Shrub/Shrub Group Number	Stem Diameter Class at Ground Level			Shrub Height (feet)	Exit Holes Present?	Shrub in Riparian Habitat?	Shrub Distance from Project Construction (feet)
	1-3 in.	3-5 in.	> 5 in.				
1	5	1	3	16	No	No	<20
2	4	1	1	20	Yes	No	20 - 100
3	0	1	2	15	Yes	No	20 - 100
4	0	0	1	21	No	No	20 - 100
5	0	0	2	20	Yes	Yes	20 - 100
6	0	0	1	20	Yes	No	<20
7	4	2	1	13	No	No	>100
8	1	0	1	16	Yes	No	20 - 100
9	0	0	1	15	No	No	<20
10	2	0	1	13	No	No	<20

Shrub/Shrub Group Number	Stem Diameter Class at Ground Level			Shrub Height (feet)	Exit Holes Present?	Shrub in Riparian Habitat?	Shrub Distance from Project Construction (feet)
	1-3 in.	3-5 in.	> 5 in.				
11	14	12	16	25	Yes	No	20 - 100
12	0	0	1	20	Yes	No	<20
13	2	0	1	12	Yes	No	<20

4.2.1.2 Critical Habitat

According to the recovery plan for VELB (USFWS 1984), the study area does not encompass areas designated as Critical or Essential habitat for VELB. Critical habitat occurs approximately 3.2 kilometers (2 miles) east of the study area.

4.2.1.3 Avoidance and Minimization Efforts

Implementation of the following measures would avoid or minimize impacts on VELB that may occur in elderberry shrubs not directly affected by project construction. These measures are from the USFWS Guidelines, dated July 9, 1999.

Establish a 6.1-Meter-Wide (20-Foot-Wide) Buffer (minimum) around All Elderberry Shrubs Where Feasible

Before any ground-disturbing activity, the City will ensure that a temporary plastic mesh-type construction fence (Tensor Polygrid or equivalent), a minimum of 1.2 meters (4 feet) tall, is installed at least 6.1 meters (20 feet) from the driplines of elderberry shrubs adjacent to the study area that will be retained. The intent of requiring this fencing is to prevent encroachment by construction vehicles and personnel. The exact location of the fencing shall be determined by a qualified biologist, with the goal of protecting habitat for VELB. The fencing shall be strung tightly on posts set at a maximum interval of 3.0 meters (10 feet). The fencing shall be installed in a way that prevents equipment from enlarging the work area beyond the delineated area. The fencing shall be checked and maintained weekly until all construction is completed. This buffer zone shall be marked by signs stating, "This is habitat of the VELB, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." Signs will be placed at intervals of 15.2 meters (50 feet) and must be readable at a distance of 6.1 meters (20 feet). No construction activity, including grading, shall be allowed until this condition is satisfied. No grading, clearing, storage of equipment or machinery, or other disturbance or activity may occur until a representative of the City has inspected and approved all temporary construction fencing. The fencing and a note reflecting this condition shall be shown on the construction plans.

Conduct Mandatory Contractor/Worker Awareness Training for Construction Personnel

Before any work occurs in the project area, including grading, a qualified wildlife biologist shall conduct mandatory contractor/worker awareness training for construction personnel. The

Draft EA Comment Letters and Responses

COMMENT LETTER #1

Alejandro Huerta

To: Nicola Swinburne

Subject: RE: Jibboom Building - CEQA Draft Mitigated NegativeDeclarationComments

-----Original Message-----

From: Dana Allen [mailto:DAllen@cityofsacramento.org]

Sent: Tuesday, April 20, 2010 1:44 PM

To: Rachel Hazlewood

Cc: Jennifer Witz; Rochelle Amrhein

Subject: Fwd: Jibboom Building - CEQA Draft Mitigated NegativeDeclarationComments

Rachel

This is our only comment letter so far. Are you or Jenn collecting comment letters from both Shelly and I to distribute for our Tuesday meeting? Or should we send out copies before the meeting to the team?

Dana

>>> "Peter MacNicholl" <PMacnich@dtsc.ca.gov> 4/19/2010 3:55 PM >>>

Hi Dana,

I appreciate your time this morning to discuss the planned actions for the Jibboom Structure located at 450 Jibboom Street anticipated for inclusion as part of the RT Matsui Waterfront Park.

1-1

DTSC has reviewed the Draft Mitigated Negative Declaration submitted on behalf of the City of Sacramento and has the following comments:

General Comments:

1.) Congratulations on being selected for the Brownsfields Cleanup Grant in the amount of \$200,000 by the United States Environmental Protection Agency. DTSC is aware that the funds will be used to restore/rehabilitate the former PG&E steam-generator power plant and areas surrounding as part of the Robert T. Matsui Waterfront Park.

1-2

2.) The 1996 Final Remedial Action Plan for the Jibboom Structure specified a future land use of light industrial/commercial for the Site due to remaining concentrations of total petroleum hydrocarbons and lead contamination in Site soils. DTSC and the Department of Water Resources (DWR) signed a Land Use Covenant in 1998 to restrict future land uses for the former PG&E Power Plant and the land adjacent (east) where the soil has been capped to prevent human and environmental exposure pathways to lead contaminated soils. Exhibit B of the Land Use Covenant (LUC) clearly identifies the respective property boundaries for the restricted use areas (POC-2-B) from adjacent properties. While the land use for the Property (POC-2) to the south of the power plant has changed from light industrial/commercial to a regional park, the land use for areas part of the LUC will remain light industrial/commercial until such time the Department of Toxic Substances Control terminates the restrictions and covenant.

1-3

3.) DTSC currently has an Operations & Maintenance Plan (O&M Plan), O&M Agreement with the City of Sacramento to provide guidance and departmental policies for the restrictions, maintenance of the cap, and groundwater monitoring in support of the LUC. Should the City of Sacramento plan to disturb the areas where land use controls remain in place (former PG&E power plant and capped land adjacent to the east) then the City will need to submit a soil management plan or appropriate document specifying the response actions to the Department 60-days in advance of the anticipated fieldwork efforts for review and approval. Based on the type of work proposed in the Soil Management Plan or Response Plan would determine the necessary deliverable to document the changes to the selected remedy in the 1996 RAP. The changes to the Site and selected remedy would be documented with either an Explanation of Significant Differences or Amendment to the RAP.

1-4

COMMENT LETTER #1

Peter MacNicholl, P.E.
Remedial Project Manager
Cleanup Program-Sacramento
8800 Cal Center Drive
Sacramento, CA 95826
916-255-3713
FAX 916-255-6621
pmacnich@dtsc.ca.gov

1-4
cont.

COMMENT LETTER #2

STATE OF CALIFORNIA – THE RESOURCES AGENCY

ARNOLD SCHWARZENEGGER, GOVERNOR

CENTRAL VALLEY FLOOD PROTECTION BOARD

3310 El Camino Ave., Rm. 151
SACRAMENTO, CA 95821
(916) 574-0609 FAX: (916) 574-0682
PERMITS: (916) 574-0685 FAX: (916) 574-0682



April 19, 2010

Dana Allen
Environmental Planning Services
Community Development Department
City of Sacramento
300 Richards Blvd., 3rd Floor
Sacramento, CA 95811

Dear Ms. Allen:

SCH# 2010032067
Draft Initial Study/Mitigated Negative Declaration
Powerhouse Science Center (P10-014)

Staff for the Central Valley Flood Protection Board has reviewed the subject document and provides the following comments:

The proposed project is located within the jurisdiction of the Central Valley Flood Protection Board (Formerly known as The Reclamation Board). The Board is required to enforce standards for the construction, maintenance and protection of adopted flood control plans that will protect public lands from floods. The jurisdiction of the Board includes the Central Valley, including all tributaries and distributaries of the Sacramento River and the San Joaquin River, and designated floodways (Title 23 California Code of Regulations (CCR), Section 2).

2-1

A Board permit is required prior to starting the work within the Board's jurisdiction for the following:

- The placement, construction, reconstruction, removal, or abandonment of any landscaping, culvert, bridge, conduit, fence, projection, fill, embankment, building, structure, obstruction, encroachment, excavation, the planting, or removal of vegetation, and any repair or maintenance that involves cutting into the levee (CCR Section 6);
- Existing structures that predate permitting or where it is necessary to establish the conditions normally imposed by permitting. The circumstances include those where responsibility for the encroachment has not been clearly established or ownership and use have been revised (CCR Section 6);
- Vegetation plantings will require the submission of detailed design drawings; identification of vegetation type; plant and tree names (i.e. common name and scientific name); total number of each type of plant and tree; planting spacing and irrigation method that will be within the project area; a complete vegetative management plan for maintenance to prevent the interference with flood control, levee maintenance,

2-2

COMMENT LETTER #2

Dana Allen
April 19, 2010
Page 2 of 2

inspection and flood fight procedures (Title 23, California Code of Regulations CCR Section 131).

2-2
cont.

The permit application and Title 23 CCR can be found on the Central Valley Flood Protection Board's website at <http://www.cvpfb.ca.gov/>. Contact your local, federal and state agencies, as other permits may apply.

2-3

If you have any questions please contact me at (916) 574-0651 or by email jherota@water.ca.gov.

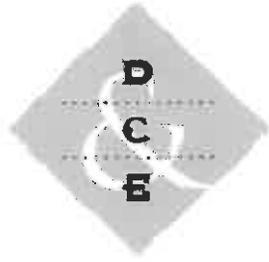
Sincerely,



James Herota
Staff Environmental Scientist
Floodway Protection Section

cc:

Governor's Office of Planning and Research
State Clearinghouse
1400 Tenth Street, Room 121
Sacramento, CA 95814



1625 SHATTUCK AVENUE
SUITE 300
BERKELEY, CA 94709
TEL: 510 848 3815
FAX: 510 848 4315
www.dceplanning.com

MEMORANDUM

DATE June 18, 2010
TO Shelly Amrhein
Sacramento Housing & Redevelopment Agency
FROM Nicola Swinburne and Steve Noack
RE **Powerhouse EA Comments and Responses**

This memorandum summarizes and responds to 2 comment letters on the Powerhouse EA.

Comment Letter 1, Peter MacNicholl, DTSC, April 19, 2010

- 1-1 This comment states that the Department of Toxic Substances Control (DTSC) has reviewed the EA. This comment serves as introduction to the letter and does not address the adequacy of the EA. Therefore, no response is needed.
- 1-2 This comment serves as a message of congratulations for the Applicant's selection as a recipient of the Brownfields Cleanup Grant for the restoration/rehabilitation of the former PG&E power plant and areas surrounding the Robert T. Matsui Waterfront Park. Since this comment does not address the adequacy of the EA, no response is needed.
- 1-3 The comment states that the 1996 Final Remedial Action Plan specified a future land use of light industrial/commercial for the Site and that land uses are restricted by the 1998 Land Use Covenant. The project proposes a commercial land use. Therefore, the proposed project complies with the restrictions of the 1998 Land Use Covenant. The Land Use Covenant was described on pages 20 and 21 of the Draft EA and activities planned to take place over the clay caps on pages 40 and 41. The comment is noted. No changes are made to the Draft EA.
- 1-4 The comment states that DTSC currently has an Operations and Maintenance Agreement with the City. If the City plans to disturb the areas where land use controls remain in place (powerplant and capped areas to the east) then a soil management plan (or appropriate document specifying the response actions) should be submitted to DTSC for review and approval. Planned activities in the areas of the clay cap and their consistency with the O&M Agreement provisions were described on page 41 of the Draft EA. The comment is noted. No changes are made to the Draft EA..

Comment Letter 2: James Herota, Central Valley Flood Protection Board, April 19, 2010

- 2-1 This comment states that the Central Valley Flood Protection Board (CVFPB) has reviewed the EA and that the proposed project is within the jurisdiction of the CVFPB. This comment serves as an introduction to the letter and does not address the adequacy of the EA. Therefore, no response is needed.
- 2-2 The comment describes how a Board permit is required for work that affects the levee and existing structures encroaching on the levee, and that information is required about plantings that could interfere with the levee structure. Application for a CVFPB Permit is the subject of Mitigation Measure #5 on page 28 of the Draft EA. The comment is noted. No changes are made to the Draft EA.
- 2-3 This comment concludes the letter by informing the applicant that the permit application form can be found on the CVFPB's website. No response to this comment is required.

**8-Step Process
Comment Letter and Responses**

U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

8-STEP PROCESS FOR FLOODPLAINS AND WETLANDS

Powerhouse Science Center – Sacramento, CA

Introduction

This 8-step process is undertaken pursuant to Executive Order 11990 (Protection of Wetlands), and under HUD implementing regulations codified at 24 CFR Part 55 – Floodplain Management. The regulations also prescribe a process suitable for protecting wetlands. Under this Executive Order, in order to receive federal funds, HUD must demonstrate that there are no practicable alternatives to locating the project in an area occupied by a wetland. The step titles below pertaining to development in a floodplain are interpreted to mean development affecting a wetland.

Step 1: *Determine whether the action is located in a 100-year floodplain (or a 500-year floodplain for critical actions).*

The project site is located next to the Sacramento River and is protected by the levee from a 1 percent annual chance of flood. As part of the project description, all structures for this proposed project would be kept back from the toe of the levee. Therefore no part of the action is located in a 100-year flood plain.

No wetlands were identified on the U.S. Fish & Wildlife Service National Inventory Map for the project area. However, a seasonal wetland was identified on the site during a biological site assessment for the Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project, a previously approved project in the same area.¹ This identified wetland is to the east of the clay cap and utility berm on the eastern edge of the project site (see Attachment 4 of the Draft EA). This seasonal wetland, identified as SW-3 in that document, is 0.021 acre in size and located in a trench directly to the east of the utility berm. This wetland exhibited positive indicators of hydrophytic vegetation and wetland hydrology but not hydric soils. Although this wetland does not meet all three diagnostic environmental characteristics of a wetland, it functions as a wetland.² The U.S. Army Corps of Engineers (USACE) verified the delineation of this feature on December 7, 2009 (SPK-2009-00977).³ Figure A-1 attached to this 8-step process shows the eastern wetland, SW-3, the utility berm and boundary fence east of the Powerhouse.

Another potential wetland feature was identified directly to the west of the utility berm, parallel to SW-3, and 0.046 acre in size. A qualified biologist conducted a wetland delineation on February 25,

¹ ICF Jones & Stokes, April 2009, Access Improvement from Railyards to Richards Boulevard and I-5 Project, page 3-5.

² United States of America Department of Transportation and Caltrans, December 2008, Preliminary Delineation of Wetland and Other Waters of the U.S. for Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project, pages 7 to 8.

³ De Paoli Conn, Angela, Senior Project Manager, California Delta Branch, Department of the Army, U.S. Army Engineer District, Sacramento, Corps of Engineers, personal communication with Nader Kamal, City of Sacramento Department of Transportation, December 7, 2009.

2010 and determined that the feature is a seasonal wetland as it contains hydrophytic vegetation and exhibits indicators of wetland hydrology and hydric soil. It therefore possesses all three diagnostic environmental characteristics necessary to qualify it as a wetland as defined by USACE.⁴ Figure A-2 attached to this 8-step process shows the western wetland and the utility berm.

The two identified wetlands are located on either side of utility lines that were installed in 2004 for the new Water Intake Structure fountain (Figure 3 of the Draft EA).⁵ The utility lines were located between the clay cap and Jibboom Street to avoid disturbing those elements. The clay cap is part of the site remediation system managed by the Department of Toxic Substances Control. The wetlands were therefore created artificially by these actions. They are seasonal features formed due to water collecting against the berm and draining off the clay cap. Grading to locate a parking area east of the Powerhouse, over the clay cap, would remove the wetland.

Because the project would involve new construction within or adjacent to a USACE-verified seasonal wetland, and another delineated wetland feature identified in accordance with the 1987 *USACE Wetland Delineation Manual*, applicable permits and certificates under Sections 401 and 404 of the Clean Water Act (CWA) are required. These applications are part of a separate process and not the subject of this 8-step process.

The 8-step process serves to ensure that the public is duly notified of the intention to fill two wetlands and documents that practicable alternatives have been analyzed. The eastern wetland (SW-3), verified December 7, 2009, was described in an Initial Study (IS) under CEQA⁶ and was covered by a Categorical Exclusion under NEPA.⁷ The western wetland is described in the main part of the Environmental Assessment (EA) to which this 8-step process is attached.

Step 2: *Notify the public for early review of the proposal and involve the affected and interested public in the decision making process.*

The Draft EA for the Powerhouse Science Center and its NOA serve as the public notice for this action. The NOA was published on March 22, 2010 by the City of Sacramento. The notice included the name of the project, proposed action, proposed location, need for the proposal, and the SHRA contact (for HUD) for the submission of written comments. It was published in the Daily Recorder, circulated through the State Clearinghouse, and sent to interested parties and local regulatory agencies. The comment period is from March 22, 2010 through April 21, 2010. More than 15 calendar days have therefore gone by since the publication of that notice. In addition, an Early Notice of a Proposed Activity in a Wetland was sent to HUD, EPA, USACE, USFWS, CVRWQCB, and DFG on April 14, 2010. This Early Notice gave notice that the SHRA conducted an evaluation required by Executive Order 11990 in accordance with HUD regulations, 24 CFR 55.20 Subpart C, Procedures for Making Determinations on Floodplain Management. This limited notice will have a 15-day comment period

⁴ ICF International, March 2010, Powerhouse Science Center Project Preliminary Delineation of Waters of the United States, including Wetlands, page 1.

⁵ Constantino, Raymond. Planner, City of Sacramento Parks and Recreation Department. Personal email communication with Alejandro A. Huerta, DC&E, April 14, 2010.

⁶ ICF Jones & Stokes, December 2009, Initial Study/Mitigated Negative Declaration: Access Improvements from Railyards to Richards Boulevard and Interstate 5 Project, page 3-41.

⁷ City of Sacramento, January 2010, Categorical Exemption/Categorical Exclusion Determination Form, Federal-Aid Project No. HPLUL 5002(128), pages 3 to 4.

that ends April 30, 2010 and references the prior notice for the Draft Powerhouse Environmental Assessment.

Step 3: *Identify and evaluate practicable alternatives.*

1) Powerhouse-Only Alternative

The Powerhouse-Only Alternative would involve only the renovation of the Powerhouse. Reduced development would require less parking and it is possible that the area located north of the Powerhouse Center might suffice and the area east of the Powerhouse with the wetlands could remain. However, the Powerhouse-Only Alternative would not provide the full museum capacity for the desired 250,000 annual visitors. There would be no space for the Planetarium program or conference center to act as a gathering place for teachers, scientists and high-tech leaders. In the event that the Powerhouse-Only Alternative were chosen, the Science Center might not relocate to the site at all because the location might not meet its capacity requirements. In conclusion, the smaller size of the facility would result in reduced benefits of the project such as the educational value of providing expanded facilities for science education and the employment from increased operations. Similarly, the smaller size of the facility would result in reduced revenues from fewer visitors. If the park around the Powerhouse were not improved, the project would not achieve the recreational benefits desired by the City such as improved access to the bike trail and the improvements to the outdoor recreation such as those provided by the shade structure and other park furniture. Finally, the 2003 Sacramento Riverfront Master Plan identifies the goal to “provide pedestrian and bicycle linkages along river and into adjacent areas,” which would not be met by this Powerhouse-Only Alternative.

2) No-Action Alternative

Under the No-Action Alternative, the project site would remain as a vacant lot. If the site were to remain in its current condition, the impact on the wetlands would not occur. However, none of the beneficial effects of the project such as increased educational value and employment would be achieved. The City would not see any additional recreational amenities. Without renovation of the Powerhouse, it would decay further, causing visual blight; its historic value could be compromised; and it could become a danger to park users.

Step 4: *Identify Potential Direct and Indirect Impacts.*

The project is not impacted by construction in this area of the wetlands as grading and adequate drainage would be provided by the project and the clay cap would be maintained under the parking. However, the proposed action would remove the wetland and this is a permanent impact to the wetland.

The wetlands were created artificially in 2004 and are seasonal, depending on rain and exhibit a high level of disturbance. The eastern wetland is dominated by tall flatsedge and also contains Fremont cottonwood, Goodding’s black willow saplings, curly dock, and bristly oxtongue. This wetland did not contain any water at the time of the delineation fieldwork. It receives hydrological input from direct precipitation, surface water, and another source, possibly a nearby leaking City water main. The

soils around the eastern wetland are significantly disturbed, consisting of 90 percent gravel and do not represent the existing soil conditions prior to the creation of the utility berm.⁸

The plant community around the western wetland has a small diversity and has non-native species. This wetland has limited use by wildlife. In addition, this wetland does not provide appreciable surface water storage or flood attenuation capability. Finally, this wetland has no scenic value, does not provide recreational opportunities, and is not unique.⁹

Step 5: *Where practicable, design or modify the proposed action to minimize the potential adverse impacts to lives, property, and natural values within the floodplain and to restore, and preserve the values of the floodplain.*

The proposed action could be modified slightly to reduce the amount of parking so that it did not encroach on the wetlands. However the site hydrology would be altered and it is possible that the wetlands would be removed by this action. If the project were modified sufficiently so that the wetlands are preserved, the project might not be viable. In addition, the wetlands would have to be fenced off to prevent being dangerous to children. The project design would have to be considerably changed by these modifications and it would compromise site aesthetics and efficacy.

Step 6: *Reevaluate the Alternatives.*

The Powerhouse-Only Alternative could be framed so that this area of the site is preserved as is; however, the project may not then be viable, and it is possible that there could still be impacts to the wetland. Only the No-Action Alternative would remove any impacts to the wetlands. However, as stated above, this alternative would not have any of the beneficial effects of the project. Furthermore, without renovation, the Powerhouse would decay further, and the site could expose park users to hazards.

Step 7: *Determination of No Practicable Alternative*

It is our determination that there is no practicable alternative to locating the project in an area occupied by wetlands. This is due to the unique nature of the development and the need for adequate parking. The FONSI-NOIRROF will serve as a final public notice that describes why the project must be located in this area and that there are no appropriate mitigation measures to preserve it.

Step 8: *Implement the Proposed Action*

On completion of the NEPA and CEQA processes, agency consultations, and issuance of all applicable permits, the Proposed Action can be implemented.

⁸ United States of America Department of Transportation and Caltrans, December 2008, Preliminary Delineation of Wetland and Other Waters of the U.S. for Sacramento Access Improvements from Railyards to Richards Boulevard and I-5 Project, page 8.

⁹ ICF International, March 2010, Powerhouse Science Center Project, Preliminary Delineation of Waters of the United States, including Wetlands, page 5.



FIGURE A-1
WETLAND EAST OF THE UTILITY BERM



FIGURE A-2
WETLAND WEST OF THE UTILITY BERM

**8-Step Process
Comment Letter and Responses**



**DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO CA 95814-2922**

REPLY TO
ATTENTION OF

May 3, 2010

Regulatory Division SPK-2010-00564

Rochelle Amrhein
Sacramento Housing and Redevelopment Agency
801 12th St
Sacramento, California 95814

Via First Class Mail and E-Mail to ramrhein@shra.org

Dear Ms. Amrhein:

We are responding to your April 28, 2010 request for comments on the Powerhouse Science Center & Jibboom Street Improvements project. The project is located near 400 Jibboom Street, Township 9 N, Range 4 E, Latitude 38.59339°, Longitude -121.50557°, Sacramento County, California. Your identification number is SPK-2010-00564.

3-1

The Corps of Engineers' jurisdiction within the study area is under the authority of Section 404 of the Clean Water Act for the discharge of dredged or fill material into waters of the United States. Waters of the United States include, but are not limited to, rivers and wetlands. Project features that result in the discharge of dredged or fill material into waters of the United States will require Department of the Army authorization prior to starting work.

3-2

To ascertain the extent of waters on the project site, you should prepare a wetland delineation, in accordance with the "Minimum Standards for Acceptance of Preliminary Wetland Delineations", under "Jurisdiction" on our website at the address below, and submit it to this office for verification. A list of consultants that prepare wetland delineations and permit application documents is also available on our website at the same location.

3-3

The range of alternatives considered for this project should include alternatives that avoid impacts to wetlands or other waters of the United States. Every effort should be made to avoid project features which require the discharge of dredged or fill material into waters of the United States. In the event it can be clearly demonstrated there are no practicable alternatives to filling waters of the United States, mitigation plans should be developed to compensate for the unavoidable losses resulting from project implementation.

3-4

If waters of the United States are going to be impacted, cultural resource sites within the defined federal permit area will need to be evaluated according to the standards of the National Environmental Policy Act. All eligible or potentially eligible cultural resource sites to the National Register of Historic Places within the permit area will be subject to Section 106 of the National Historic Preservation Act, 1966, as amended. The Corps of Engineers must also

3-5

comply with the terms and conditions of the Federal Endangered Species Act with regards to our permitting process. You may need to supply a recent biological assessment of the project site for us to comply with the federal Endangered Species Act.

3-5
cont.

Please refer to identification number SPK-2010-00564 in any correspondence concerning this project. If you have any questions, please contact Daniel Neal by e-mail at *Daniel.P.Neal@usace.army.mil*, or by telephone at 916-557-7901. For more information regarding our program, please visit our website at *www.spk.usace.army.mil/regulatory.html*.

3-6

Sincerely,



KAD Kathleen A. Dadey, Ph.D.
California Delta Branch



1625 SHATTUCK AVENUE
SUITE 300
BERKELEY, CA 94709
TEL: 510 848 3815
FAX: 510 848 4315
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MEMORANDUM

DATE June 18, 2010
TO Shelly Amrhein
Sacramento Housing & Redevelopment Agency
FROM Nicola Swinburne and Steve Noack
RE **Powerhouse 8-Step Process Comments and Responses**

This memorandum summarizes and responds to 1 comment letter on the Powerhouse 8-Step Process.

Comment Letter 3, Kathleen A. Dadey, Department of the Army, U.S. Army Engineer District, Sacramento, Corps of Engineers, May 3, 2010

- 3-1 This comment states that the Corps of Engineers responded to the April 28, 2010 request for comments. This comment serves as introduction to the letter, citing the project location and identification number. No response is needed.
- 3-2 This comment states that the Corps of Engineers has jurisdiction over the study area under Section 404 of the Clean Water Act. The comment also states that any discharge of dredged or fill material into rivers and wetlands would require Department of the Army authorization prior to work. Authorization for any work is the subject of Mitigation Measure #2 on pages 13 and 14 of the Draft EA. The comment is noted. No changes are made to the Draft EA.
- 3-3 The comment states that wetland delineations need to be prepared and submitted for verification. Wetland delineations for the proposed project are described on page 13 of the Draft EA (also described on pages 1 and 2 of the 8-Step Process). The comment is noted. No changes are made to the Draft EA or the 8-Step Process.
- 3-4 This comment states that alternatives should avoid impacts to wetlands and that, if there are no practicable alternatives, compensation should be developed for the loss. Alternatives are described and analyzed on pages 3 through 4 of the 8-Step Process. Compensation for the loss of wetlands is the subject of Mitigation Measure #2 of the Draft EA. The comment is noted. No changes are made to the Draft EA or the 8-Step Process.
- 3-5 This comment states that cultural resources in or near the wetlands will need to be evaluated according to the National Environmental Policy Act and Section 106 of the National Historic Preservation Act. The proposed project's compliance with the Section 106 process is described on pages 9 through 11 of the Draft EA. The

comment also states that the proposed project may need a recent biological assessment to comply with the federal Endangered Species Act. ICF International wrote a Biological Assessment in 2009 for the Access Improvements from Railyards to Richards Boulevard and I-5 Project for the eastern wetland. The western wetland's biological value is described on page 5 of the Powerhouse Science Center Project Preliminary Delineation of Waters of the United States, including Wetlands report prepared by ICF International in March 2010. The proposed project's compliance with the federal Endangered Species Act is described on pages 15 through 17 and 42 through 43 of the Draft EA. The comment is noted. No changes are made to the Draft EA.

- 3-6 This comment serves as a conclusion to the letter and restates the project's identification number and gives the name and number of the contact person at the Corps of Engineers. No response to this comment is required.

ARCHAEOLOGICAL RESOURCES INVENTORY AND EVALUATION REPORT FOR THE POWERHOUSE SCIENCE CENTER, SACRAMENTO COUNTY, CALIFORNIA

PREPARED FOR:

Carson Development
P.O. Box 2590
Sacramento, CA 95812
Contact: Debora Fee
916.441.6870

PREPARED BY:

ICF International
630 K Street, Suite 400
Sacramento, CA 95814
Contact: Trish Fernandez, M.A., RPA
916.737.3000

June 2010



ICF International. 2010. Archaeological Resources Inventory and Evaluation Report for the Powerhouse Science Center, Sacramento County, California. Revised Draft. June. (ICF 00252.10.) Sacramento, CA. Prepared for Carson Development, Sacramento, CA.

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Acronyms and Abbreviations

ACHP	Advisory Council of Historic Preservation
APE	area of potential effects
B.P.	before present
CCTS	Central California Taxonomic System
CDBG	Community Development Block Grants
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
EPA	United States Environmental Protection Agency
Education Center	Education Center, and Restaurant
HUD	Department of Housing and Urban Development
ICF	ICF International
the Learning Center	Planetarium and Challenger Learning Center and Café
MOA	Memorandum of Agreement
NCIC	North Central Information Center
NRHP	National Register of Historic Places
PG&E	Pacific Gas and Electric
proposed project	Powerhouse Science Center Project
SHPO	California State Historic Preservation Officer
SHRA	Sacramento Housing and Redevelopment Agency
SITF	Sacramento Intermodal Transportation Facility

Chapter 1

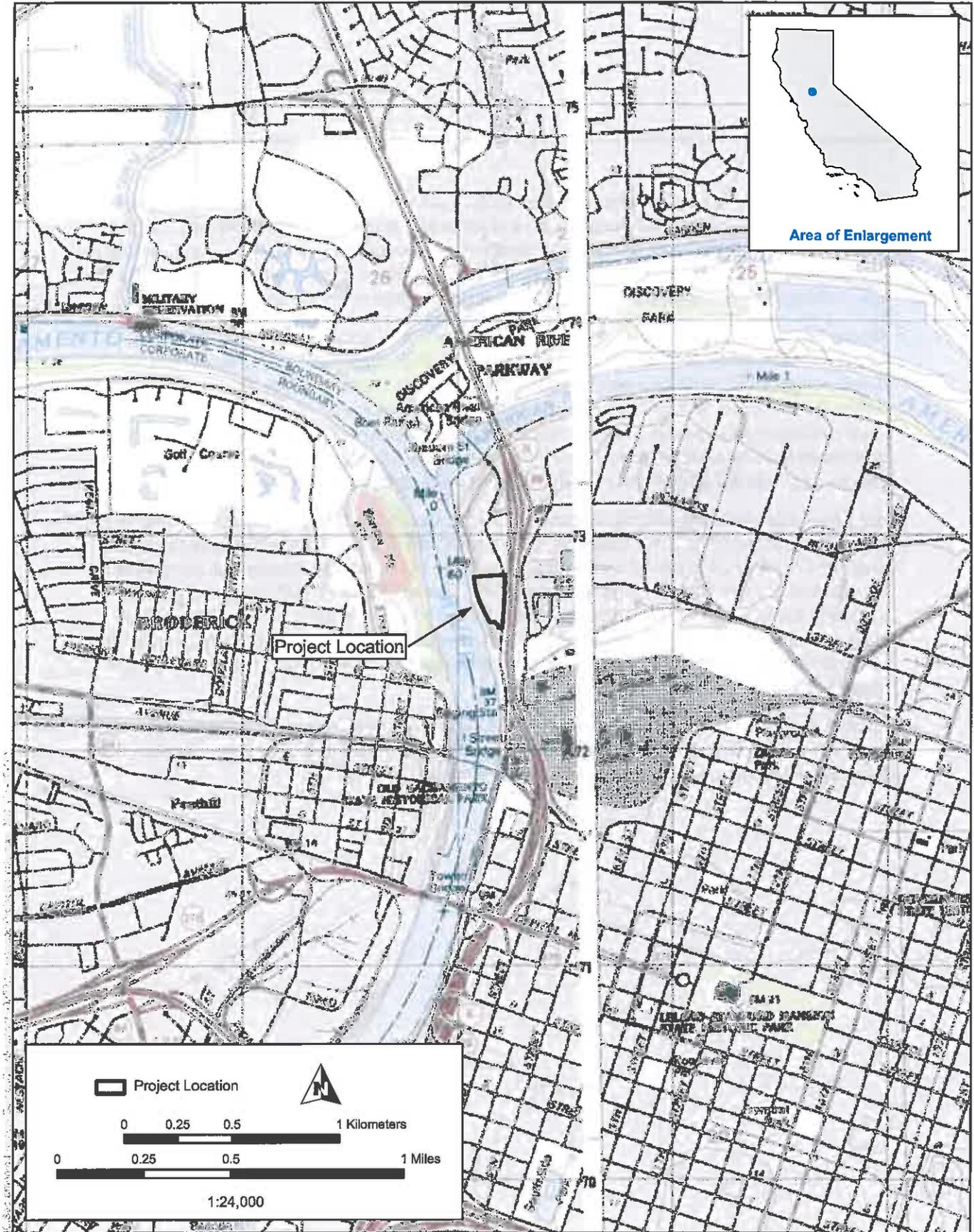
Introduction

This report documents the cultural resources study conducted for the Infrastructure Improvement Project and Powerhouse Science Center's area of potential effects (APE), in Sacramento County (Figure 1). These projects are considered connected actions under the Code of Federal Regulations. Therefore, for the purposes of Section 106 review, these distinct projects will be referred to as one undertaking, the Powerhouse Science Center Project (hereafter called the proposed project).

The purpose of this report is to provide the Sacramento Housing and Redevelopment Agency (SHRA), authorized as the responsible entity by the U.S. Department of Housing and Urban Development (HUD), with data necessary to consult with the California State Historic Preservation Officer (SHPO) under Section 106 of the National Historic Preservation Act (Section 106) and its implementing regulations, 36 Code of Federal Regulations (CFR) 800. This document addresses only the archaeological resources of the Powerhouse Science Center. A Cultural Resources Report prepared by Page & Turnbull, Inc. (2010) addresses the architectural resources.

One previously identified cultural resource, the Pacific Gas and Electric (PG&E) Powerhouse (P-3-1711), exists in the APE. The archaeological survey identified two additional features associated with P-3-1711, Pads A and B. These features were recorded in the field, researched, and evaluated for significance according to the National Register of Historic Places (NRHP) eligibility criteria. Neither of the two new features appears eligible for the NRHP. It is ICF International's (ICF's) recommendation that the archaeological features are not historic properties as defined under 36 CFR 800 and that the proposed undertaking be determined to have no adverse affect on historic properties.

All work for this archaeological inventory and evaluation was conducted by Melissa Cascella, M.A., under the direction of Trish Fernandez, M.A. Ms. Cascella and Ms. Fernandez both meet the Secretary of Interior Standards for work in History and Archaeology.



**Figure 1 - Project Location
Powerhouse Science Center Project**

Section 106 of the National Historic Preservation Act

The proposed project is considered a federal undertaking because it requires funding and approval from HUD. HUD has delegated Section 106 authority for this project to the SHRA. As a federal undertaking, the proposed project is subject to compliance with Section 106. Section 106 requires that, before beginning an undertaking, a federal agency must take into account the effects of the undertaking on historic properties (cultural resources eligible for the NRHP) and afford the Advisory Council of Historic Preservation (ACHP) an opportunity to comment on these actions (16 U.S.C. 470f). Specific regulations regarding compliance with Section 106 state that, although the tasks necessary to comply with Section 106 may be delegated to others, the federal agency is ultimately responsible for ensuring that the Section 106 process is completed according to statute (36 CFR 800). Implementing regulations for Section 106 (36 CFR 800) detail the following preliminary three basic steps:

1. Initiate process by coordinating with other environmental reviews, consulting with the SHPO, identifying and consulting with interested parties (including the MLD), and identifying points in the process to seek input from the public and to notify the public of proposed actions.
2. Identify cultural resources and evaluate them for NRHP eligibility, resulting in the identification of historic properties, if any.
3. Assess effects of the project on historic properties, if any.

If there are no historic properties identified or if it is determined—in consultation with the MLD(s) of consulting Indian tribes—that the project will have no adverse effect on historic properties, no further consideration of cultural resources is necessary.

Background

The proposed project has been developed according to specific community needs. To address infrastructure requirements, Community Development Block Grants (CDBGs) will be used to relocate water and utility lines on the project site to Jibboom Street to bring the infrastructure into compliance with City standards in the low-/moderate-income area. As for the PG&E Powerhouse, the proposed project will largely rehabilitate and interpret what is currently a vacant building.

Description of Undertaking

The proposed project would include site work, rehabilitation of the Powerhouse, and construction of the Planetarium and Challenger Learning Center and Café (Learning Center), Education Center, and Restaurant (Education Center). To improve the site, an ecological wastewater treatment system that mimics processes found in wetland environments would be constructed at the northern border of the Robert T. Matsui Waterfront Park for educational purposes. The system would not supplant sewer service to the Powerhouse Science Center. Several surface parking areas would also be created and the site would be landscaped. The Powerhouse would be rehabilitated according to the *Secretary of the Interior's Standards for Rehabilitation* and would primarily hold exhibits for the proposed Powerhouse Science Center. The two-story Learning Center would be connected to the Powerhouse via a glazed bridge at the second story and would stand to the south of the Powerhouse. The two-story Education Center would be constructed in the northwest portion of the site. The following paragraphs describe the proposed project in more detail. Current conceptual drawings of the project components can be found in Page & Turnbull, Inc. (2010).

Ground Disturbances

All proposed site work would occur east of the western edge of the levee bike path along the Sacramento River. There would be no new structures within 10 feet of the levee.

Infrastructure

To bring the infrastructure into compliance with City standards in the low-/moderate-income area, water and sewer lines located at the east perimeter of the parcel would be relocated from within the parcel to run below Jibboom Street. The relocation of these utility lines would occur 875 feet south of the intersection of Jibboom Street and Richards Boulevard and would continue 750 feet to the south. As part of the infrastructure improvements, new curbs and gutters would be installed, sidewalks would be laid, and street lighting would be installed.

Living Machine Wastewater Treatment System

To provide educational opportunities on the site, a Living Machine ecological wastewater treatment system would be sculpted into the overbuild of the northern border of the Robert T. Matsui Waterfront Park. Living Machine is Worrell Water Technologies, LLC's trade name for a wastewater system that mimics processes found in wetland environments to generate clean water for reuse from localized wastewater (Worrell Water Technologies 2010). The Living Machine installation for the proposed project would consist of two rows (approximately 1,500 square feet each) of simulated wetland basins and would be located along the northern and eastern edges of the existing Robert T. Matsui Waterfront Park. Water would be pumped through the gravel-filled basins to provide clean water. The Living Machine installation would be visible to the public and may supplement educational programs at the Powerhouse Science Center. The Living Machine treatment system would not supplant wastewater treatment services for the proposed project.

Grading

All proposed site work would occur east of the western edge of the levee bike path along the Sacramento River. There would be no new structures within 10 feet of the levee.

Basement Excavation

An undetermined amount of contaminated soil would be excavated in the basement of the existing Powerhouse to create space that may be occupied. The level and extent of excavation would be determined upon further exploration of the condition of the contaminated soil, and existing and abandoned foundation structures below grade. Contaminated soil will be disposed of appropriately.

Landscaping and Paving

All proposed site work would occur east of the western edge of the levee bike path along the Sacramento River.

Three asphalt-paved surface parking areas would be constructed at the east portion of the site, parallel to Jibboom Street and at the north end of the parcel. The first lot would contain a single row of angled parking parallel to Jibboom Street, would be located to the northeast of the water feature in the Robert T. Matsui Park, and would be accessed by driveways at its north and south ends. The second lot would be centrally located in the eastern portion of the parcel, would contain three rows of parking, and would be accessed by a drive at the center of the parcel. Five solar "trees" would be located between the second and third parking rows. The third parking area would be accessed by a drive in the northern portion of the parcel and would contain seven rows of surface parking. Solar-paneled parking canopies would cover approximately one third of the northern portion of the lot.

Paved walkways to the Powerhouse would be laid at the north and south ends of the parcel. Paved walkways would also be located between the Powerhouse and the two proposed auxiliary buildings. A patio would be constructed to the west of the proposed Restaurant and Education Center, between the buildings and the bike path.

Trees would be planted on the west side of Jibboom Street between the street and sidewalk. Trees would also be planted along the western edge of the first parking lot. Several trees would be planted to border the portion of the Robert T. Matsui Waterfront Park between the Powerhouse and the water feature in the park. Low-lying plantings would be located between the bike path and the Powerhouse. Small ornamental trees would shade the walkway north of the Powerhouse and shrubs

would line the northern edge of the parcel. The plantings would be set back so that they would not obstruct views of the Powerhouse building.

Rehabilitation of the Powerhouse

Exterior

The architectural detailing on the exterior of the building, which includes the stucco finish, quoining, cartouche and PG&E signage above the entrance on the west façade, would be repaired and restored. Enclosed windows in the building would be re-opened, the frames repaired or replaced, and replacement glass installed. The flat roof would be replaced and reinforced with a steel truss system and the roof monitors would be repaired or replaced as necessary. If replaced, the new monitors would match the design, placement, size, form, and profile of the original monitors and glazing. New glazed double doors would be installed in the existing entrances in the west and south façades. On the east (the original “rear”) unfinished elevation, a glazed addition and elevator tower would be constructed. The addition would stand in the “L” created by the northern and southern blocks of the building. The portion of the addition located in the “L” would be two stories and would contain a glazed walkway connection to the proposed Planetarium and Challenger Café. Along the northern block of the building, the addition would be one story and would include a covered corridor to the elevator tower.

Interior

Interior structural and seismic work would be conducted and the building would be rehabilitated. The concrete floors would be replaced in their current locations and the concrete building walls would be reinforced with shotcrete. The relationship of the northern and southern building blocks would be preserved, but the large concrete plinths which historically supported equipment in the Powerhouse would be removed (all equipment in the building and all metal materials were removed several decades ago by previous owners).

The building would be composed of four levels: an intake floor, ground floor, mezzanine, and second floor. A new concrete floor would be constructed for the intake floor which would include a glazed opening in the northern block of the building to display the building’s former water intake pipes. The intake floor would contain offices in the northern building block. The southern building block would serve as a storage area if environmental conditions allow.

On the ground floor, the central portion of the northern block would be glazed above the former intake pipes. The northern and southern blocks would feature open plans with exhibit space. The ground floor of the glazed addition would contain the main entrance, ticketing area, elevator, and gift shop. The first and second floor mezzanines at the north wall of the northern block would contain open plans with exhibit space. A second floor would be constructed south of the second floor mezzanine. The second floor would contain a central opening above the intake pipes below the intake floor as well as flanking openings at the east and west ends of the northern block.

Pedestrian bridges to the east and west of the central opening in the northern block would connect the second floor mezzanine to the new second floor. An additional opening in the southern block of the second floor would represent the historically open area between the boilers formerly located in the southern block. The second floor would feature an open plan with exhibits. The second floor of the addition would contain classrooms and a bridge to the proposed Planetarium and Challenger Café building.

Restrooms and an office would be built in the eastern portion of the first and second floors of the south building block and a corridor would run between these spaces and the west wall of the original building. The building would contain four sets of stairs and the elevator tower addition. One staircase, located on the first floor above the intake pipes, would lead to the mezzanine and second floor. A second, new, double-loaded staircase would be constructed in the northeast corner of the building. A third staircase would lead from the office on the first floor to the proposed storage area on the intake floor. Finally, a fourth staircase in the southeast corner of the first floor would lead to the second floor of the building.

New Construction

A Planetarium and Challenger Learning Center and Café (the Learning Center) would be constructed in the southeast portion of the parcel. A glazed walkway would connect the second story of the Powerhouse to the Learning Center. The Learning Center would be two stories in height and rectangular in plan. The concrete building would feature glazing to expose the dome of the planetarium inside.

The Education Center would be two stories, rectangular in plan, and would be located parallel to the bike trail and Sacramento River.

Although two stories in height, the roofline of the new buildings would be lower than the cornice of the Powerhouse. The Learning Center and Education Center would also be located to the southeast and northwest, respectively, to preserve views of the Powerhouse from Jibboom Street, the bike trail, and the Sacramento River.

Area of Potential Effects

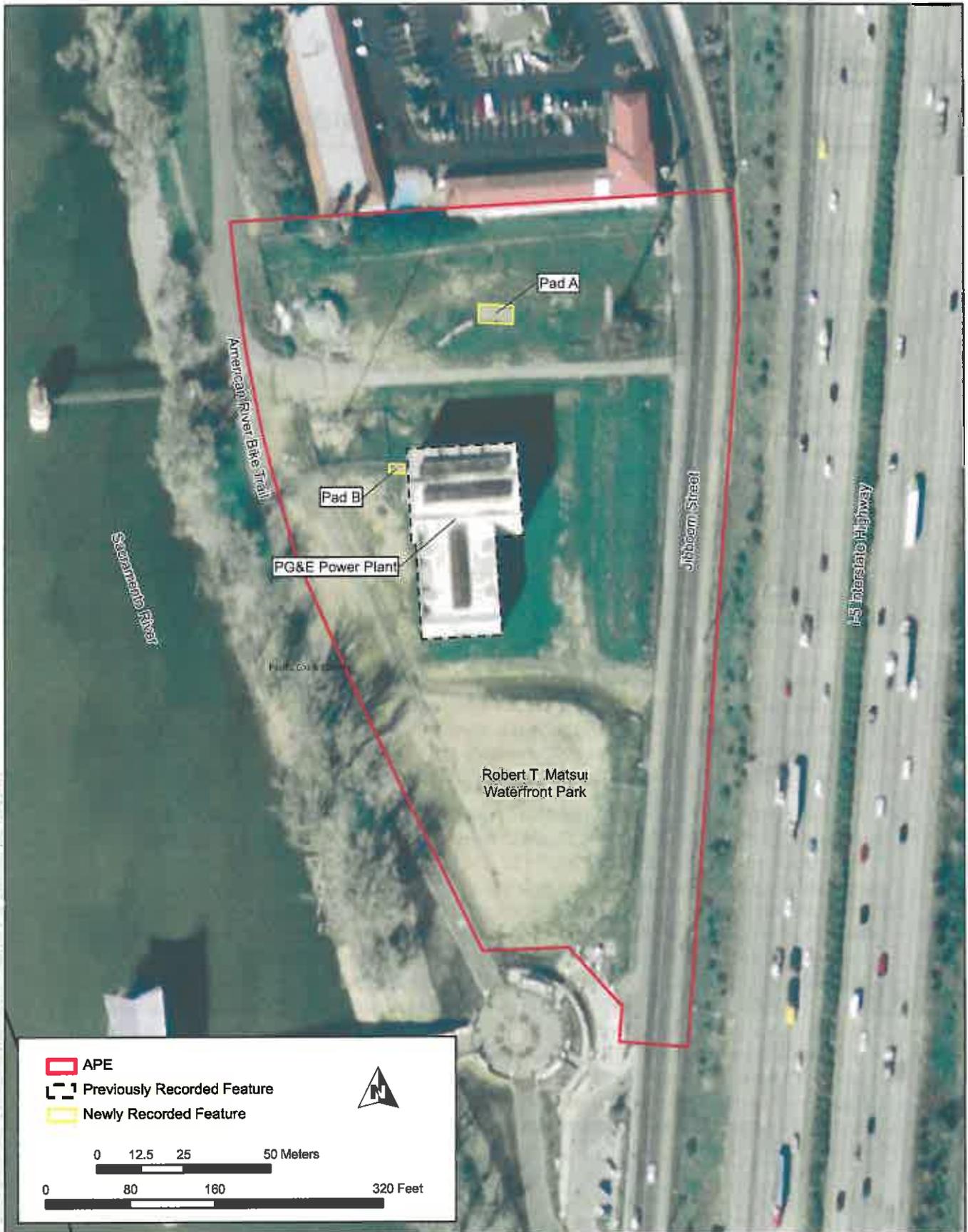
For the purposes of identifying archaeological historic properties, SHRA and the SHPO agree on the APE delineated in Figure 2. The archaeological APE differs from the APE for architectural resources depicted in Page & Turnbull's report in that the archaeological APE only covers the areas that are subject to ground disturbance, whereas the architectural APE covers areas that could be affected by visual or audible effects resulting from the undertaking.

The APE for the proposed project includes all areas subject to ground disturbance, such as infrastructure improvements, installation of an educational and functional Living Machine ecological wastewater processing system, sculpting of the grade, rehabilitation/adaptive reuse of the Powerhouse into a new Science Center, and the construction of parking and two buildings: a Planetarium and Challenger Learning Center and an Education Center and Restaurant. In addition, the APE includes a maximum subsurface limit of 10 feet below current grade for the components outlined on Figure 3 and described here:

- all areas of infrastructure improvements
- all areas of buried utilities, grading, and new construction
- foundation reinforcement within the footprint of the historic Powerhouse



**Figure 2 - Project APE
Powerhouse Science Center Project**



**Figure 3 - P-34-1711 (PG&E Powerhouse) Features
Powerhouse Science Center Project**

Environment

The proposed project is in the Sacramento Valley, the northern half of California's Central Valley. This area is primarily defined as a hydrographic unit—the contiguous watershed drained by the Sacramento River and its tributaries. This vast drainage stretches 384 miles from the headwaters in the northern Sacramento Valley to the Sacramento–San Joaquin River Delta.

These watercourses moved alluvium from the Sierra Nevada and the Coast Ranges to cover the Cenozoic non-marine basement rocks of the valley (Schoenherr 1992:518, 520). Before Euroamerican settlement of the Sacramento Valley, the dominant native vegetation in the valley consisted of *Nassella pulchra*, or purple needlegrass (Heady 1977). This perennial grass is the distinctive and characteristic species for the Central Valley prairie. Plant succession cycles in the prairie tended toward perennial bunchgrasses, such as purple needlegrass, on all well-drained upland sites (Heady 1977). Although purple needlegrass is a quintessential and indicator species for the California prairie, the valley supported a mosaic of other plant communities. In particular, the numerous waterways bisecting the valley supported many riparian species. Common riparian species are willow (*Salix* sp.), buttonbush (*Cephalanthus occidentalis*), California sycamore (*Platanus racemosa*), and Fremont's cottonwood (*Populus fremontii*).

Native fauna in the region included pronghorn antelope (*Antilocarpa americana*), deer (*Odocoileus hemionus*), jackrabbit (*Lepus californicus*), California ground squirrel (*Spermophilus beecheyi*), kangaroo rat (*Dipodomys heermanni*), pocket gopher (*Thomomys bottae*), and tule elk (*Cervus elophus nannodes*). The development of subspecies and strains unique to the Central Valley among this fauna suggest a long association between the floristic and faunal communities (Heady 1977).

The Holocene environment of the region was characterized by a general warming trend that subsumed episodes of relatively cool climates. Most paleoclimatic reconstructions for the Central Valley are based on Ernst Antevs' (1948, 1953, 1955) three-part global climatic sequence. The sequence spans the Holocene, consisting of the moderately cool/moist Anathermal (ca. 10,000–7500 before present [B.P.]), the warm and dry Altithermal (ca. 7500–4000 B.P.), and the Medithermal (ca. 4000 B.P. to present). Tree-ring growth chronologies from central eastern California, glacial chronologies, and pollen cores generally corroborate Antevs' sequence, with the caveat that California's Holocene environment exhibited regional variation (Adam 1967; Birkeland et al. 1976; Birman 1964; Curry 1969, 1970; Moratto et al. 1978; Šercelj and Adam 1975). Pollen diagrams from the Lake Tahoe and Yosemite areas indicate a vegetation shift that suggests a general increase in temperature from 9000 to 2900 B.P., although six relatively cool and moist periods, each lasting 400–1,500 years, punctuated the general warm and dry trend (Moratto et al. 1978:150–151). Modern average temperatures vacillate between 56° and 62° Fahrenheit annually. Most precipitation occurs as rain in amounts that vary from 5–25 inches per year.

Depositional Context

The landscape in Sacramento County is the result of various geologic processes that occurred in response to fluctuating climate and tectonic activities. Along the lower American River, sufficient evidence exists to suggest that the region has been affected by at least four cycles of landscape change within the last 600,000 years (Shlemon 1972). Any amount of significant soil formation would have occurred only during interglacial periods or intervals of lower precipitation and increased vegetative cover, which are characterized by relatively stable landscapes (Meyer et al. 2009:46; Shlemon 1972). During these periods of landscape stability, hydrologic variables of major rivers would have been adjusted so that terraces and interfluvies were neither significantly eroded nor aggraded. Soils would have had time to adequately form. As such, the soils and geomorphic conditions described herein would have formed since the Last Glacial Maximum, approximately 10,000 B.P.

Geomorphic Setting

Pre-1860

The APE is located at the confluence of the Sacramento and American rivers (Figure 1). Both of these rivers had different geographic positions relative to their current positions—the ancestral Sacramento River was generally situated in its present position, although it was considerably wider, and the ancestral American River was positioned farther south (approximately 1000 feet south of the APE) (ERM 2002:Figure 1-5; Ray 1873).

According to the Rosgen Level I valley classification, the APE in prehistoric times was located in a Type X (10) valley system (Rosgen 1996). A Type X valley system indicates a very wide, alluvium-dominated river environment with an extensive floodplain containing lacustrine deposits, alluvial flats, or wetlands (or all three). Since the Last Glacial Maximum, stream gradients most likely decreased (relative to the previous glacial period) as the Sacramento and American rivers adjusted to an influx of glacial melt-water sediments (Shlemon and Begg 1975). Channel form most likely consisted of meandering and anabranching (meandering with stable island formation) rivers with slightly sinuous to sinuous planform. Based on general geomorphic principles relating to floodplain sedimentation (Schumm 1981), floodplain development in the project vicinity most likely consisted of lateral accretion of sediments on the edges of the rivers and vertical accretion of sediments farther out onto the floodplain. Levees were constructed in phases starting as early as the 1850s.

Post-1860

In 1862, the American River was rechanneled to meet the Sacramento River about 0.25 mile north of the APE. The levees were strengthened and, south and west of Sutter Lake, a decade-long effort of street raising commenced. In 1910 nearby Sutter Lake was filled.

The original construction of the PG&E Powerhouse foundation required the disturbance of 6 feet 8 inches below the 1911 existing ground surface directly below the structure (Willis Polk and Co. 1911:20). Fill was placed in the surrounding area ranging in depth from 9 feet 8 inches immediately adjacent to the Powerhouse, to a maximum of 10 feet 7 inches at the lowest point (Willis Polk and Co. 1911:20). In addition, a planked wharf extended west from the PG&E Powerhouse over the levee and into the Sacramento River. Pilings for this wharf, driven directly into the soil, were 20 ft long (Willis Polk and Co. 1911:26).

The river has experienced several floods throughout the years exceeding 90,000 cubic feet per second and marked primarily by deposition of overbank materials, principally clay and silt. These include flood events during the winter of 1927–1928, February 1986, and January 1997 (Redmond 2008).

Remediation Projects (post-1980s)

The PG&E Powerhouse was first identified as a hazardous site in 1985 after the United States Environmental Protection Agency (EPA) and the State of California Department of Health Services completed four years of testing at the site. Throughout the late 1980s and early 1990s, efforts to clean the site to acceptable toxicity levels continued. In 1987, "at least 12 inches of soil were removed from the entire 2.3 acres exposed area of the former Associated Metals Property [current location of Robert T. Matsui Waterfront Park], and in some areas four or more feet were removed before the objectives were achieved. Approximately 10,000 square feet of the former PG&E Building Property was also excavated." (United States Environmental Protection Agency 2007:14) As part of later improvements to the Waterfront Park, and in order to insulate any remaining contaminants from park users, ten or more feet of clean soil were added to the site (United States Environmental Protection Agency 2007:31) (Appendix C)

In 1988, two 8,000-gallon fuel bunkers buried at the south end of the building were removed. In 1989, 6,200 tons of soil was removed from four areas of heaviest contamination, ranging in depth from 5 to 10 feet. In 1997, areas to the south and east of the Powerhouse were capped with dirt fill and two feet of clay, and then covered with more fill and vegetation. Thereafter, the Powerhouse was determined not dangerous to human health but the EPA imposed future building restrictions and constant toxicity monitoring (Department of Water Resources 1997, 1999; United States Environmental Protection Agency 1985).

To date, no remediation has taken place within the Powerhouse basement. However, hydrocarbons (heavy oil) were detected between 1991 and 1997 throughout much of the building basement in surface soils less than 2 feet deep and at greater depths in the vicinity of the buried fuel bunkers (Department of Water Resources 1999).

Previous Depositional Studies in the APE and Vicinity

Geotechnical studies of the APE indicate that fill materials were observed at depths of 10 to 15 feet below the site grade surface. Fill materials included silty sand with minor rubble associated with the initial 1911 filling for the PG&E Powerhouse or subsequent hazardous materials cleanup, described in more detail below (Dreyfuss & Blackford 2000:6.1). Other geotechnical tests taken approximately 1,500 feet to the southeast of the APE, 500 feet inland, reveal fill deposits varying from 0.5 to 15 feet below ground surface (ICF Jones & Stokes 2008).

Examination of geotechnical borings and cross-sections from the Sacramento Intermodal Transportation Facility (SITF) project (southeast of the Powerhouse) indicates that the shallowest native land surface in the SITF APE is buried as deep as 10 to 15 feet beneath placed fill (ICF Jones & Stokes 2009a). Areas adjacent to the APE and close to the Sacramento River may have thinner fill deposits, excepting the levees. Hydraulic mining debris may be present in the Powerhouse APE, but this would have to be demonstrated rather than assumed.

In Discovery Park, north of the Powerhouse APE, two radiocarbon dates have been returned on natural buried soils obtained from a cut bank of the Sacramento River. One sample, MR#471, was taken from 12.5 to 13.1 feet below ground surface and returned a date of 2841 cal B.P. The second

sample, MR#472, was taken at a depth of 18.0 to 19.0 ft below ground surface and returned a date of 4020 cal B.P. [Meyer and Rosenthal (2008:Figure 39, Appendix A)]. The environment from which these samples were taken is similar to that of the Powerhouse APE and would be affected by similar geomorphic processes.

Summary of Depositional Context

The data presented above suggest that Paleoindian sites (ca. 13,000 to 8000 B.P.) would be deeply buried, probably in excess of 19 ft below the present ground surface and that land surfaces of a younger (< 8000 B.P.) vintage are probably buried in the Powerhouse vicinity. Such landforms would have the potential to contain buried archaeological sites. Nevertheless, if the vertical dimension of the Powerhouse APE is not expected to intersect natural sediments, only fill, the likelihood that ground-disturbing activities associated with the proposed project would come in contact with Native American archaeological resources is low. Such discoveries are still possible, however; fill material for construction sites is sometimes obtained unwittingly from archaeological sites and human burial sites, then incorporated into construction fill or structures such as levees. The potential for human remains and archaeological discoveries under such circumstances is difficult to predict.

Prehistoric Archaeological Context

Terminal Pleistocene to Early Holocene (13,500-7000 B.P)

Although it is likely the Sacramento Valley was inhabited by humans as early as 10,000 years ago, the evidence for early human occupation is likely buried by very deep alluvial sediments that accumulated rapidly during the late Holocene Epoch. Nonetheless, Johnson (1967) found a number of lithic cores and a flake associated with Pleistocene-age gravels. These archaeological remains were grouped into what was called the Farmington Complex, characterized by core tools and large, reworked percussion flakes (Treganza and Heizer 1953).

Recent geoarchaeological investigations at CA-STA-69 (in the vicinity of Farmington Complex-type site CA-STA-44), however, indicate that the Farmington Complex assemblage at CA-STA-69 may be contained completely within Holocene-age alluvial terrace deposits, not Pleistocene-age glacial outwash deposits. These findings raise the question of whether reinvestigation of other Farmington Complex assemblages will reveal a Holocene-age assemblage (Rosenthal et al. 2007:151.)

Preliminary results from recent excavations at CA-SAC-38 reveal the earliest confirmed habitation in the immediate Sacramento vicinity. Obsidian hydration readings on artifacts from the Napa, Borax Lake, Annadel, Bodie, Casa Diablo, and Mount Konocti obsidian flows indicate use of the site from 3000–8000 B.P. In addition, radiocarbon assays taken from between 9.8 feet and 11.5 feet below ground surface yielded conventional dates of 5870, 6690, and 6700 cal B.P. (Tremaine 2008:99–102.)

Mid-Late Holocene (7000-4000 B.P.)

Evolution of Prehistoric Chronological Approaches

This section provides a brief overview of the archaeological manifestations of the changing adaptive strategies used by the indigenous inhabitants of the Central Valley.

Horizons (1930–1970)

The archaeological record of the Central Valley has been approached in two fundamentally different ways. The first is chronological. From relative sequences in stratified occupational and burial sites, a three-stage chronology initially was developed in the late 1930s. Simply called the Early, Transitional (later called *Middle*), and Late horizons, these stages were defined by shifting patterns in site assemblages and mortuary morphology. Although interpretations varied, explanations for change usually were linked to the movements of people. This chronological framework was later refined and eventually became the Central California Taxonomic System (CCTS) which, to be consistent with the Midwest Taxonomic System, substituted the term *horizon* for *period*.

Patterns (1970–present)

The second approach grew out of the archaeological patterns developed from the CCTS and was advanced by Fredrickson (1973), who used the term *pattern* to describe an “adaptive mode extending across one or more regions, characterized by particular technological skills and devices, and particular economic modes.” A pattern is a general mode of life characterized archaeologically by technology, particular artifacts, economic systems, trade, burial practices, and other aspects of culture.

As absolute dates became available for sites with early, middle, and late assemblages, it was discovered that sites with different assemblages actually were contemporaneous. This was particularly true with sites from the Early and Middle horizons. This discovery, along with a change in archaeological paradigms to a more economic and functional orientation in the 1960s, led to a reorganization of the CCTS. This new scheme used the same archaeological manifestations to differentiate sites as the CCTS used, but the new scheme ordered sites into functional groups rather than temporal ones.

Three patterns were introduced: Windmill, Berkeley, and Augustine. Patterns, while generally corresponding to the Early, Middle, and Late horizons within the Central Valley, were conceptually different and free of spatial and temporal constraints. By changing the paradigm from a cultural historical orientation to a more processual/adaptive one and introducing the concept of pattern, Fredrickson addressed problems with the chronological and regional sequences that had been nagging archaeologists for several decades.

Windmill Pattern (4500–3000 B.P.)

The Windmill Pattern shows evidence of a mixed economy of game procurement and use of naturally occurring plant foods. The archaeological record contains numerous projectile points with a wide range of faunal remains. Hunting was not limited to terrestrial animals: fishing hooks and spears have been found in association with the remains of sturgeon (*Acipenser* sp.), salmon (*Oncorhynchus* sp.), and other fish. Plants also were used, as indicated by ground-stone artifacts and clay balls that were used for boiling acorn meal. Settlement strategies during the Windmill period

reflect seasonal adaptations: habitation sites in the valley were occupied during the winter months, but populations moved into the foothills during the summer (Moratto 1984).

Berkeley Pattern (3500–2500 B.P.)

The Windmill Pattern ultimately changed to a more specialized adaptation labeled the Berkeley Pattern. A reduction in the number of handstones and grinding stones and an increase in mortars and pestles indicate a greater dependence on acorns. Although gathered resources gained importance during this period, the continued presence of projectile points and spear-throwers in the archaeological record indicates that hunting was still an important activity (Fredrickson 1973).

Augustine Pattern (1450 B.P.–ca. 1850)

The Berkeley Pattern was superseded by the Augustine Pattern around 1450 B.P. The Augustine Pattern reflects a change in subsistence and land use patterns to those of the ethnographically known people of the historic era. This pattern exhibits a great elaboration of ceremonial and social organization and stratification. Trade exchange became very well developed, and an even more intensive emphasis was placed on the use of the acorn, as shown by the presence in the archaeological record of shaped mortars and pestles and numerous hopper mortars. Other notable elements of the artifact assemblage associated with the Augustine Pattern include flanged tubular smoking pipes, harpoons, clamshell disc beads, and an especially elaborate baked clay industry, which included figurines and pottery vessels (Cosumnes Brownware). The presence of small projectile point types, referred to as the Gunther Barbed series, suggests the use of the bow and arrow. Other traits associated with the Augustine Pattern include the introduction of pre-interment burning of offerings in a gravel pit during a mortuary ritual, increased village sedentism, population growth, and an incipient monetary economy in which beads were used as a standard of exchange (Moratto 1984).

Current Trends

The problem with both approaches is that they have been based on an archaeological record derived primarily from village sites. This poses less of a problem under a chronological framework but presents a more substantial problem when an economic perspective is taken. Archaeologists' current understanding of the prehistoric valley settlement and subsistence systems is heavily biased toward large habitation sites adjacent to permanent water sources. These sites, by their very nature, can provide only limited information on the total economic system. Much more study is needed at ephemeral and peripheral sites located away from the larger habitation sites. In addition, these studies need to be conducted in conjunction with descendants of indigenous people for a more holistic approach, understanding, and treatment of these resources.

Ethnographic Context

Although cultural descriptions of the area's indigenous groups in the English language are known from as early as 1849, most of our current cultural knowledge comes from various anthropologists in the early part of the twentieth century as summarized by Levy (1978:413) and Wilson and Towne (1978:397). The APE includes portions of territory that ethnographers, tribal historians, and elders have historically attributed to the Valley Nisenan, Plains Miwok, and the present day Shingle Spring Band of Miwok Indians (SSR) who originated from the Verona area. These groups held territory primarily east of the Sacramento River. However, they each occupied lands west of the Sacramento

River as well (Levy 1978; Wilson and Towne 1978). Decimation of the people through Euroamerican introduced diseases, the Gold Rush, and subsequent settlement caused the indigenous people to live in places and intermarry in ways they had not prior to Euroamerican arrival. This upheaval in the nineteenth century resulted in conflicting and incomplete information about traditional tribal locations (Levy 1978). The material culture and settlement/subsistence behavior of these groups exhibit similarities, likely because of historical relationships and a shared natural environment. Historical maps and accounts of early travelers to the Sacramento Valley testify that tule marshes, open grasslands, and occasional oak groves characterized the study area (Jackson 1851; Ord 1843; Wyld 1849). The project vicinity was generally wet in the winter and often subject to flooding; the weather was exceedingly dry in summer. Much of the floodplain was presumably sparsely inhabited, and Native Americans typically situated their larger, permanent settlements on high ground along the Sacramento and American Rivers (Bennyhoff 1977; Kroeber 1925, 1932; Levy 1978; Wilson and Towne 1978).

Valley Nisenan

The Valley Nisenan is a subdivision of a larger group, the Nisenan, who form the southern linguistic group of the Maidu. The Valley Nisenan lived in the Sacramento Valley from the Feather River north of Marysville to the Sacramento River just south of its confluence with the American River. Between these two points, the Valley Nisenan inhabited areas along the Bear and Yuba rivers as well. Few permanent habitation sites were made between the Sacramento River and the foothills to the east (the general western boundary of the Hill Nisenan); however, this area was used for gathering and hunting (Littlejohn 1928; Wilson and Towne 1978.)

The political organization of the Nisenan extended to several villages organized in tribelets. Near the project's APE there are three well-known villages that are part of the larger system of tribelets and centers. The *Pushune*, also known as the *Pusune*, was an important and influential village situated on the north bank of the American River that exchanged labor and trade relations with the European settlers. The villages of *Momol* and *Sacum'ne* (also known as *Sekumni*) were located south of the American River near the APE, and, although they were not as influential as the *Pushune*, they also had exchanges with European settlers (Kroeber 1925; Secrest 2003; Wilson and Towne 1978.)

Most Valley Nisenan settlements were built on low natural rises along watercourses. Nisenan villages varied greatly in size. Some villages are recorded as having approximately 5 houses, while others had up to 50. These houses were dome shaped, approximately 9.8 feet–15.1 feet in diameter, and covered with earth, tule, mats, or grasses. Pole-supported brush shelters were constructed during gathering rounds in the warmer months. Major villages had a dance house, which was built 2.9 feet to 3.9 feet into the ground, supported with heavy beams and posts, and covered with brush, tule, or earth (Wilson and Towne 1978.)

The Nisenan's homeland consisted of flat, oak-studded grassland, bisected by riverine and marsh environments that provided an abundance and variety of resources. The Nisenan made use of the resources that became available at different times of the year. Acorns, roots, onions, garlic, grasses, herbs, and seeds, as well as twining, clothing, and structural materials, were gathered when these resources became available. Acorns were an especially important resource for the Nisenan. Deer, rabbits, rodents, birds, grasshoppers, larvae, pupae, lizards, and frogs were among the animals hunted and snared by the Nisenan. Salmon were also an important resource for the Nisenan and were caught by net or spear. Other river resources included sturgeon, clams, and mussels. Trade provided other valuable resources that normally were not available in the Nisenan environment. The Valley Nisenan received black acorns, pine nuts, manzanita berries, skins, bows, and bow wood

from the Hill Nisenan to their east, in exchange for fish, roots, grasses, shells, beads, salt, and feathers (Davis 1961; Littlejohn 1928; Wilson and Towne 1978.)

The Nisenan had an array of tools to obtain, process, and use these material resources. Wooden digging sticks, poles for shaking acorns loose, and baskets of primarily willow and redbud were used to gather vegetal resources. Stone mortars and pestles were used to process many of the vegetal foods, and baskets, heated stones, and wooden stirring sticks were used for cooking. Basalt and obsidian were the primary stone material used for making knives, arrow points, and spear points, clubs, arrow straighteners, and scrapers. Bows and arrows were constructed of wood and sinew. Other utilitarian items include stone and wooden skin-dressing tools, bags, cordage, netting, canoes, poles, and paddles (Littlejohn 1928; Wilson and Towne 1978).

The Valley Nisenan world included spiritual and ceremonial activities, as well. Shamans served important roles as intermediaries between humans and spirits, and healed injuries and sicknesses. Ceremonies were conducted for a girl's entrance into womanhood, during seasonal harvest or bounty times, and annually to mourn the dead. The Kuksu Cult was a religion practiced by the majority of Central Valley dwellers, as well as other indigenous Californians. This religion included an array of deities of varying rank; ceremonies, dances, and initiation rites; and a detailed cosmology that served to explain their material world and guide their behavior (Kroeber 1925.)

Plains Miwok

The Plains Miwok are part of the larger Eastern Miwok group who form one of the two major divisions of the Miwokan subgroup of the Utian speakers. The Plains Miwok lived in the Central Valley along the Sacramento, Cosumnes, and Mokelumne Rivers. Like their neighbors to the north, the Plains Miwok built their homes on high ground, concentrating major villages along the major waterways. Cone-shaped homes were constructed with poles and thatching of brush, grass, or tule, and semi-subterranean earth-covered homes were built as well. Major villages had an assembly house, which was a 39- to 49-foot-diameter semi-subterranean structure, as well as a sweathouse, which was a scaled-down version of the assembly house (Levy 1978).

The Plains Miwok gathered food resources as the seasons varied. As with the majority of California tribes, the Plains Miwok relied heavily on the acorn for subsistence. Other foods gathered include nuts, seeds, roots, greens, berries, and mushrooms. Animal foods included tule elk, pronghorn antelope, jackrabbits, squirrels, beavers, quail, and waterfowl. Salmon was the dominant animal food resource, ranking above other river resources, such as sturgeon. Salt, nuts, basketry, and obsidian were obtained through trade with the Sierra Miwok to the east for shells, basketry, and bows obtained in turn through trade from the west (Levy 1978).

Technological items of the Plains Miwok are similar to those of the Valley Nisenan. Wooden digging sticks, poles, and baskets were used for gathering vegetal resources, while stone mortars, pestles, and cooking stones were used for processing. Items used for obtaining animal resources included nets, snares, seines, bows, and arrows. Arrow points were made primarily of basalt and obsidian (Levy 1978).

Like the Valley Nisenan, the Plains Miwok were also known to practice the Kuksu religion with its ceremonies and dances, initiation rites, and ranking deity. The Plains Miwok also held ceremonies for girls' maturity, and held beliefs that explained their natural world (Kroeber 1925).

According to Tribal historians and elders the project site is within the aboriginal territory of the SSR. Projects in similar locations along the Sacramento and American Rivers have, in recent history,

unearthed numerous Native American burials. Because this project is within aboriginal territory and near the river, the SSR anticipates cultural resource discoveries and recommends the implementation of the proper treatment measures (see Chapter 6, Conclusions and Recommendations).

Euroamerican Contact

Between 1770 and 1880, the native Californian population came in contact with people of entirely new cultures. These people were European or were of European descent. Introduced diseases, missionization, settlement, and the final blow of the Gold Rush in 1849 resulted in overwhelming and irreversible changes in the lives of indigenous people. Disease itself resulted in decimation of from 50%–75% of the population. Combined with warfare, total population loss is estimated to have reached 90% (Cook 1955, 1978). Notwithstanding these effects, people of Nisenan and Miwok ancestry continue to be visible members of their communities today, making substantial contributions to the maintenance of the culture. The descendants of the Plains Miwok have achieved the status of a federally recognized Indian Tribe, known as the SSR.

Historical Context

Sacramento began as a boomtown during the Gold Rush. First platted in late 1848, the city had a population of 12,000 by the end of 1849. In addition to Front Street along the river, J Street, which was the main route to the gold fields, was Sacramento's early commercial center, expanding eastward and overflowing to K Street as the city grew. Such rapid growth notwithstanding, Sacramento's early history was plagued by floods. In a dramatic response to the flooding, between the 1850s and the early 1870s, Sacramentans built a series of levees, re-channeled the American River at the junction with the Sacramento River, and raised the level of city streets and most buildings by four to 14 feet (City of Sacramento 2009).

Despite the waning of the Gold Rush Sacramento remained a viable urban center due to the railroads, agricultural trade, and the growth of state government. The railroads became a major employer during the late nineteenth and early twentieth centuries. Surrounded by the fertile valley lands, Sacramento developed into an important processing and transport center for grains, fruits, and vegetables. Development in the central core of Sacramento included businesses such as the Sacramento Warehouse Hay, Grain & Hops, and the U.S Bonded Warehouse Brandy Storehouse, both located at Front and R Street. These warehouses were constructed of brick and had a capacity of 400,000 square feet (California Railroad Commission 1921; Sanborn Map Co. 1915). The area also had several lumber yards and mills. By the early twentieth century, canneries were another main employer in the city, including the Central California Canneries, located downtown at Front Street and P Street, and the Sacramento Packing Company Fruit Packing Warehouse, located on Front Street just south of M Street.

The third principal source of economic growth in Sacramento stemmed from state government. Designated the state capital in 1854, Sacramento began construction of the capitol building six years later and completed the building in 1874. With the expansion of state administrative functions in the twentieth century, state government became a large employer and state office buildings dotted the downtown area, particularly around the capitol building (City of Sacramento 2009; Sanborn-Perris Map Co. 1895; Sanborn Map Co. 1915).

With plentiful employment opportunities, the population of Sacramento grew steadily during the late nineteenth and early twentieth centuries. Residential growth beyond the central city initially flowed to the east and south, aided by the development of electric streetcar lines in the 1890s. The central city also grew during the 1910s and 1920s, with major new public and commercial buildings in the downtown area (City of Sacramento 2009).

Although the Depression of the 1930s temporarily slowed growth, the spread of suburban development accelerated after World War II. New forms of commercial development followed the residential construction, most notably strip malls. The trend of the ever-expanding ring of suburban residential and commercial development has continued to the present day, and while some former neighborhoods have incorporated into their own cities in recent years, Sacramento essentially has merged with many formerly autonomous cities and towns on the periphery of the metropolitan area (City of Sacramento 2009).

Consultation with Potentially Interested Parties

SHRA initiated consultation under Section 106 with the SHPO in a letter dated February 18, 2010, and with federally and non-federally recognized tribes indicated by NAHC in letters dated March 1, 2010. SHRA left voicemail messages with federally and non-federally recognized tribes on March 22, 2010. In addition, ICF attempted to identify other consulting parties to participate in consultation by contacting Native American organizations and individuals and historical societies. Results of both of these efforts are summarized below.

Native Americans

On March 25, 2010 and April 12, 2010, Melissa Cascella, M.A., requested that the NAHC search its Sacred Lands File for the presence of cultural resources in the APE that are of interest to Native Americans, and provide a list of local Native American representatives who might have information or concerns regarding the project. She then sent letters to five known Native American representatives for the project area. The NAHC indicated on April 15, 2010 that the Sacred Lands File contained no record of cultural resources in the APE, and provided a list of Native American representatives which included two additional, individual contacts. After receiving the NAHC letter, Ms. Cascella corresponded with the additional individuals via letters as well. The letters included a brief project description and a map of the project area and requested that the recipient respond with any information or concerns.

Ms. Cascella received a letter from Daniel Fonseca, Cultural Resources Director for the SSR, dated April 5, 2010, indicating the organization he represents was not aware of cultural resources near to or potentially impacted by the project, but requested a copy of the surface survey report. Mr. Fonseca also stated that if any new information or human remains are found, the SSR has a process to protect these important and sacred artifacts and provided his contact information in the event that human remains are found. In order to honor Mr. Fonseca's request, ICF will provide a copy of the survey report to the project applicant with a request they forward the copy on to the SSR.

Ms. Cascella made follow-up telephone calls on April 22, 2010 and spoke with Rose Enos, a self-representing individual of Maidu and Washoe descent who the NAHC suggested be contacted. Ms. Enos stated that she was mostly concerned with burials, and that she was not aware of any villages or burials in the project vicinity. Ms. Cascella asked if she had any further questions about the project and Ms. Enos responded by questioning if the soil in the project area had been previously disturbed. Ms. Cascella then described the previous soil remediation which had occurred within the project area to Ms. Enos.

Voicemail messages were left for April Wallace Moore, Nicolas Fonseca of the SSR, Jessica Tavares of the United Auburn Indian Community of the Auburn Rancheria, and the Tribal Preservation Committee of the United Auburn Indian Community of the Auburn Rancheria.

As a result of consultation initiated by the SHRA on March 10, Daniel Fonseca, Cultural Resources Director of the SSR, responded via letter to SHRA. The letter is dated April 6, 2010 and postmarked via certified mail April 23, 2010. Mr. Fonseca stated that the SSR would like to consult with SHRA and to contact Michelle LaPena or AmyAnn Taylor to schedule a meeting pursuant to Section 106 of the NHPA. In response to this request, a meeting was scheduled for Wednesday, May 26, 2010, to discuss the project and concerns of the SSR. The meeting was held at 1:00 p.m. at LaPena Law Corporation in Sacramento. In attendance were:

Shelly Amrhein, SHRA

Daniel Burnett, SSR

Roberta Deering, City of Sacramento Historic Preservation

Trish Fernandez, ICF International

Daniel Fonseca, SSR

Melisa Gaudreau, Page & Turnbull

Meg Glynn, Page & Turnbull

John Tayaba, SSR

AmyAnn Taylor, LaPena Law Corporation

Jennifer Witz, City of Sacramento Economic Development

The meeting was very productive with valuable information shared between the parties. Of most significance, Tribal Vice Chairman John Tayaba explained that the project area is in the ancestral area of the members of the SSR. He explained that the stewardship for ancestral burials has been handed down to him and other members of the SSR. The important message from the SSR at this meeting was that they consider the areas along both the Sacramento and American Rivers within their tribal lands to be sensitive for the discovery of Native American human remains. In addition, the SSR reminded the attendees that projects in similar locations along these rivers have, in recent history, unearthed numerous Native American burials. Therefore, they requested measures to help ensure the proper treatment of any burials that may exist within the project area and that may be inadvertently disturbed as a result of ground-disturbing actions associated with the proposed undertaking.

The SSR requested the following:

1. a pedestrian survey of the APE conducted by tribal members of their choosing;
2. Tribal Monitors of the SSR's choosing, at all ground-disturbing activities associated with the project, if determined to be necessary by the MLD in consultation with SHRA; and
3. a written agreement between the federally designated responsible entity and the SSR to guide the treatment of any human burials inadvertently discovered as a result of the undertaking. This agreement would be drafted by the SSR and would include a stated policy of avoidance and reburial.

SHRA agreed to the requests, which are included in the recommendations section of this report.

To date, there have been no other responses to requests for consultation. Copies of communications directly between ICF and potentially interested parties are provided in Appendix A.

Historical Societies

ICF identified several historical societies and local government planning divisions to consult:

- Center for Sacramento History.
- Sacramento County Historical Society.
- Citizen Soldier's Museum Guard Historical Society.
- Sacramento History Museum (formerly the Discovery Museum of Sacramento and represented by the Carson Development Company (the project applicant).

On March 25, 2010, Melissa Cascella mailed letters describing the proposed project to each of these organizations. The letters requested information about local-area cultural resources and provided an overview map of the proposed project.

Ms. Cascella made follow-up telephone calls on April 22, 2010 and spoke with Patricia Johnson, Senior Archivist (Reference, Government Records) and Volunteer Coordinator for the Center for Sacramento History. Ms. Johnson stated she was unable to locate the letter, asked for another copy, and provided her email address in order to do so. Ms. Cascella emailed a copy of the original letter to Ms. Johnson on April 22, 2010. Ms. Johnson responded by email on April 23, 2010 and stated that The Center for Sacramento History had no objections, issues, or concerns with the redevelopment of the powerhouse plant into a learning center for the Discovery Museum and Science Center.

Voicemail messages were left for Sacramento County Historical Society, Citizen Soldier's Museum Guard Historical Society, and Janessa West, the Public Programs Coordinator of the Sacramento History Museum. On April 26, 2010, William Burg, a member of the Board of Directors of the Sacramento County Historical Society, called and left a message for Ms. Cascella stating that the society did not have any specific information regarding the Powerhouse and suggested contacting the Center for Sacramento History. Since the Center for Sacramento History had already been consulted for this proposed project, no further action was taken. To date, there have been no other responses to these letters and calls. All items of correspondence are provided in Appendix A.

Records Search, Historic Research, Literature Review

The records search referenced for this project was conducted for the adjacent Sacramento Access Improvements from Railyards to Richards Boulevard and Interstate 5 Project (ICF Jones & Stokes 2009b). The records search was conducted at the North Central Information Center (NCIC) of the California Historical Resources Information System (CHRIS) on August 6, 2008 (I.C. File # SAC-08-99). The records searches consulted the CHRIS base maps of previous cultural resources studies and recorded cultural resources for the APE and a 0.25-mi radius from the APE. In addition, the following sources were consulted:

- Base maps marked with the locations of previous cultural resources studies and known cultural resources.
- *California Inventory of Historic Resources* (California Department of Parks and Recreation 1976 and updates).
- *California Points of Historical Interest* (California Department of Parks and Recreation 1992 and updates).

- *California Historical Landmarks* (California Department of Parks and Recreation 1996 and updates).
- *Survey of Surveys: A Summary of California's Historical and Architectural Resource Surveys* (Office of Historic Preservation 1989).
- *California Place Names: The Origin and Etymology of Current Geographical Names* (Gudde 1996).
- *Historic Spots in California*, third and fourth editions (Hoover et al. 1966; Hoover et al. 1990).
- *Directory of Properties in the Historic Property Data File*, Sacramento County (Office of Historic Preservation 2008a:33–56) NRHP (National Park Service 2008).
- *California Register of Historical Resources (CRHR)* (Office of Historic Preservation, Department of Parks and Recreation, Sacramento, 2008).
- *Caltrans Local Agency and Statewide Historic Bridge Inventories* (California Department of Transportation 2008).
- Historic maps 1920 (Southern Pacific) and 1930 (National Park Service).
- Sanborn Insurance maps (1895–1915, 1915–1951, and 1951–1952).
- Historic aerial maps (California State Railroad Museum).

The records searches indicate that a total of three previous cultural resource studies have been conducted in the APE (Jones & Stokes 2005; PAR Environmental Services 2001; Waechter and Wee 1999), resulting in coverage of all but 4 acres of the APE. As a result of these previous surveys, two previously recorded cultural resources are located in the APE:

- P-34-1711/HRI#5813-1178-0000 (PG&E Powerhouse, Sacramento River Station “B”).
- P-34-490/SA-SAC-463H (Sacramento River, East Levee).

These two properties were assigned a California Historic Resource Status Code of 3S, meaning they appeared individually eligible for listing in the NRHP through survey evaluation. The PG&E Powerhouse was also listed as a priority structure and was nominated for listing on the NRHP by the City of Sacramento in 2010. The East Levee was determined not eligible for inclusion in the NRHP in 2010 (Bauer and Hetland 2010).

Field Survey

Melissa Cascella surveyed the APE for historic and prehistoric archaeological resources on March 25, 2010. The survey was conducted by walking parallel transects spaced no further than 15 meters. Ground surface visibility varied throughout the APE, from 100% in completely denuded areas to 0% in areas of tall grass, thick riparian vegetation, and urban development.

Archaeological resources encountered during the survey were photographed and important information regarding site dimensions, surrounding landscape features, and other distinguishing site characteristics were recorded. Upon return from the field, this information was entered in standard historic resources inventory forms and submitted to the NCIC. These completed forms are provided in Appendix B.

A Tribal Monitor designated by the MLD will conduct a field survey of the APE before construction or ground-disturbing activities are conducted at the site.

P-34-1711 (PG&E Powerhouse)

As a result of the methods described in Chapter 5, one cultural resource, P-34-1711, was identified in the APE. P-34-1711 was previously recorded as the PG&E Powerhouse (constructed in 1912) by Boghosian (1998). As a result of the archaeological survey conducted by ICF, two additional site features, Pads A and B, were identified (Figure 4).

Pad A is located approximately 110 feet from the northeast corner of the Powerhouse and measures 30 feet (east-west) by 17 feet (north-south). Pad B directly abuts the northwest corner of the Powerhouse and measures 8 feet (north-south) by 15 feet (east-west). Pad B appears to have once had a fence line along its south side.

Neither pad contains bolts or other fasteners to indicate that they once supported a structure or mechanical device. In addition, neither pad is present on historic Sanborn maps, suggesting that the pads do not reflect formal structure foundations, but more likely, small patios or storage pads.

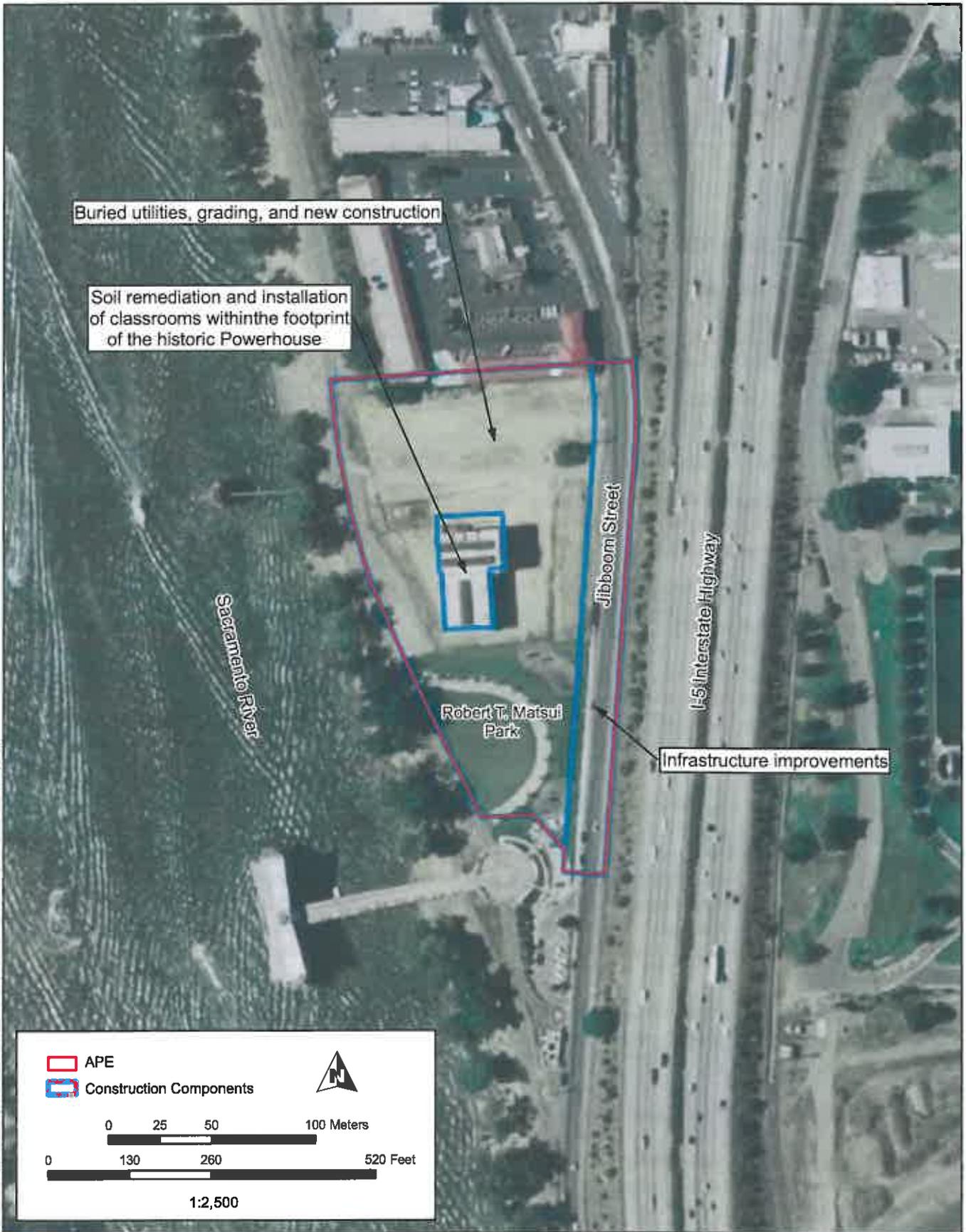


Figure 4 - Construction Components
Powerhouse Science Center Project

Chapter 6

Conclusions and Recommendations

NRHP Evaluation

NRHP significance criteria applied to evaluate the cultural resources in this study are defined in 36 CFR 60.4 as the quality of significance in American history, architecture, archaeology, engineering, and culture as present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

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

Eligibility for listing in the NRHP requires that a resource not only meet one of the A–D significance criteria but also possess integrity. *Integrity* is the ability of a property to convey its significance. The evaluation of a resource's integrity must be grounded in an understanding of that resource's physical characteristics and how those characteristics relate to its significance. The evaluation of a resource's integrity in relation to its significance will be conducted as prescribed in *National Register Bulletin No. 15: How to Apply the National Register Criteria for Evaluation* (National Park Service 2002).

Historic research and physical assessment of Pads A and B have not elicited any significant association of these pads with the PG&E Powerhouse or an important individual. Their purpose, function, and date of use are unknown and they do not exhibit any distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic values. Nor do they represent significant and distinguishable entities whose components may lack individual distinction. Lastly, the pads have no potential to yield information important to the study of history. As a result, it appears that Pads A and B do not meet any of the criteria for listing in the NRHP.

ICF recommends that SHRA determine Pads A and B ineligible for listing in the NRHP and that they forward such determination to the SHPO for concurrence.

Conclusions

The review of ethnographic data, historic maps, geomorphological data, and soil remediation documents described earlier in this inventory indicate that there little potential for buried archaeological deposits to exist within the archaeological APE. Although the APE is located near the

confluence of two major rivers (Sacramento and American) and two ethnographic villages (*Molmol* and *Sama*) (Wilson and Towne 1978), the area was natural swamp land as it was in a relatively low lying area before the American River was redirected in 1868. Such low-lying areas are not suitable for Native American associated activities that would leave behind material remains. Dredging and filling activities associated with this redirection would have had major ground-disturbing impacts to the area.

Although historic archaeological deposits are not known or expected within the APE, these activities described in this report (including, construction and modification of the levee between 1910 and the 1940s, construction of the powerhouse itself in 1911, and extensive soil remediation conducted within the parcel between 1986 and 1997) would also have had impacts to any historic archaeological deposits. Finally, geotechnical analyses summarized by Dreyfuss & Blackford (2000) state that a layer of fill exists from 10 to 15 feet on the parcel. This fill consists of “loose to medium dense silty sand with minor rubble that was believed to have been either placed during hazardous materials cleanup operations or was associated with the PG&E power plant” (Dreyfuss & Blackford 2000:6.1). Although rubble may include historic materials, it is mixed with the silty sand, indicating it is not a discrete and separate layer with historic integrity.

Recommendations

ICF recommends that SHRA determine that this archaeological study support a finding of no adverse effect for the undertaking as a whole. Although the possibility of inadvertently discovering any intact archaeological deposits is low because the APE is underlain by artificially placed fill, there is always a possibility of such a discovery. Specifically, the possibility exists for human remains, particularly of Native American ancestry, to be unearthed during ground-disturbing activities associated with this undertaking. These remains may be primary or secondary placements as archaeological materials and human remains are sometimes incorporated into fill deposits, where such fill has been acquired from a former living site or unmarked cemetery.

Regardless of their origin, the proper treatment of Native American human remains and items of cultural patrimony is of paramount concern to the SSR. To ensure that such remains, artifacts and other materials associated with the remains and other items of cultural patrimony are identified and treated in accordance with traditional values and practices, the measures described below will be taken in consultation with the SSR for this traditional area.

1. A pedestrian survey will be conducted by tribal members of the SSR choosing. A professional archaeologist will accompany the tribal members during their survey. The pedestrian survey and access to the APE will be arranged through the City of Sacramento staff.
2. The SSR will prepare a Cultural Resources Treatment and Monitoring Agreement (Plan) in coordination with the SHRA, the City, and their consultants. The Plan will contain provisions for monitoring during construction, as well as protocols and responsibilities for construction-related discoveries of archaeological and human remains. The Plan will be prepared in accordance with applicable federal, state, and local cultural resources regulations. The Plan will be finalized before construction may begin on the project. The Plan will specify the timing associated with the completion of each task. If, for example, the Plan specifies that a task be completed prior to ground disturbance, that task must be completed prior to the start of any project related ground disturbance.

3. Tribal Monitors, as designated by the MLD, will monitor all ground-disturbing activities associated with the project if determined to be necessary by the MLD and the SHRA.

Chapter 7

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APPENDIX A **Native American Consultation**



Fax Transmission

Date:	March 25, 2010
Attention:	Native American Heritage Commission
Fax Number:	916.657.5390
Phone Number:	916.653.4082
Number of Pages:	2 (including this page)
From:	Melissa Cascella, Staff Archaeologist ICF International
Subject:	Powerhouse Science Center Project
Client:	Carson Development
Project:	Powerhouse Science Center Project
Project Number:	



Memorandum

Date:	March 25, 2010
To:	Native American Heritage Commission
Cc:	
From:	Melissa Cascella ICF International, Staff Archaeologist
Subject:	Request for a Sacred Lands File Search and List of Contacts in Sacramento County: Powerhouse Science Center Project

The proposed City of Sacramento Powerhouse Science Center Project will include infrastructure improvements and the construction of the Powerhouse Science Center. The proposed project includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site. ICF International is assisting Carson Development (on behalf of the Discovery Museum of Sacramento) with tasks required to comply with Section 106 of the National Historic Preservation Act. To this end, we are requesting that your office search the Sacred Lands File for the presence of cultural resources of concern to Native Americans. In addition, please send a list of Native American representatives that may have knowledge about potential resources in the area. The legal location is given below. Thank you for your assistance with this endeavor. Please call me at 916.231.7649 if you have any questions. My fax number is 916.737.3030. Thank you very much.

Sincerely,

Melissa Cascella
Staff Archaeologist

USGS Quadrangles: Sacramento West, unsectioned New Helvetia landgrant.



March 25, 2010

Rose Enos
15310 Bancroft Road
Auburn, CA 95603

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Ms. Enos:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site.

The project is located on the riverfront in the City of Sacramento, Sacramento County, and is on the Sacramento West 7.5' quad (unsectioned New Helvetia landgrant) (see attached map). We would appreciate being notified of any information you have regarding cultural resources that may exist in or near this area.

Please contact me at 916-231-7649 or at mcascella@icfi.com if you have any questions or concerns about this project. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Cascella", written in a cursive style.

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



March 25, 2010

Kenneth Council
4209 V Street #5
Sacramento, CA 95817

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Mr. Council:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site.

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Please contact me at 916-231-7649 or at mcascella@icfi.com if you have any questions or concerns about this project. Thank you for your attention to this matter.

Sincerely,

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Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 - Project Vicinity



March 25, 2010

John Tayaba, Vice Chairperson
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Mr. Tayaba:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site.

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Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



March 25, 2010

Nicholas Fonseca, Chairperson
Shingle Springs Band of Miwok Indians
P.O. Box 1340
Shingle Springs, CA 95682

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Mr. Fonseca:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site.

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Please contact me at 916-231-7649 or at mcascella@icfi.com if you have any questions or concerns about this project. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink that reads "Melissa Cascella". The signature is fluid and cursive, written over a light blue horizontal line.

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



March 25, 2010

Tribal Preservation Committee
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Tribal Preservation Committee:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site.

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Sincerely,

A handwritten signature in black ink that reads "Melissa Cascella".

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



March 25, 2010

Discovery Museum of Sacramento
101 I Street Old Sacramento
Sacramento, CA 95814

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Discovery Museum of Sacramento:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site. The project is located on the riverfront in the City of Sacramento, Sacramento County (see attached map).

As part of our study, all interested historical organizations are being consulted to determine if any important historic or cultural resources may be affected by the proposed project. Your efforts in this process provide invaluable information for the proper identification and treatment of such resources.

Please do not hesitate to contact me with any questions. All comments and letters received from historical organizations will be included in the reports generated by this study. Thank you for your time respecting this matter.

Sincerely,

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Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



March 25, 2010

Citizen Soldier's Museum Guard Historical Society
1119 2nd Street
Sacramento, CA 95814

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Citizen Soldier's Museum Guard Historical Society:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site. The project is located on the riverfront in the City of Sacramento, Sacramento County (see attached map).

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Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Cascella".

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



March 25, 2010

Sacramento County Historical Society
PO Box 160065
Sacramento, CA 95816

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Sacramento County Historical Society:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site. The project is located on the riverfront in the City of Sacramento, Sacramento County (see attached map).

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Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Cascella", written in a cursive style.

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



March 25, 2010

Sacramento Archives and Museum Collection Center
551 Sequoia Pacific Blvd.
Sacramento, CA 95814

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Sacramento Archives and Museum Collection Center:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site. The project is located on the riverfront in the City of Sacramento, Sacramento County (see attached map).

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Please do not hesitate to contact me with any questions. All comments and letters received from historical organizations will be included in the reports generated by this study. Thank you for your time respecting this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Cascella".

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity



Figure 1 - Project Vicinity
Powerhouse Science Center Project



SHINGLE SPRINGS RANCHERIA

Shingle Springs Band of Miwok Indians,
Shingle Springs Rancheria
(Verona Tract), California
5281 Honpie Road, Placerville, CA 95667
P.O. Box 1340; Shingle Springs, CA 95682
(530) 676-8010 office; (530) 676-8033 Fax;

IFC International
630 K Street, Suite 400
Sacramento, CA 95814

April 5, 2010

RE: Powerhouse Science Center Project, Sacramento County, CA

Dear Melissa Cascella:

Thank you for your letter dated March 25, 2010 seeking information regarding the proposed project that is located on the riverfront in the City of Sacramento, Sacramento County, and is on the Sacramento West 7.5' quad (unsectioned New Helvetia landgrant). Based on the information provided, the Shingle Springs Band of Miwok Indians is not aware of any known prehistoric, historic or ethnographic in site in this area. However, as the project progresses, if any new information or human remains are found, we do have a process to protect such important and sacred artifacts (especially near rivers or streams). We the Shingle Springs Band of Miwok Indians would also like to request a copy of your surface survey for this project.

Please contact Daniel Fonseca at the following address if tribal cultural items or Native American human remains are found:

Daniel Fonseca, Cultural Resources Director
5281 Honpie Road
Placerville, CA 95667

Or if you would like to email it to me that will also be alright.

Email: d.fonseca@shinglesprings.org

I am enclosing my business card for you to keep for any additional contact.

Thank you for providing us with this notice and opportunity to comment.

Regards,

Daniel Fonseca
Cultural Resources Director

EN:

SHINGLE SPRINGS RANCHERIA



Daniel Fonseca
Director of Cultural Resources

P.O. Box 1340 • Shingle Springs, CA 95682
Wk. (530) 306-3069 • Fax (530) 676-8033
Email: dfonseca@ssband.org



Fax Transmission

Date:	April 12, 2010
Attention:	Native American Heritage Commission
Fax Number:	916.657.5390
Phone Number:	916.653.4082
Number of Pages:	2 (including this page)
From:	Melissa Cascella, Staff Archaeologist ICF International
Subject:	Powerhouse Science Center Project
Client:	Carson Development
Project:	Powerhouse Science Center Project
Project Number:	00252.10



Memorandum

Date:	April 12, 2010
To:	Native American Heritage Commission
Cc:	
From:	Melissa Cascella ICF International, Staff Archaeologist
Subject:	Request for a Sacred Lands File Search and List of Contacts in Sacramento County: Powerhouse Science Center Project

The proposed City of Sacramento Powerhouse Science Center Project will include infrastructure improvements and the construction of the Powerhouse Science Center. The proposed project includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site. ICF International is assisting Carson Development (on behalf of the Discovery Museum of Sacramento) with tasks required to comply with Section 106 of the National Historic Preservation Act. To this end, we are requesting that your office search the Sacred Lands File for the presence of cultural resources of concern to Native Americans. In addition, please send a list of Native American representatives that may have knowledge about potential resources in the area. The legal location is given below. Thank you for your assistance with this endeavor. Please call me at 916.231.7649 if you have any questions. My fax number is 916.737.3030. Thank you very much.

Sincerely,

Melissa Cascella

Staff Archaeologist

USGS Quadrangles: Sacramento West, unsectioned New Helvetia landgrant.

STATE OF CALIFORNIA

Arnold Schwarzenegger, Governor

NATIVE AMERICAN HERITAGE COMMISSION

915 CAPITOL MALL, ROOM 364
SACRAMENTO, CA 95814
(916) 653-6251
Fax (916) 667-6300
Web Site www.nahc.ca.gov
e-mail: ds_nahc@pacbell.net



April 15, 2010

Melissa Cascella
IFC Jones & Stokes
630 K Street, Suite 400
Sacramento, CA 95814

Sent by Fax: 916-737-3030
Number of Pages: 2

Re: Proposed Powerhouse Science Center Project, Sacramento County

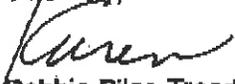
Dear Ms. Cascella:

A record search of the sacred land file has failed to indicate the presence of Native American cultural resources in the immediate project area. The absence of specific site information in the sacred lands file does not indicate the absence of cultural resources in any project area. Other sources of cultural resources should also be contacted for information regarding known and recorded sites.

Enclosed is a list of Native Americans individuals/organizations who may have knowledge of cultural resources in the project area. The Commission makes no recommendation or preference of a single individual, or group over another. This list should provide a starting place in locating areas of potential adverse impact within the proposed project area. I suggest you contact all of those indicated, if they cannot supply information, they might recommend others with specific knowledge. By contacting all those listed, your organization will be better able to respond to claims of failure to consult with the appropriate tribe or group. If a response has not been received within two weeks of notification, the Commission requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact me at (916) 653-4038.

Sincerely,

For 
Debbie Pilas-Treadway
Environmental Specialist III

**Native American Contacts
Sacramento County
April 15, 2010**

Rose Enos
15310 Bancroft Road Maidu
Auburn , CA 95603 Washoe
(530) 878-2378

United Auburn Indian Community of the Auburn
Tribal Preservation Committee
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
530-883-2320
530-883-2380 - Fax

April Wallace Moore
19630 Placer Hills Road Nisenan - So Maidu
Colfax , CA 95713 Konkow
530-637-4279 Washoe

Shingle Springs Band of Miwok Indians
John Tayaba, Vice Chairperson
P.O. Box 1340 Miwok
Shingle Springs , CA 95682 Maidu
(530) 676-8010
(530) 676-8033 Fax

Shingle Springs Band of Miwok Indians
Nicholas Fonseca, Chairperson
P.O. Box 1340 Miwok
Shingle Springs , CA 95682 Maidu
nfonseca@ssband.org
(530) 676-8010
(530) 676-8033 Fax

United Auburn Indian Community of the Auburn Rancheria
Jessica Tavares, Chairperson
10720 Indian Hill Road Maidu
Auburn , CA 95603 Miwok
530-883-2390
530-883-2380 - Fax

This list is current only as of the date of this document.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7060.5 of the Health and Safety Code, Section 5097.94 of the Public Resources Code and Section 5097.98 of the Public Resources Code.

This list is only applicable for contacting local Native Americans with regard to cultural resources for the proposed Powerhouse Science Center project, Sacramento County



April 16, 2010

April Wallace Moore
19630 Placer Hills Road
Colfax, CA 95713

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Ms. Moore:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site.

The project is located on the riverfront in the City of Sacramento, Sacramento County, and is on the Sacramento West 7.5' quad (unsectioned New Helvetia landgrant) (see attached map). ICF International submitted a query to the Native American Heritage Commission's sacred lands database, which failed to indicate the presence of Native American cultural resources within the immediate project area. We would appreciate being notified of any information you have regarding cultural resources that may exist in or near this area.

Please contact me at 916-231-7649 or at mcascella@icfi.com if you have any questions or concerns about this project. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Cascella".

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity

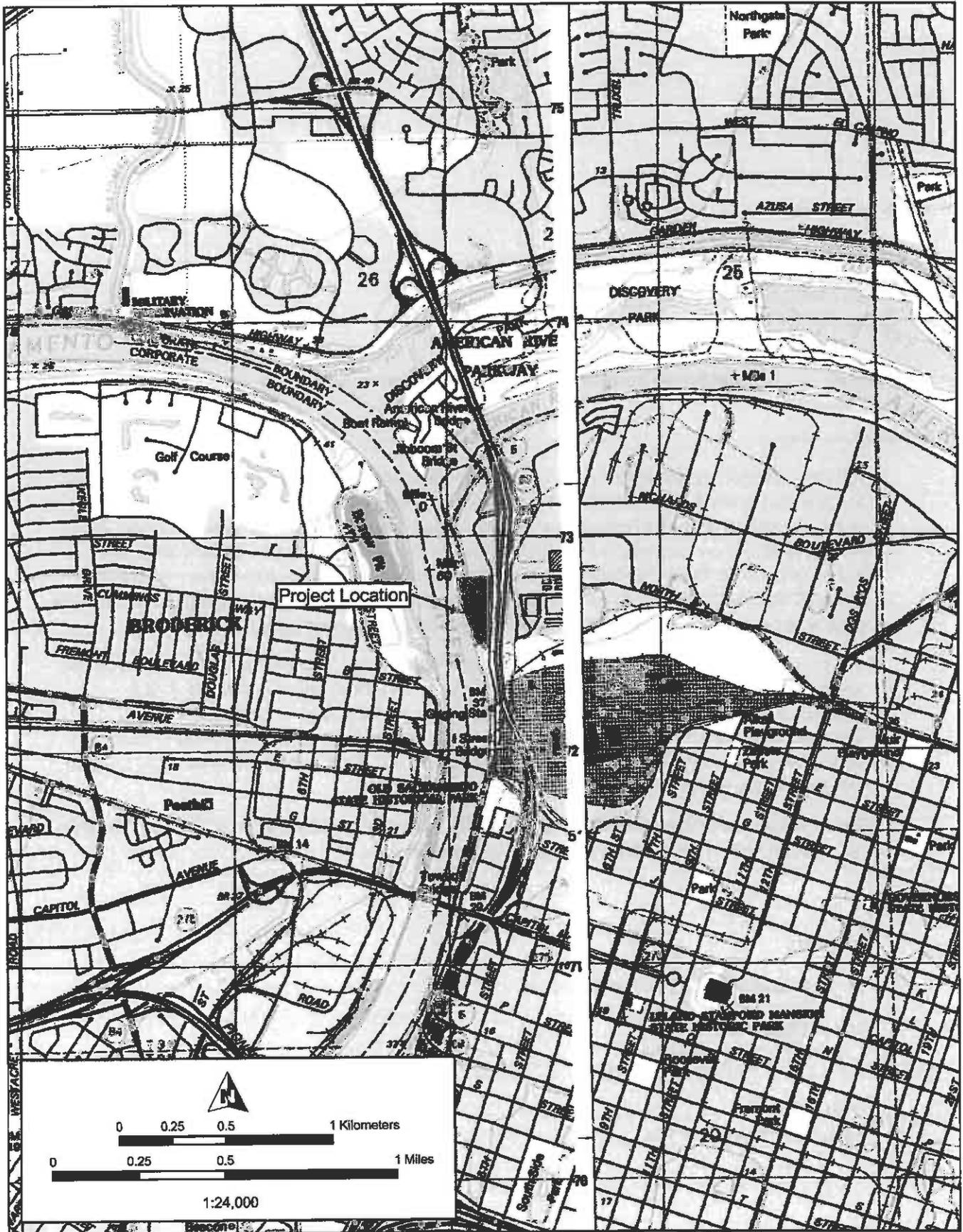


Figure 1 - Project Vicinity
Powerhouse Science Center Project



April 22, 2010

Jessica Tavares, Chairperson
United Auburn Indian Community of the Auburn Rancheria
10720 Indian Hill Road
Auburn, CA 95603

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Ms. Tavares:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site.

The project is located on the riverfront in the City of Sacramento, Sacramento County, and is on the Sacramento West 7.5' quad (unsectioned New Helvetia landgrant) (see attached map). ICF International submitted a query to the Native American Heritage Commission's sacred lands database, which failed to indicate the presence of Native American cultural resources within the immediate project area. We would appreciate being notified of any information you have regarding cultural resources that may exist in or near this area.

Please contact me at 916-231-7649 or at mcascella@icfi.com if you have any questions or concerns about this project. Thank you for your attention to this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Cascella".

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity

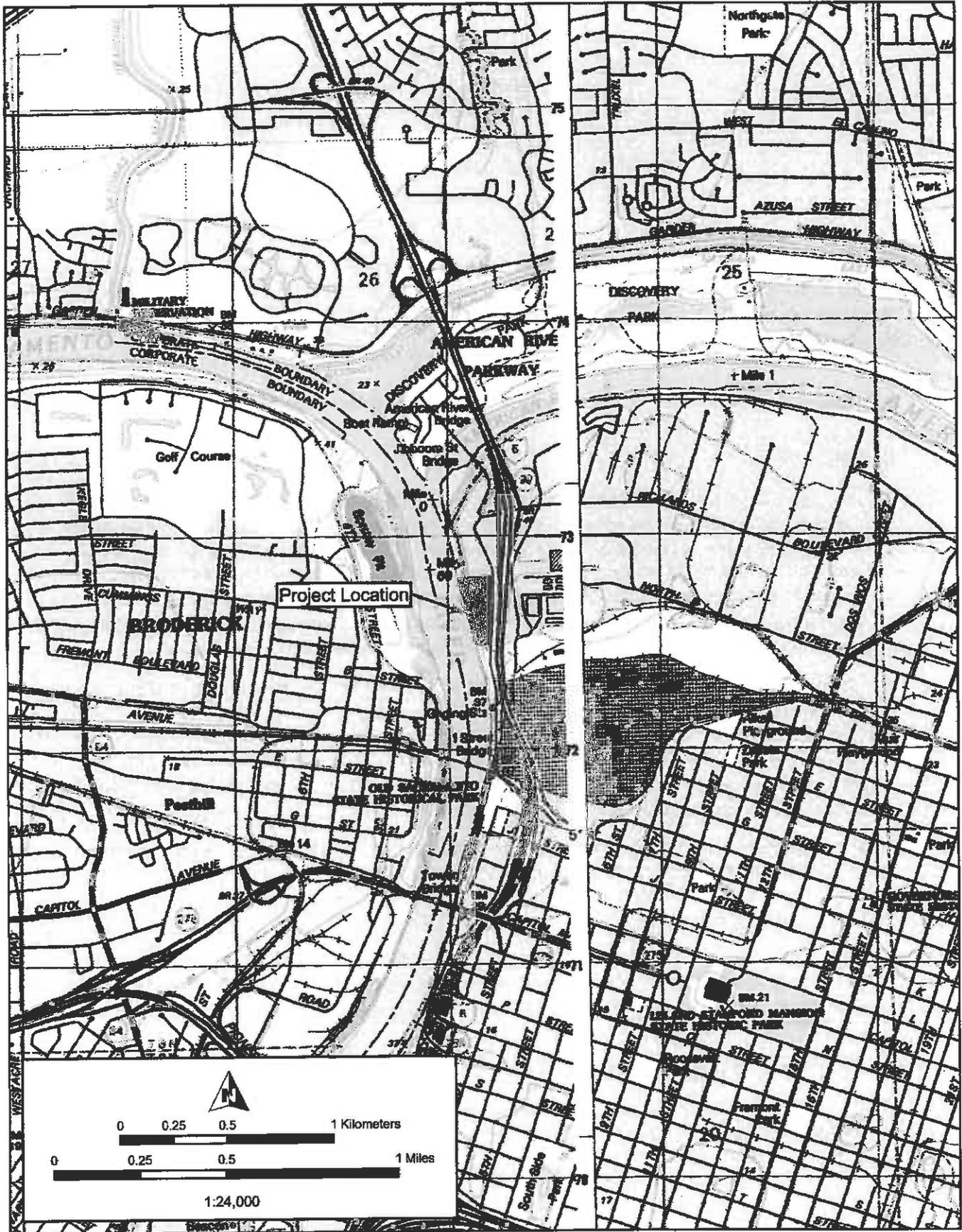


Figure 1 - Project Vicinity
Powerhouse Science Center Project

RECORD OF CONVERSATION

DATE: 04/22/2010, 11:38am

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME: Rose Enos

TITLE:

AGENCY/COMPANY:

CONTACT INFO: (530) 878-2378

NOTES: Melissa Cascella, an ICFI archaeologist, called and described the project to Ms. Enos, and asked if she had received the initial consultation letter and had any comments or concerns about the project. Ms. Enos stated that she was mostly concerned with burials, and that she was not aware of any villages or burials in the project vicinity. Ms. Cascella asked if she had any further questions about the project and Ms. Enos responded by questioning if the soil in the project area had been previously disturbed. Ms. Cascella then described the previous soil remediation which has occurred within the project area to Ms. Enos.

RECORD OF CONVERSATION

DATE: 04/22/2010, 11:46am

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME: Jessica Tavares

TITLE: Chairperson

AGENCY/COMPANY: United Auburn Indian Community of the Auburn Rancheria

CONTACT INFO: (530) 883-2390

NOTES: Melissa Cascella, an ICFI archaeologist, called and left a message describing the project to Ms. Tavares, and asked if she had any comments or concerns about the project. Ms. Cascella provided her office phone number for her response.

RECORD OF CONVERSATION

DATE: 04/22/2010, 11:49am

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME: Tribal Preservation Committee

TITLE:

AGENCY/COMPANY: United Auburn Indian Community of the Auburn Rancheria

CONTACT INFO: (530) 883-2320

NOTES: Melissa Cascella, an ICFI archaeologist, called and left a message describing the project to the Tribal Preservation Committee, and asking if they had any comments or concerns about the project. Ms. Cascella provided her office phone number for their response.

RECORD OF CONVERSATION

DATE: 04/22/2010, 3:55pm

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME: Patricia Johnson

TITLE: Senior Archivist (Reference, Government Records), Volunteer Coordinator

AGENCY/COMPANY: Center for Sacramento History

CONTACT INFO: (916) 808-7074, pjohnson@cityofsacramento.org

NOTES: Melissa Cascella, an ICFI archaeologist, called and described the project to Ms. Johnson, and asked if she had any information, comments or concerns about the project. Ms. Johnson stated she was unable to locate the letter, asked for another copy, and provided her email address in order to do so.

Cascella, Melissa

From: Cascella, Melissa
Sent: Thursday, April 22, 2010 4:05 PM
To: 'pjohnson@cityofsacramento.org'
Subject: RE: PG&E Powerhouse Science Center Project
Attachments: 20100325_Letter.pdf; Project Location.pdf

Ms. Johnson,

Per our phone conversation, I am resending the letter regarding the PG&E Powerhouse Science Center Project. If you have any questions or concerns, please don't hesitate to contact me.

Best Regards,
Melissa

Melissa Cascella, M.A., RPA | Archaeologist | 916.231.7649 | mcascella@icfi.com | icfi.com

ICF INTERNATIONAL | 630 K Street, Suite 400, Sacramento, CA 95814 | 916.737.3030 (f) | 916.475.4821 (m)

In January, ICF Jones & Stokes became ICF International.
Check out icfi.com/evolution.

 Please consider the environment before printing this e-mail.



March 25, 2010

Sacramento Archives and Museum Collection Center
551 Sequoia Pacific Blvd.
Sacramento, CA 95814

Subject: Powerhouse Science Center Project, Sacramento County, CA

Dear Sacramento Archives and Museum Collection Center:

ICF International has contracted with Carson Development (on behalf of the Discovery Museum of Sacramento) to conduct a cultural resources inventory for proposed infrastructure improvements and the construction of the Powerhouse Science Center. The proposed undertaking includes 750 feet of infrastructure improvements, rehabilitation of the abandoned Pacific Gas and Electric's Sacramento River Station "B" located at 450 Jibboom Street, improvements to adjacent Robert T. Matsui Waterfront Park, and construction of a Planetarium and Challenger Learning Center and Café (Learning Center) and Education Center and Restaurant (Education Center) on the site. The project is located on the riverfront in the City of Sacramento, Sacramento County (see attached map).

As part of our study, all interested historical organizations are being consulted to determine if any important historic or cultural resources may be affected by the proposed project. Your efforts in this process provide invaluable information for the proper identification and treatment of such resources.

Please do not hesitate to contact me with any questions. All comments and letters received from historical organizations will be included in the reports generated by this study. Thank you for your time respecting this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "Melissa Cascella", written in a cursive style.

Melissa Cascella
Cultural Resources Specialist

Enclosure

Figure 1 – Project Vicinity

MAY 04 2010



SHINGLE SPRINGS RANCHERIA

Shingle Springs Band of Miwok Indians,
Shingle Springs Rancheria
(Verona Tract), California
5281 Honple Road, Placerville, CA 95667
P.O. Box 1340, Shingle Springs, CA 95682
(530) 676-8010 Office (530) 676-8033 Fax

April 6, 2010

Ms. Rochelle Amrhein
Environmental Coordinator
Sacramento Housing and Redevelopment Agency
801 12th Street
Sacramento, CA 95814

RE: Section 106 Consultation for the Infrastructure Improvement Project, and development of the Powerhouse Science Center in Sacramento, California

Dear Ms. Amrhein:

Thank you for your letter dated, March 02, 2010, seeking comments, and consultation with the Shingle Springs Band of Miwok Indians regarding the Infrastructure Improvement Project, and development of the Powerhouse Science Center in Sacramento, California. We appreciate your efforts to contact us, and wish to respond.

Based on the information provided, the Shingle Springs Band of Miwok Indians along with its Most Likely Descendant, John Tayaba would like to consult with your office on these projects. Please let this letter serve as a formal request for consultation with the Sacramento Housing and Redevelopment Agency under Section 106 of the National Historic Preservation Act ("NHPA").

Please contact Michelle LaPena or AmyAnn Taylor, Tribal Attorney at (916) 442-9906 to schedule a consultation meeting pursuant to Section 106 of the NHPA.

Sincerely,

Daniel Fonseca
Cultural Resources Director

c: Melissa Cascella, ICF International



SHINGLE SPRINGS RANCHERIA

Shingle Springs Band of Miwok Indians,
Shingle Springs Rancheria
(Verona Tract), California
5281 Honpie Road, Placerville, CA 95667
P.O. Box 1340, Shingle Springs, CA 95682
(530) 676-8010 Office (530) 676-8033 Fax

June 14, 2010

Ms. Rochelle Amrhein
Environmental Coordinator
Sacramento Housing and Redevelopment Agency
630 I Street
Sacramento, CA 95814-2404

Re: Powerhouse Science Center – Comments for Cultural Resources Report

Dear Ms. Amrhein:

The Shingle Springs Band of Miwok Indians (the "Tribe") has reviewed the Revised Draft of the Cultural Resources Report ("Report") for the Powerhouse Science Center ("Project"). In general, the Tribe feels that the Report is a well-written articulation of the cultural resources encompassed in the Project. The Tribe is concerned with the brief references to and lack of elaboration on the Tribe and its cultural resources in the body of the report. The Tribe would also like to comment on the following:

Our comments are organized section by section and include recommended changes and sample language to incorporate in the subsequent draft of the Report.

Cultural Resources Report – Revised Draft

Page 8, at the top of the page, it states, "[...] The report outlines measures to ensure that Native American human remains and items of cultural patrimony are identified and treated in accordance with traditional values and practices." The Tribe recommends the Report include the name of their Tribe and a reference to the page numbers or location of the described measures. The sentence could state, "The report outlines measures to ensure that the human remains and items of cultural patrimony of the Shingle Springs Band of Miwok Indians and other Native Americans are identified and treated in accordance with the traditional values and practices as established by the Most Likely Descendent ("MLD") of the Shingle Springs Band of Miwok Indians and other affiliated Native American Tribes (see Appendix: Archaeology)."

Page 9, at the bottom of the page, it states, "In the 1980s and 1990s, environmental work was conducted to cap the contaminated soils in the building footprint and mitigate contaminated soils on the site. [...] Two outside clay caps were also laid on the project site." The Tribe reviewed the Jibboom Street Site Grading Clay Caps Plan in Appendix C. The Tribe requests any historical maps or documents which provide more specificity in the location of the caps.

Page 10, in the Section Archaeological Report, it states, "ICF International prepared a full archaeological report, "Archaeological Resources Inventory and Evaluation Report ... which appears in the Appendix ... ICF recommended a finding of no adverse effect for the undertaking as a whole, but described measures to ensure the proper treatment of Native American remains and items of cultural patrimony." This is the extent of the Archaeological Report section. The Tribe recommends this section include a summary of the Archaeological Report which is located in the Appendix. The paragraph could be revised to include the following sentences, "The members of the Shingle Spring Band of Miwok Indians are descendants of the Miwok and Maidu Indians that inhabited the central part of California for thousands of years until contact with the Europeans. In 1916, a special Indian Agent of the Department of the Interior conducted a census of Indians living in Sacramento County in California and found Indian families living along the Sacramento River and in the Sacramento area. These Indian families were later relocated to what is now the Shingle Springs Rancheria in El Dorado County. The Project is on the land inhabited by Indian people thousands of years ago and in the recent past and it was therefore necessary to consider and adhere to the measures in the archaeological report."

Page 28, at the top of the page, it states, "[...] The Inadvertent Discoveries Plan will be followed if human remains or items of cultural patrimony are found (Appendix: Archeology)." The Tribe recommends the sentence be revised to include reference to the Tribe and MLD. The sentence could state, "[...] The Inadvertent Discoveries plan will be followed if human remains or items of cultural patrimony are found, which includes consulting the Most Likely Descendent of the Shingle Springs Band of Miwok Indians (Appendix: Archeology)."

Page 29, in the second paragraph of Section VIII. Conclusion, it states "[...] There is a moderate likelihood that the project site contains archaeological resources; if resources are encountered during excavation, construction will be halted and a qualified archeologist will be called to the site to monitor and report." The Project is within the aboriginal territory of the Tribe and near the river. This is significant because numerous Native American burials and cultural items have been unearthed in recent projects along the river. The Tribe anticipates discoveries of human remains and cultural items and does not wish to wait until these resources are discovered or destroyed before any precautions or measures are taken. The Tribe recommends the paragraph include the following sentence, "That being said, the Project is within the aboriginal territory of the Shingle Springs Band of Miwok Indians and near the river which increases the likelihood that human remains and cultural items will be discovered and in that items have been discovered close to the project site in the last several years. Therefore, to avoid the destruction of cultural resources, discoveries should be anticipated and the appropriate precautions should be adhered to prior to their discovery, to ensure the ancestors and culture of the Tribe are protected."

Appendix: Archaeology: Archaeological Resources Inventory and Evaluation Report for the Powerhouse Science Center, Sacramento County, California – Revised Draft

Page 2-1, in the first bullet point, it states, "Initiate process by coordinating with other environmental reviews, consulting with the SHPO, identifying and consulting with interested parties, and identifying points in the process to seek input from the public and to notify the public of proposed actions." The Tribe recommends direct reference to the MLD. The sentence could state "[...] consulting with the SHPO and MLD, if appropriate, [...]."

Page 2-1, at the bottom of the page, it states, "If there are no historic properties identified or if it is determined that the project will have no adverse effect on historic properties, no further consideration of cultural resources is necessary". The Tribe recommends direct mention of consultation with the MLD. The sentence could state, "[...] if it is determined that the project will have no adverse effect on historic and pre-historic properties, after notification or consultation with the MLDs of tribes affiliated with the land, no further consideration of cultural resources is necessary."

Page 2-1, in the second bullet point, there is the following type-o, "Identify cultural resources and evaluate them for NRHP) eligibility [...]." The parenthesis following "NRHP" should be deleted.

Page 4-4, at the bottom of the Summary of Depositional Context, it states, "[...] if the vertical dimension of the Powerhouse APE does not intersect natural sediments, but only fill, the likelihood that ground-disturbing activities associated with the proposed project would come in contact with Native American archaeological resources is remote." That being said, as mentioned above, the site is within the aboriginal territory of the Tribe and near the river where cultural resources are regularly discovered. Additionally, in cultural resources are often discovered in similar situations where it is expected that only fill will be intersected by the ground-disturbing activities. The sentence could be revised to state, "[...] if the vertical dimension of the Powerhouse APE is not expected to intersect natural sediments, only fill, the likelihood that ground-disturbing activities associated with the proposed project will come in contact with Native American archaeological resources is still possible because the site is along the river in an aboriginal territory, depending on where the fill was taken from."

Page 4-6, in the middle of the paragraph under Ethnographic Context, it states, "The APE includes portions of territory that ethnographers historically attributed to the Valley Nisenan. However, the Plains Miwok have been included in this ethnographic context." The site for this project is within the aboriginal territory of the Tribe and therefore the Tribe recommends the following revision. The sentence could state, "The APE includes portions of territory that ethnographers and tribal historians and elders have historically attributed to the Valley Nisenan and Plains Miwok and the present day Shingle Spring Band of Miwok Indians who originated from the Verona area."

Page 4-9, at the top of the page, it states, "Notwithstanding these effects, people of Nisenan and Miwok ancestry continue to be visible members of their communities today, making substantial contributions to the maintenance of their culture." The Tribe recommends the sentence be revised to directly mention that the descendants of the Miwok people have established a federally recognized tribe. The sentence could state, "[...] people of Nisenan and Miwok ancestry continue to be visible members of their communities today, making substantial contributions to the maintenance of their culture. The descendants of the Plains Miwok have achieved the status of a federally recognized Indian Tribe, known as the Shingle Springs Band of Miwok Indians."

Page 5-1, in the second paragraph under Native Americans, it states, "Ms. Cascella received a letter from Daniel Fonseca, Cultural Resources Director for the Shingle Springs Band of Miwok Indians (Shingle Springs Band) [...]." The Tribe recommends the first reference to the Tribe include the full proper name, the Shingle Springs Band of Miwok Indians, as written in the report, but that after the first reference, it be abbreviated only as either the Tribe or SSR.

Page 5-2, in the middle of the page, it states, “[...] Tribal Vice Chairman John Tayaba explained that the project area is in the ancestral area of the members of the Shingle Springs Band. He explained that the stewardship for ancestral burials has been handed down to him and other members of the Shingle Springs Band. ... they consider the areas along both the Sacramento and American Rivers within their tribal lands to be sensitive for the discovery of Native American human remains. ... projects in similar locations along these rivers have, in recent history, unearthed numerous Native American burials.” This is significant information that should not only be located in chapter five (5) of the last appendix. The Tribe recommends this information also be included in the Ethnographic section on the Plains Miwok or in the body of the Cultural Resources Report in Section IV Summary of Archeological Documentation. The paragraph could state, “According to Tribal historians and elders the project site is within the aboriginal territory of the Shingle Springs Band of Miwok Indians. Projects in similar locations along the Sacramento and American rivers have, in recent history, unearthed numerous Native American burials. Because this project is within aboriginal territory and near the river, cultural resource discoveries should be anticipated and the proper measures should be observed.”

Page 5-2, near the bottom of the page it lists the requests by the Tribe, the second bullet point states, “possible monitoring by a tribal member of their choosing of all ground-disturbing activities associated with the project.” The Tribe recommends revision of this sentence to include authority of the Tribe to choose to have Tribal Monitors. Any reference to Tribal members as monitors should be revised to reference Tribal Monitors instead of Tribal members. The sentence could state, “Tribal Monitors of the Tribe’s choosing, at all ground-disturbing activities associated with the project, if determined to be necessary by the MLD.”

Page 5-2, near the bottom of the page it lists the requests by the Tribe, the third bullet point states, “a written agreement between the federally designated responsible entity and the Shingle Springs Band guide the treatment if any human burials inadvertently discovered as a result of the undertaking. This agreement would be drafted by the Shingle Springs Band and would include a stated policy of avoidance and reburial.” The Tribe recommends the reference to the Tribe include the full proper name or recommended abbreviations of the Tribe or SSR, as indicated above.

Page 5-2, near the bottom of the page it lists the requests by the Tribe, the third bullet point there is a type-o. The sentence is cut off after one word and then started on the next line. The sentence should go until the right margin before continuing onto another line.

Page 5-4, the Field Survey section indicates that a field survey was conducted of the APE for historic and prehistoric archaeological resources. The Tribe recommends direct mention of a subsequent field survey by Tribal Cultural Resources Staff designated by the MLD. This is important because Tribal staff are often able to identify markers of cultural resources not identified by non Tribal Monitors. A sentence could be included at the end of the section which states, “a Tribal Monitor designated by the MLD will conduct a field survey of the APE before any construction or ground-disturbing activities are conducted at the site.”

Page 6-2, in the first paragraph under Recommendations, it states, “Although the possibility of inadvertently discovering any intact archaeological deposit is low... there is always a remote possibility of such discovery. Specifically, the possibility exists for human remains, particularly of Native American ancestry, to be unearthed during ground-disturbing

activities [...]” The Tribe recommends the sentence be revised to delete “remote”, to state, “[...] there is always a possibility of such discovery.”

Page 6-2, describes the measures to be taken in consultation with the Tribe, however it does not include Tribal Monitors designated by the MLD. The Tribe recommends a bullet point be added which could state, “Tribal Monitors, as designated by the MLD, will monitor all ground-disturbing activities associated with the project if determined to be necessary by the MLD.”

Page 6-2, describes the measures to be taken in consultation with the Tribe, the second bullet point states, “The Shingle Springs Band will prepare a Monitoring and Inadvertent Discovery Plan (Plan) ... The Plan will contain provisions for ... protocols and responsibilities for construction related discoveries of archaeological and human remains.” As discussed in the meeting, the Tribe wishes to reserve the authority to determine the location of reburial and to ensure that all cultural resources unearthed during any ground-disturbing activities are reburied according to the Plan. The Tribe prefers to rebury cultural resources near or at the site of discovery and in a location where they will be protected from any further ground-disturbing activities. The Tribe recommends the Plan be called the Cultural Resources Treatment and Monitoring Agreement (“Agreement”). The Tribe further recommends the Report include more detail and give a summary of the Agreement.

General Comments

Following review of the Report, the Tribe would like to address the following issues.

What is the date when Jibboom Street was first built? Were any cultural resources discovered during the construction of Jibboom Street?

The Tribe requests maps detailing the infrastructure improvements and the utilities to be removed from the site which include specificity of the area of proposed ground-disturbing activities.

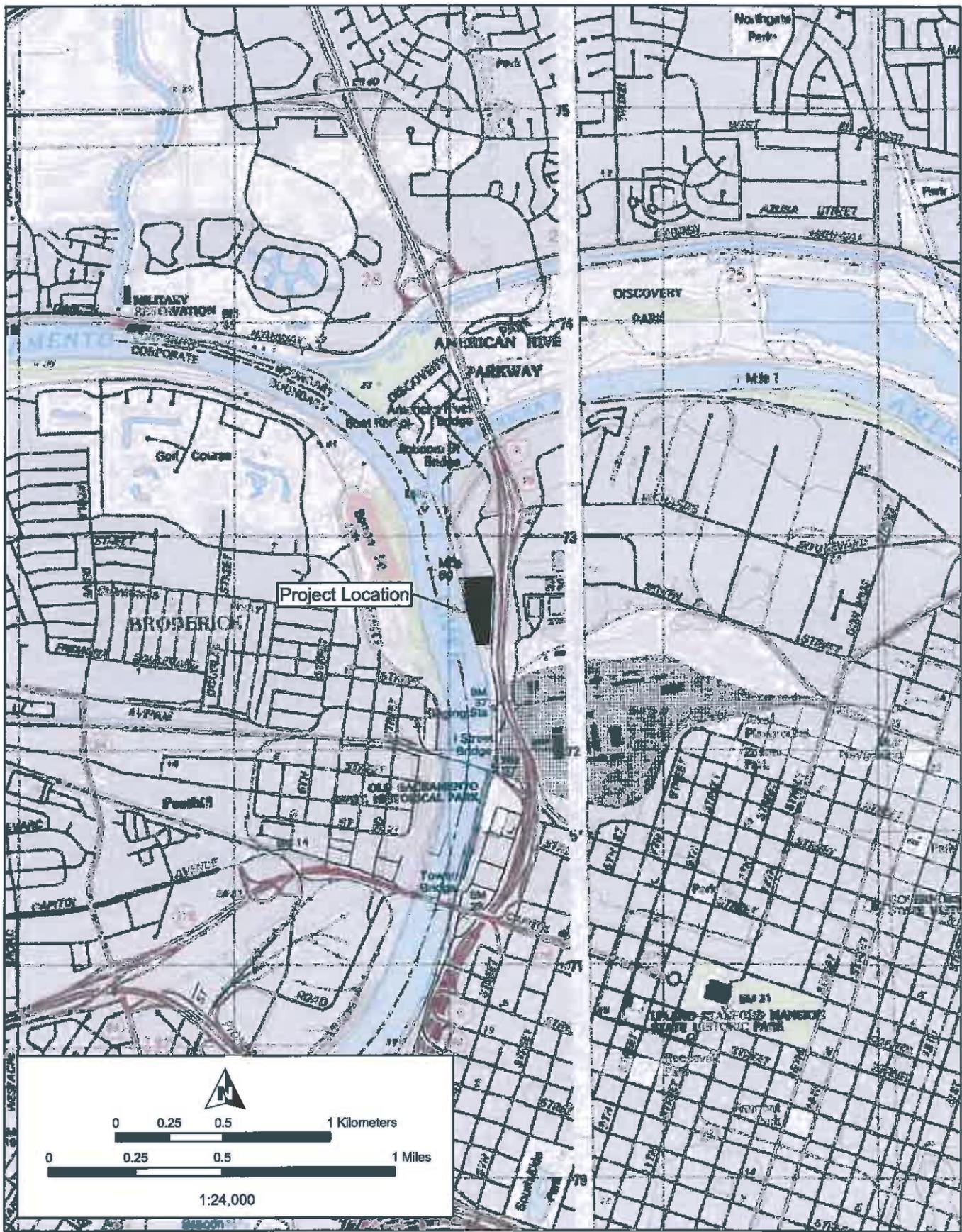
The Tribe requests clarification that the Map named Sacramento West 7.5' Topo Quadrangle in Appendix B illustrates that testing for pre-historic sites were conducted a quarter mile around the site. Furthermore, because of the Tribe's experience with cultural resources in the area, especially along the river, if no pre-historic sites were found in the quarter mile radius, the Tribe requests testing and/or documented research in a half-mile and a mile radius around the site.

Conclusion

We appreciate this opportunity to comment on the Report and look forward to our continued collaboration as the Project moves forth. If you have any questions, please contact, Tribal Attorney, AmyAnn Taylor, at your earliest convenience.

Sincerely,

John Tayaba
MLD



**Figure 1 - Project Vicinity
Powerhouse Science Center Project**

RECORD OF CONVERSATION

DATE: 04/22/2010, 4:08pm

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME:

TITLE:

AGENCY/COMPANY: Sacramento County Historical Society

CONTACT INFO: (916) 443-6265

NOTES: Melissa Cascella, an ICFI archaeologist, called and left a message describing the project to the Sacramento County Historical Society, and asked if they had any information, comments or concerns about the project. Ms. Cascella provided her office phone number for their response.

RECORD OF CONVERSATION

DATE: 04/22/2010, 4:10pm

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME:

TITLE:

AGENCY/COMPANY: Citizen Soldier's Museum Guard Historical Society

CONTACT INFO: (916) 442-2883

NOTES: Melissa Cascella, an ICFI archaeologist, called and left a message describing the project to the Citizen Soldier's Museum Guard Historical Society, and asked if they had any information, comments or concerns about the project. Ms. Cascella provided her office phone number for their response.

RECORD OF CONVERSATION

DATE: 04/22/2010, 4:14pm

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME: Janessa West

TITLE: Public Programs Coordinator

AGENCY/COMPANY: Sacramento History Museum (formerly the Discovery Museum of Sacramento)

CONTACT INFO: (916) 442-2883

NOTES: Melissa Cascella, an ICFI archaeologist, called and left a message describing the project to Ms. West, and asked if she had any information, comments or concerns about the project. Ms. Cascella provided her office phone number for her response.

Follow up

**Cascella, Melissa****From:** Patricia Johnson [pjohnson@cityofsacramento.org]**Sent:** Fri 4/23/2010 9:39 AM**To:** Cascella, Melissa**Cc:****Subject:** RE: PG&E Powerhouse Science Center Project**Attachments:**

Dear Ms. Casella:

Thank you for resending the letter regarding the PG&E Powerhouse project. In discussing this issue with my colleagues after you called yesterday, we have determined that The Center for Sacramento History has no objections, issues, or concerns with the redevelopment of the powerhouse plant into a learning center for the Discovery Museum and Science Center.

Thank you for considering us.

Pat Johnson

Senior Archivist,
Volunteer Coordinator
Center for Sacramento History
A Sacramento City/County Agency

551 Sequoia Pacific Blvd.
Sacramento, CA 95814
916-808-7074
pjohnson@cityofsacramento.org
www.sacramentoarchives.org

>>> "Cascella, Melissa" <MCascella@icfi.com> 4/22/2010 4:05 PM >>>
Ms. Johnson,

Per our phone conversation, I am resending the letter regarding the PG&E Powerhouse Science Center Project. If you have any questions or concerns, please don't hesitate to contact me.

Best Regards,

Melissa

Melissa Cascella, M.A., RPA | Archaeologist | 916.231.7649 |
mcascella@icfi.com <<http://kiosk.jsanet.com/signature/>> | icfi.com
<<http://www.icfi.com/>>

ICF INTERNATIONAL | 630 K Street, Suite 400, Sacramento, CA 95814 |
916.737.3030 (f) | 916.475.4821 (m)

In January, ICF Jones & Stokes became ICF International.
Check out [icfi.com/evolution](http://www.icfi.com/evolution) <<http://www.icfi.com/evolution>>

P Please consider the environment before printing this e-mail.

RECORD OF CONVERSATION

DATE: 04/26/2010, 12:09pm

TYPE OF CONVERSATION (PHONE CALL/MEETING/OTHER): phone call

NAME: William Burg

TITLE: Board of Directors, member

AGENCY/COMPANY: Sacramento County Historical Society

CONTACT INFO: (916) 798-5449

NOTES: William (Bill) Burg called Melissa Cascella and left a message stating that the Sacramento County Historical Society did not know of any specific information regarding the PG&E Powerhouse building. Mr. Burg suggested that Ms. Cascella contact the Center for Sacramento History.

National Flood Hazard Layer FIRMette



Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Regulatory Floodway Zone AE, AO, AH, VE, AR

OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X

OTHER AREAS OF FLOOD HAZARD		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D

OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs

GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall

OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5 Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary

MAP PANELS		Digital Data Available
		No Digital Data Available
		Unmapped



38°36'9.27"N
121°30'37.24"W



121°29'59.78"W



1:6,000
38°35'41.15"N

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

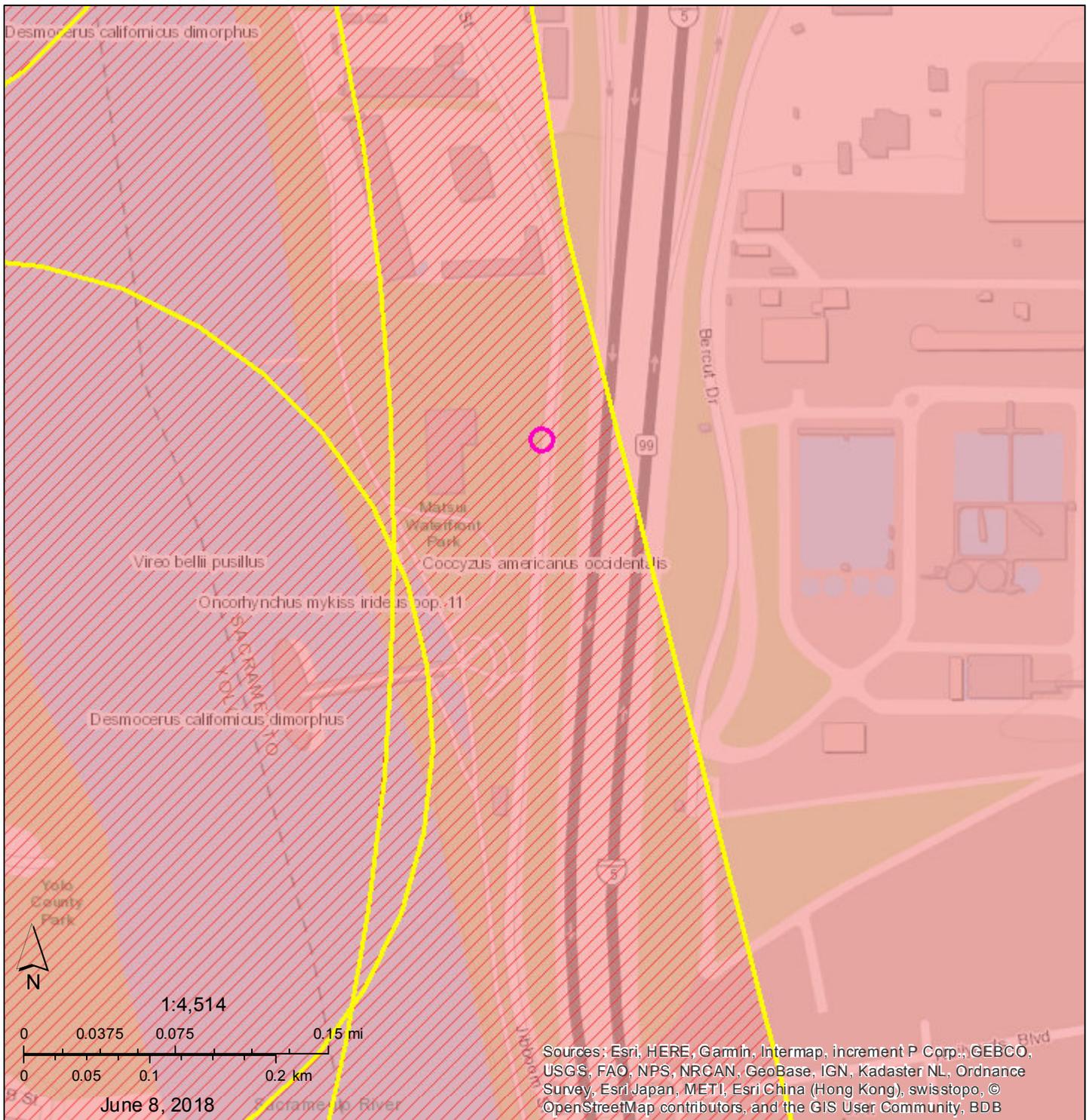
This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The base map shown complies with FEMA's base map accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 5/2/2018 at 5:50:44 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: base map imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

Species	Habitat	Habitat Present at Project Site
Giant Garter Snake (<i>Thamnophis gigas</i>)	Habitat of this highly aquatic species includes primarily marshes and sloughs, sometimes low-gradient streams, ponds, and small lakes, with cattails, bulrushes, willows, or other emergent or water-edge vegetation usually present and used for basking and cover (California Department of Fish and Game 1990, USFWS 1993, Rossman et al. 1996, Stebbins 2003). Because of the direct loss of natural habitat, this snake now relies heavily on rice fields in the Sacramento Valley, but it also uses managed marsh areas in various national wildlife refuges and state wildlife areas (USFWS 1999). "Essential habitat components consist of: (1) adequate water during the snake's active season (early spring through mid-fall) to provide adequate permanent water to maintain dense populations of food organisms; (2) emergent, herbaceous wetland vegetation, such as cattails and bulrushes, for escape cover and foraging habitat during the active season; (3) upland habitat with grassy banks and openings in waterside vegetation for basking; and (4) higher elevation upland habitats for cover and refuge from flood waters during the snake's inactive season in the winter" (from USFWS 1999). The giant gartersnake is absent from large rivers and other waters with populations of large, introduced, predatory fishes, and from wetlands with sand, gravel, or rock substrates (see USFWS 1993). Riparian woodlands do not provide suitable habitat because of excessive shade and inadequate prey resources (Hansen).	No
California Red-legged Frog (<i>Rana draytonii</i>)	This species usually occurs in or near quiet permanent water of streams, marshes, ponds, lakes, and other quiet bodies of water. In summer, frogs estivate in small mammal burrows, leaf litter, or other moist sites in or near (within a few hundred feet of) riparian areas (Rathbun et al. 1993, cited by USFWS 1994; USFWS 1996). Individuals may range far from water along riparian corridors and in damp thickets and forests. Breeding occurs in permanent or seasonal water of ponds, marshes, or quiet stream pools, sometimes in lakes (Fellers, in Jones et al. 2005); eggs often are attached to emergent vegetation, float at surface (Hayes and Miyamoto 1984).	No
California Tiger Salamander (<i>Ambystoma californiense</i>)	Lives in vacant or mammal-occupied burrows (e.g., California ground squirrel, valley pocker gopher) (Trenham 2001), occasionally other underground retreats, throughout most of the year; in grassland, savanna, or open woodland habitats. Lays eggs on submerged stems and leaves, in shallow ephemeral or semipermanent pools and ponds that fill during heavy winter rains or in permanent ponds (Alvarez 2004); adults spend little time in breeding sites.	No
Delta Smelt (<i>Hypomesus transpacificus</i>)	This euryhaline species inhabits open waters of bays, tidal rivers, channels, and sloughs; it rarely occurs in water with salinity of more than 10-12 ppt; when not spawning, it tends to concentrate where salt water and freshwater mix (salinity about 2 ppt) and zooplankton populations are dense (Moyle et al. 1989; USFWS 1993, 1996). Populations are concentrated mainly in the lower Delta and upper Suisun Bay after breeding (at least formerly). Adequate freshwater flows are needed to transport young to rearing habitat and to maintain rearing habitat in a favorable location (i.e., Suisun Bay).	No
Valley Elderberry Longhorn Beetle (<i>Desmocerus californicus dimorphus</i>)	Primarily found in riparian wooded areas where elderberries occur, but it has occasionally been found with these plants in more upland habitats.	No
Vernal Pool Fairy Shrimp (<i>Branchinecta lynchi</i>)	This species inhabits vernal pools and similar ephemeral wetlands. It is most commonly found in grassed or mud bottomed pools or basalt flow depression pools in unplowed grasslands (Eng et al. 1990). The pools vary in size from over 10 ha to only 20 square meters. It occurs at temperatures between 6 and 20 degrees C in soft and poorly buffered waters (Eng et al. 1990). Occurs mostly in vernal pools (79%) although it also inhabits a variety of natural and artificial seasonal wetland habitats, such as alkali pools, ephemeral drainages, stock ponds, roadside ditches, vernal swales, and rock outcrop pools. Whatever the habitat, the wetlands in which this species is found are small (<200 square meters) and shallow (mean 5 cm), however this species occasionally inhabits large (44,534 square meters) and very deep (122 cm) habitats (Eriksen & Belk, 1999).	No
Vernal Pool Tadpole Shrimp (<i>Lepidurus packardii</i>)	Found in a variety of natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activities. Wetland habitats vary in size from very small (2 square meters) to very large (356,253 square meters) and exhibit extremes in depth (2-15 cm) and volume (23-9,262,573 cubic meters (Helm, 1998).	No
least Bell's vireo (<i>Vireo bellii pusillus</i>)	Dense brush, mesquite, willow-cottonwood forest, streamside thickets, and scrub oak, in arid regions but often near water (AOU 1983); moist woodland, bottomlands, woodland edge, scattered cover and hedgerows in cultivated areas. Willow-dominated riparian woodlands (Biosystems Analysis 1989). Open woodland, brush in winter. Nests in shrub or low tree, usually averaging about 1 m above ground, usually in horizontal or downsloping twig fork, typically near edge of thicket. Nesting vegetation in California (often willow or ROSA) averages 3-5 m in height. Usually returns to same nesting territory in successive years (Franzreb 1989). For breeding, they require fairly dense riparian shrubbery, preferably where flowing water is present, but they also favor dry watercourses in the desert, bordered by mesquite and Arrow-weed. Willow, wild rose, and other dense vegetation are used for nesting.	No
steelhead - Central Valley DPS (<i>Oncorhynchus mykiss irideus</i> pop. 11)	BIG RIVER, CREEK, High gradient, Low gradient, MEDIUM RIVER, Moderate gradient, Pool, Riffle	No
western yellow-billed cuckoo (<i>Coccyzus americanus occidentalis</i>)	Extirpated from region.	No

Map of Powerhouse/Matsui Park Project Area



California Natural Diversity Database (CNDDDB) Commercial [ds85]

- | | | | | | | | |
|--|----------------------|--|----------------------------------|--|------------------------------|--|----------------------------------|
| | Plant (80m) | | Animal (non-specific) | | Aquatic Comm. (80m) | | Multiple (circular) |
| | Plant (specific) | | Animal (circular) | | Aquatic Comm. (specific) | | Sensitive EO's (Commercial only) |
| | Plant (non-specific) | | Terrestrial Comm. (80m) | | Aquatic Comm. (non-specific) | | |
| | Plant (circular) | | Terrestrial Comm. (specific) | | Aquatic Comm. (circular) | | |
| | Animal (80m) | | Terrestrial Comm. (non-specific) | | Multiple (80m) | | |
| | Animal (specific) | | Terrestrial Comm. (circular) | | Multiple (specific) | | |
| | | | | | Multiple (non-specific) | | |



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 90034

EO Index: 96966

Key Quad: Sacramento East (3812154)

Element Code: ABNRB02022

Occurrence Number: 194

Occurrence Last Updated: 2015-04-03

Scientific Name: *Coccyzus americanus occidentalis*

Common Name: western yellow-billed cuckoo

Listing Status: **Federal:** Threatened

Rare Plant Rank:

State: Endangered

Other Lists: BLM_S-Sensitive

CNDDDB Element Ranks: **Global:** G5T2T3

State: S1

NABCI_RWL-Red Watch List
USFS_S-Sensitive
USFWS_BCC-Birds of Conservation Concern

General Habitat:

RIPARIAN FOREST NESTER, ALONG THE BROAD, LOWER FLOOD-BOTTOMS OF LARGER RIVER SYSTEMS.

Micro Habitat:

NESTS IN RIPARIAN JUNGLES OF WILLOW, OFTEN MIXED WITH COTTONWOODS, WITH LOWER STORY OF BLACKBERRY, NETTLES, OR WILD GRAPE.

Last Date Observed: 1877-07-XX

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1877-07-XX

Occurrence Rank: None

Owner/Manager: UNKNOWN

Trend: Unknown

Presence: Extirpated

Location:

SACRAMENTO.

Detailed Location:

1877 EXPEDITION CONDUCTED IN "VICINITY OF SACRAMENTO CITY...WHERE VEGETATION WAS NOURISHED BY THE PRESENCE OF WATER." MAPPED GENERALLY CENTERED ON SACRAMENTO.

Ecological:

Threats:

DEVELOPMENT HAS ELIMINATED HABITAT IN THE AREA. THOUGHT TO HAVE BEEN EXTIRPATED IN SACRAMENTO AND YOLO COUNTIES.

General:

FOUND BREEDING IN VICINITY OF SACRAMENTO BETWEEN 6 JUN AND 4 JUL 1877.

PLSS: T08N, R04E, Sec. 01 (M)

Accuracy: 5 miles

Area (acres): 0

UTM: Zone-10 N4270865 E631254

Latitude/Longitude: 38.57656 / -121.49319

Elevation (feet): 20

County Summary:

Sacramento, Yolo

Quad Summary:

Sacramento East (3812154), Sacramento West (3812155), Rio Linda (3812164), Taylor Monument (3812165)

Sources:

RID77A0001 RIDGWAY, R. (SMITHSONIAN INSTITUTION) - REPORT OF THE GEOLOGICAL EXPLORATION OF THE FORTIETH PARALLEL, VOLUME IV: PART III, ORNITHOLOGY. PROFESSIONAL PAPERS OF THE ENGINEER DEPARTMENT, U.S. ARMY, NO. 18. 1877-XX-XX



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	91654	EO Index:	92725
Key Quad:	Sacramento West (3812155)	Element Code:	ABPBW01114
Occurrence Number:	515	Occurrence Last Updated:	2014-02-19

Scientific Name:	<i>Vireo bellii pusillus</i>	Common Name:	least Bell's vireo
Listing Status:	Federal: Endangered State: Endangered	Rare Plant Rank:	
CNDDB Element Ranks:	Global: G5T2 State: S2	Other Lists:	IUCN_NT-Near Threatened NABCI_YWL-Yellow Watch List

General Habitat:	Micro Habitat:
SUMMER RESIDENT OF SOUTHERN CALIFORNIA IN LOW RIPARIAN IN VICINITY OF WATER OR IN DRY RIVER BOTTOMS; BELOW 2000 FT.	NESTS PLACED ALONG MARGINS OF BUSHES OR ON TWIGS PROJECTING INTO PATHWAYS, USUALLY WILLOW, BACCHARIS, MESQUITE.

Last Date Observed:	1877-04-10	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	1877-04-10	Occurrence Rank:	Unknown
Owner/Manager:	UNKNOWN	Trend:	Unknown
Presence:	Presumed Extant		

Location:
WASHINGTON (=BRODERICK NEIGHBORHOOD OF WEST SACRAMENTO).

Detailed Location:
EXACT LOCATION UNKNOWN. SPECIMEN LOCALE STATED AS "WASHINGTON, YOLO CO." PROBABLY COLLECTED FROM RIPARIAN VEGETATION ALONG THE SACRAMENTO RIVER.

Ecological:

Threats:

General:

TWO ADULT MALES WERE COLLECTED ON 10 APR 1877 AND DEPOSITED AT CAS; COLLECTOR UNKNOWN.

PLSS:	T09N, R04E, Sec. 34 (M)	Accuracy:	1 mile	Area (acres):	0
UTM:	Zone-10 N4272606 E628512	Latitude/Longitude:	38.59265 / -121.52434	Elevation (feet):	15

County Summary:	Quad Summary:
Sacramento, Yolo	Sacramento West (3812155)

Sources:
ANO77S0001 ANONYMOUS (CALIFORNIA ACADEMY OF SCIENCES) - CAS #18503 AND CAS #18504 COLLECTED FROM WASHINGTON, YOLO CO. 1877-04-10



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Map Index Number:	90985	EO Index:	92033
Key Quad:	Citrus Heights (3812163)	Element Code:	AFCHA0209K
Occurrence Number:	5	Occurrence Last Updated:	2014-02-26

Scientific Name:	<i>Oncorhynchus mykiss irideus pop. 11</i>		
Common Name:	steelhead - Central Valley DPS		
Listing Status:	Federal:	Threatened	Rare Plant Rank:
	State:	None	Other Lists:
			AFS_TH-Threatened
CNDDB Element Ranks:	Global:	G5T2Q	
	State:	S2	

General Habitat:	Micro Habitat:
POPULATIONS IN THE SACRAMENTO AND SAN JOAQUIN RIVERS AND THEIR TRIBUTARIES.	□

Last Date Observed:	2012-XX-XX	Occurrence Type:	Natural/Native occurrence
Last Survey Date:	2012-XX-XX	Occurrence Rank:	Poor
Owner/Manager:	SAC COUNTY, CITY OF SACRAMENTO	Trend:	Decreasing
Presence:	Presumed Extant		

Location:
 LOWER AMERICAN RIVER, FROM ITS MOUTH IN THE SACRAMENTO RIVER TO THE NIMBUS HATCHERY DAM (RM23).

Detailed Location:
 MAPPED TO 23 MI OF RIVER CURRENTLY NAVIGABLE BY STEELHEAD (SH). OLD FOLSOM DAM (RM27) BUILT 1895; NIMBUS AND FOLSOM DAMS BUILT 1955, CUT OFF NEARLY ALL OF SPAWNING HABITAT. RSTS FISHED BELOW WATT BRIDGE AT RM9.

Ecological:
 80-100% OF ADULTS OBSERVED IN RIVER DURING 2003-2012 SPAWNING SURVEYS & 92-99% OF RETURNS TO HATCHERY 2001-10 WERE HATCHERY-ORIGIN (HO). NIMBUS HATCHERY SH EXCLUDED FROM DPS; EGGS IMPORTED FROM EEL RIVER (1955-62) WA & OR (1969-73, '80-81).

Threats:
 DAM, HABITAT LOSS. SMALL WILD POP SWAMPED W/ HO SH. HIGH WATER TEMP & RELATED DISEASES. REDD DEWATERING. BASS PREDATION.

General:
 1944-47: SUMMER RUN OF 400-1,246; GONE BY 1955. WINTER RUN ESTS: 3K-5K (LATE 60S); >19K (1971-72); >12K (1973-74); 255-1,462 (1990-93). RST CATCH 1994-99: 30-145; >2K IN 2012. # REDDS/YEAR: 155-215 (2002-05), 172 ('07), 89 ('11), 76 ('12).

PLSS:	T09N, R06E, Sec. 14 (M)	Accuracy:	nonspecific area	Area (acres):	2,592
UTM:	Zone-10 N4276902 E648185	Latitude/Longitude:	38.62828 / -121.29761	Elevation (feet):	

County Summary:	Quad Summary:
Sacramento	Carmichael (3812153), Sacramento East (3812154), Folsom (3812162), Citrus Heights (3812163)



Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Sources:

CON13R0001	CONSTANTINEDES, N. & J. SILVA - JUVENILE SALMONID EMIGRATION MONITORING IN THE LOWER AMERICAN RIVER, CALIFORNIA JANUARY - JUNE 2013 2013-XX-XX
GER71R0001	GERSTUNG, E. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-REGION 2) - A REPORT TO THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD ON THE FISH AND WILDLIFE RESOURCES OF THE AMERICAN RIVER TO BE AFFECTED BY THE AUBURN DAM... 1971-06-XX
HAN05R0001	HANNON, J. & B. DEASON (U.S. BUREAU OF RECLAMATION) - AMERICAN RIVER STEELHEAD (ONCORHYCHUS MYKISS) SPAWNING 2001-2005 2005-10-27
HAN11R0002	HANNON, J. (U.S. BUREAU OF RECLAMATION) - AMERICAN RIVER STEELHEAD (ONCORHYNCHUS MYKISS) SPAWNING - 2011, WITH COMPARISONS TO PRIOR YEARS. 2011-XX-XX
HAN12R0002	HANNON, J. (U.S. BUREAU OF RECLAMATION) - AMERICAN RIVER STEELHEAD (ONCORHYNCHUS MYKISS) SPAWNING - 2012, WITH COMPARISONS TO PRIOR YEARS. 2012-XX-XX
HSR12R0004	CALIFORNIA HATCHERY SCIENTIFIC REVIEW GROUP - CALIFORNIA HATCHERY REVIEW PROJECT - APPENDIX VIII: NIMBUS FISH HATCHERY STEELHEAD PROGRAM REPORT 2012-06-XX
MCE96R0001	MCEWAN, D. & T. JACKSON (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - STEELHEAD RESTORATION AND MANAGEMENT PLAN FOR CALIFORNIA. 1996-XX-XX
NMF09R0001	NATIONAL MARINE FISHERIES SERVICE (NOAA) - CALIFORNIA CENTRAL VALLEY SALMON & STEELHEAD DRAFT RECOVERY PLAN, APPENDIX A: CENTRAL VALLEY WATERSHED PROFILES. 2009-10-XX
NMF11R0002	NATIONAL MARINE FISHERIES SERVICE (NOAA) - CENTRAL VALLEY RECOVERY DOMAIN 5-YEAR REVIEW: SUMMARY AND EVALUATION OF CENTRAL VALLEY STEELHEAD DPS. 2011-XX-XX
SNI00R0005	SNIDER, B. & R. TITUS (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - LOWER AMERICAN RIVER EMIGRATION SURVEY, OCTOBER 1996 - SEPTEMBER 1997. 2000-01-XX
SNI01R0001	SNIDER, B. & R. TITUS (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - LOWER AMERICAN RIVER EMIGRATION SURVEY, OCTOBER 1997 - SEPTEMBER 1998. 2001-12-XX
SNI02R0001	SNIDER, B. & R. TITUS (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - LOWER AMERICAN RIVER EMIGRATION SURVEY, OCTOBER 1998 - SEPTEMBER 1999. 2002-09-XX
SNI97R0001	SNIDER, B. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - LOWER AMERICAN RIVER EMIGRATION SURVEY, NOVEMBER 1994 - SEPTEMBER 1995. 1997-09-XX
SNI98R0001	SNIDER, B. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - LOWER AMERICAN RIVER EMIGRATION SURVEY, OCTOBER 1995 - SEPTEMBER 1996. 1998-09-XX
STA76R0001	STALEY, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE-REGION 2) - AMERICAN RIVER STEELHEAD (SALMO GAIRDNERII GAIRDNERII) MANAGEMENT, 1956-1974. 1976-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 91655	EO Index: 92726
Key Quad: Knights Landing (3812176)	Element Code: AFCHA0209K
Occurrence Number: 28	Occurrence Last Updated: 2014-03-28

Scientific Name: <i>Oncorhynchus mykiss irideus pop. 11</i>	Common Name: steelhead - Central Valley DPS
Listing Status:	Rare Plant Rank:
Federal: Threatened	
State: None	Other Lists: AFS_TH-Threatened
CNDDB Element Ranks:	
Global: G5T2Q	
State: S2	

General Habitat: POPULATIONS IN THE SACRAMENTO AND SAN JOAQUIN RIVERS AND THEIR TRIBUTARIES.	Micro Habitat: <input type="checkbox"/>
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Last Date Observed: 2012-05-10	Occurrence Type: Natural/Native occurrence
Last Survey Date: 2012-05-10	Occurrence Rank: Unknown
Owner/Manager: UNKNOWN	Trend: Unknown
Presence: Presumed Extant	

Location:
LOWER-MIDDLE SACRAMENTO RIVER, FROM SHERWOOD HARBOR (RM 55) TO COLUSA (RM 144).

Detailed Location:
MAPPED TO INCLUDE RIVER SEGMENTS 3 & 4 FROM ANGLER SURVEYS 1991-2010 AND 13 USFWS BEACH SEINE STATIONS SAMPLED SINCE 1979. ROTARY SCREW TRAP AT KNIGHTS LANDING OPERATED SINCE 1997 AND MOSSDALE TRAWLS SINCE 1988.

Ecological:
MIGRATION CORRIDOR FROM UPPER SAC & TRIBS TO DELTA. YIELDS AVERAGE 3% OF YEARLY SAC R ANGLING CATCH. FLOOD FLOWS DIVERTED INTO SUTTER & YOLO BYPASSES (OCC 30, 31) PROVIDE REARING HABITAT BUT STRAYING ADULTS MAY BE STRANDED AS FLOWS SUBSIDE.

Threats:
CHANNELIZATION, DIVERSIONS, POLLUTANTS.

General:
YEARLY RST CATCH 1998-2012 FROM 37 (2000) TO 241 (2008), AVG 132; 66-100% HATCHERY-ORIGIN(HO) SINCE '98, WHEN HO FISH 100% AD-CLIPPED. YRLY TRAWL CATCH 1988-2012: FROM 10 ('91) TO 679 ('93); ~93% HO, 2000-12. SEINE CATCH AVG 8/YR 1979-2012.

PLSS: T11N, R02E, Sec. 13 (M)	Accuracy: nonspecific area	Area (acres): 20,980
UTM: Zone-10 N4295601 E612546	Latitude/Longitude: 38.80199 / -121.70389	Elevation (feet):

County Summary: Colusa, Sacramento, Sutter, Yolo	Quad Summary: Sacramento West (3812155), Taylor Monument (3812165), Grays Bend (3812166), Verona (3812175), Knights Landing (3812176), Eldorado Bend (3812177), Kirkville (3812187), Tisdale Weir (3912117), Grimes (3912118), Meridian (3912128), Colusa (3912221)
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Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Sources:

BOR08R0001	U.S. BUREAU OF RECLAMATION - BIOLOGICAL ASSESSMENT ON THE CONTINUED LONG-TERM OPERATIONS OF THE CENTRAL VALLEY PROJECT & THE STATE WATER PROJECT, CHAPTER 4: STEELHEAD FACTORS. 2008-05-16
BUT98R0001	BUTTE CREEK WATERSHED PROJECT - BUTTE CREEK WATERSHED PROJECT EXISTING CONDITIONS REPORT. 1998-08-XX
DFW11U0001	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE - SUCCESSFUL FISH RESCUE COMPLETED AT TISDALE AND FREMONT WEIR OFF SACRAMENTO RIVER (CDFW NEWS BLOG POST). 2011-04-15
DFW14U0001	CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE - KNIGHTS LANDING ROTARY SCREW TRAP DATA FOR ONCORHYNCHUS MYKISS, 1999-2012. 2014-XX-XX
MAS03R0001	MASSA, D. & T. SCHROYER (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY SALMON AND STEELHEAD HARVEST MONITORING PROJECT: 2002 ANGLER SURVEY. 2003-09-XX
MUR01R0001	MURPHY, K. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY SALMON AND STEELHEAD HARVEST MONITORING PROJECT: 1999 ANGLER SURVEY. 2001-03-XX
MUR01R0002	MURPHY, K. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY SALMON AND STEELHEAD HARVEST MONITORING PROJECT: 2000 ANGLER SURVEY. 2001-07-XX
MUR99R0001	MURPHY, K. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY SALMON AND STEELHEAD HARVEST MONITORING PROJECT: 1998 ANGLER SURVEY. 1999-12-20
ROB07R0002	ROBERTS, J. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - TIMING, COMPOSITION AND ABUNDANCE OF JUVENILE ANADROMOUS SALMONID EMIGRATION IN THE SACRAMENTO RIVER NEAR KNIGHTS LANDING OCTOBER 2001-SEPTEMBER 2002. 2007-01-XX
SCH02R0001	SCHROYER, T. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY SALMON AND STEELHEAD HARVEST MONITORING PROJECT: 2001 ANGLER SURVEY. 2002-12-XX
SNI00R0003	SNIDER, B. & R. TITUS (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - TIMING, COMPOSITION AND ABUNDANCE OF JUVENILE ANADROMOUS SALMONID EMIGRATION IN THE SACRAMENTO RIVER NEAR KNIGHTS LANDING OCTOBER 1997-SEPTEMBER 1998. 2000-07-XX
SNI00R0004	SNIDER, B. & R. TITUS (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - TIMING, COMPOSITION AND ABUNDANCE OF JUVENILE ANADROMOUS SALMONID EMIGRATION IN THE SACRAMENTO RIVER NEAR KNIGHTS LANDING OCTOBER 1998-SEPTEMBER 1999. 2000-12-XX
STO11D0002	STOCKTON FISH AND WILDLIFE OFFICE - BEACH SEINES CHINOOK & PELAGIC ORGANISM DECLINE SPECIES 1976-2011 MONITORING DATA. 2011-XX-XX
STO11D0003	STOCKTON FISH AND WILDLIFE OFFICE - SACRAMENTO TRAWLS CHINOOK & PELAGIC ORGANISM DECLINE SPECIES 1988-2011 MONITORING DATA. 2011-XX-XX
STO13D0001	STOCKTON FISH AND WILDLIFE OFFICE - BEACH SEINES CHINOOK & PELAGIC ORGANISM DECLINE SPECIES 2012-2013 MONITORING DATA. 2013-XX-XX
STO13D0002	STOCKTON FISH AND WILDLIFE OFFICE - SACRAMENTO TRAWLS CHINOOK & PELAGIC ORGANISM DECLINE SPECIES 2012-2013 MONITORING DATA. 2013-XX-XX
TIT07R0001	TITUS, R. & M. BROWN (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY ANGLER SURVEY, 2007 ANNUAL PROJECT PERFORMANCE REPORT, F-119-R. 2007-10-31
TIT08R0001	TITUS, R. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY ANGLER SURVEY, 2008 ANNUAL PROJECT PERFORMANCE REPORT, F-119-R. 2008-12-27
TIT10R0001	TITUS, R. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - CENTRAL VALLEY ANGLER SURVEY, 2010 ANNUAL PROJECT PERFORMANCE REPORT, F-119-R. 2010-09-01
VIN06R0002	VINCIK, R. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - TIMING, COMPOSITION AND ABUNDANCE OF JUVENILE ANADROMOUS SALMONID EMIGRATION IN THE SACRAMENTO RIVER NEAR KNIGHTS LANDING SEPTEMBER 1999-SEPTEMBER 2000. 2006-12-XX
WIX95R0002	WIXOM, L. ET AL. (CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE) - FINAL PERFORMANCE REPORT, SACRAMENTO RIVER SYSTEM SPORT FISH CATCH INVENTORY. 1995-06-30



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 11252	EO Index: 22723
Key Quad: Sacramento West (3812155)	Element Code: IICOL48011
Occurrence Number: 28	Occurrence Last Updated: 1989-08-11

Scientific Name: <i>Desmocerus californicus dimorphus</i>	Common Name: valley elderberry longhorn beetle
Listing Status:	Rare Plant Rank:
Federal: Threatened	
State: None	Other Lists:
CNDDDB Element Ranks:	
Global: G3T2	
State: S2	

General Habitat: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).	Micro Habitat: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.
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Last Date Observed: 1985-09-04	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1985-09-04	Occurrence Rank: Unknown
Owner/Manager: PVT	Trend: Unknown
Presence: Presumed Extant	

Location:
SACRAMENTO RIVER, OPPOSITE MOUTH OF AMERICAN RIVER, AT RIVER MI 60.3, W BANK.

Detailed Location:

Ecological:
HABITAT CONSISTS OF ELDERBERRY SAVANNAH AND ELDERBERRY TREES IN A COTTONWOOD RIPARIAN WOODLAND.

Threats:
THREAT OF DEVELOPMENT INTO LIGHTHOUSE MARINA PROJECT.

General:
EXIT HOLES FOUND.

PLSS: T09N, R04E, Sec. 26 (M)	Accuracy: 1/5 mile	Area (acres): 0
UTM: Zone-10 N4273153 E629684	Latitude/Longitude: 38.59740 / -121.51079	Elevation (feet): 30

County Summary: Sacramento, Yolo	Quad Summary: Sacramento West (3812155)
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Sources:

SCH85F0025	SCHONHOLTZ, R. - FIELD SURVEY FORM FOR DESMOCERUS CALIFORNICUS DIMORPHUS 1985-09-04
SEE86R0001	LARRY SEEMAN & ASSOCIATES ET AL. FOR EDAW, INC. - DEIR-EIS FOR LIGHTHOUSE MARINA PROJECT 1986-03-XX
SEE86R0002	LARRY SEEMAN & ASSOCIATES, INC. - BIOLOGICAL SURVEY OF LIGHTHOUSE MARINA PROJECT, FOR VALLEY ELDERBERRY LONGHORN BEETLE (PART OF DEIR). 1986-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 11259	EO Index: 22724
Key Quad: Sacramento West (3812155)	Element Code: IICOL48011
Occurrence Number: 29	Occurrence Last Updated: 1989-08-11

Scientific Name: <i>Desmocerus californicus dimorphus</i>	Common Name: valley elderberry longhorn beetle
Listing Status:	Rare Plant Rank:
Federal: Threatened	
State: None	Other Lists:
CNDDDB Element Ranks:	
Global: G3T2	
State: S2	

General Habitat: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).	Micro Habitat: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.
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Last Date Observed: 1985-09-04	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1985-09-04	Occurrence Rank: Unknown
Owner/Manager: PVT	Trend: Unknown
Presence: Presumed Extant	

Location:
SACRAMENTO RIVER, OPPOSITE MOUTH OF AMERICAN RIVER, RIVER MI 59.8, W BANK.

Detailed Location:

Ecological:
HABITAT CONSISTS OF ELDERBERRY SAVANNAH AND ELDERBERRY TREES IN A COTTONWOOD RIPARIAN WOODLAND.

Threats:
THREAT OF DEVELOPMENT INTO THE LIGHTHOUSE MARINA PROJECT.

General:
EXIT HOLES FOUND.

PLSS: T09N, R04E, Sec. 35 (M)	Accuracy: 1/5 mile	Area (acres): 0
UTM: Zone-10 N4272507 E629839	Latitude/Longitude: 38.59156 / -121.50913	Elevation (feet):

County Summary: Sacramento, Yolo	Quad Summary: Sacramento West (3812155)
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Sources:

SCH85F0025	SCHONHOLTZ, R. - FIELD SURVEY FORM FOR DESMOCERUS CALIFORNICUS DIMORPHUS 1985-09-04
SEE86R0001	LARRY SEEMAN & ASSOCIATES ET AL. FOR EDAW, INC. - DEIR-EIS FOR LIGHTHOUSE MARINA PROJECT 1986-03-XX
SEE86R0002	LARRY SEEMAN & ASSOCIATES, INC. - BIOLOGICAL SURVEY OF LIGHTHOUSE MARINA PROJECT, FOR VALLEY ELDERBERRY LONGHORN BEETLE (PART OF DEIR). 1986-XX-XX



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 11236

EO Index: 22712

Key Quad: Sacramento West (3812155)

Element Code: IICOL48011

Occurrence Number: 56

Occurrence Last Updated: 1989-08-11

Scientific Name: *Desmocerus californicus dimorphus*

Common Name: valley elderberry longhorn beetle

Listing Status: **Federal:** Threatened

Rare Plant Rank:

State: None

Other Lists:

CNDDDB Element Ranks: **Global:** G3T2

State: S2

General Habitat:

OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).

Micro Habitat:

PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.

Last Date Observed: 1985-09-04

Occurrence Type: Natural/Native occurrence

Last Survey Date: 1985-09-04

Occurrence Rank: Unknown

Owner/Manager: PVT

Trend: Unknown

Presence: Presumed Extant

Location:

SACRAMENTO RIVER, OPPOSITE JCT WITH NATOMAS, MAIN DRAINAGE CANAL, RIVER MILE 61.

Detailed Location:

Ecological:

HABITAT CONSISTS OF ELDERBERRY AND SAVANNAH/ELDERBERRY TREES IN A COTTONWOOD RIPARIAN WOODLAND.

Threats:

THREAT OF DEVELOPMENT.

General:

YELLOW WARBLER AND SWAINSON'S HAWK ALSO OBSERVED AT THE SITE.

PLSS: T09N, R04E, Sec. 27 (M)

Accuracy: 1/5 mile

Area (acres): 0

UTM: Zone-10 N4273753 E628707

Latitude/Longitude: 38.60295 / -121.52189

Elevation (feet): 25

County Summary:

Sacramento, Yolo

Quad Summary:

Sacramento West (3812155)

Sources:

SCH85F0025 SCHONHOLTZ, R. - FIELD SURVEY FORM FOR DESMOCERUS CALIFORNICUS DIMORPHUS 1985-09-04



Occurrence Report

California Department of Fish and Wildlife

California Natural Diversity Database



Map Index Number: 95231	EO Index: 96367
Key Quad: Sacramento West (3812155)	Element Code: IICOL48011
Occurrence Number: 283	Occurrence Last Updated: 2015-03-04

Scientific Name: <i>Desmocerus californicus dimorphus</i>	Common Name: valley elderberry longhorn beetle
Listing Status:	Rare Plant Rank:
Federal: Threatened	
State: None	Other Lists:
CNDDDB Element Ranks:	
Global: G3T2	
State: S2	

General Habitat: OCCURS ONLY IN THE CENTRAL VALLEY OF CALIFORNIA, IN ASSOCIATION WITH BLUE ELDERBERRY (SAMBUCUS MEXICANA).	Micro Habitat: PREFERS TO LAY EGGS IN ELDERBERRIES 2-8 INCHES IN DIAMETER; SOME PREFERENCE SHOWN FOR "STRESSED" ELDERBERRIES.
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Last Date Observed: 1949-05-06	Occurrence Type: Natural/Native occurrence
Last Survey Date: 1949-05-06	Occurrence Rank: Unknown
Owner/Manager: UNKNOWN	Trend: Unknown
Presence: Presumed Extant	

Location:
SACRAMENTO, VICINITY OF I-5 AND I-80 INTERCHANGE.

Detailed Location:
MAPPED GENERALLY TO SACRAMENTO, NEAR SACRAMENTO RIVER. PROVIDED LOCATION DESCRIPTION GIVEN ONLY AS "SACRAMENTO." EXACT LOCATION OF COLLECTIONS UNKNOWN, THIS OCCURRENCE SERVES AS A PLACEHOLDER.

Ecological:
ALLOTYPES AND PARATYPES COLLECTED IN 1921 COMPOSED OF 2 MALES AND 2 FEMALES (USNM #24678); COLLECTED ON ELDERBERRY.

Threats:
General:
ALLOTYPE/PARATYPES COLLECTED MAY-JUN 1921. INDIVIDUAL BEETLES COLLECTED ON 2 MAY 1926, 17 MAY 1944, 21 MAY 1944 (4 COLLECTED), 1 JUN 1948, AND 6 MAY 1949. COLLECTIONS HELD AT UC BERKELEY ESSIG MUSEUM OF ENTOMOLOGY ID# EMEC61120-61127.

PLSS: T08N, R04E, Sec. 02 (M)	Accuracy: 1 mile	Area (acres): 0
UTM: Zone-10 N4269963 E630188	Latitude/Longitude: 38.56859 / -121.50559	Elevation (feet): 15

County Summary: Sacramento, Yolo	Quad Summary: Sacramento East (3812154), Sacramento West (3812155)
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Occurrence Report
California Department of Fish and Wildlife
California Natural Diversity Database



Sources:

FIS21A0001	FISHER, W. - A NEW CERAMBYCID BEETLE FROM CALIFORNIA. PROCEEDINGS OF THE ENTOMOLOGICAL SOCIETY OF WASHINGTON, 23:2006-2008 (1921) 1921-12-XX
HAM44S0001	HAMSHER, C.A. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61127 COLLECTED AT "SACRAMENTO" 1944-05-17
MCC44S0001	MCCLAY, A.T. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61122 COLLECTED AT "SACRAMENTO" 1944-05-21
MCC44S0002	MCCLAY, A.T. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61123 COLLECTED AT "SACRAMENTO" 1944-05-21
MCC44S0003	MCCLAY, A.T. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61124 COLLECTED AT "SACRAMENTO" 1944-05-21
MCC44S0004	MCCLAY, A.T. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61126 COLLECTED AT "SACRAMENTO" 1944-05-21
MCC48S0001	MCCLAY, A.T. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61121 COLLECTED AT "SACRAMENTO" 1948-06-01
MCC49S0001	MCCLAY, A.T. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61120 COLLECTED AT "SACRAMENTO" 1949-05-06
THO21S0001	THOMPSON, B. (U.S. NATIONAL MUSEUM OF NATURAL HISTORY) - USNM ENTOMOLOGY 24678 COLLECTED IN SACRAMENTO 1921-05-03
WIL26S0001	WILSON, C.C. (UNIVERSITY OF CALIFORNIA, BERKELEY) - ESSIG MUSEUM OF ENTOMOLOGY #EMEC61125 COLLECTED AT "SACRAMENTO" 1926-05-02

IPaC resource list

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

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

Location

Sacramento County, California



Local offices

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

San Francisco Bay-Delta Fish And Wildlife

 (916) 930-5603

 (916) 930-5654

650 Capitol Mall
Suite 8-300
Sacramento, CA 95814

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

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

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

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

Birds

NAME

STATUS

Least Bell's Vireo *Vireo bellii pusillus*

Endangered

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/5945>

Reptiles

NAME

STATUS

Giant Garter Snake *Thamnophis gigas*

Threatened

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/4482>

Amphibians

NAME

STATUS

California Red-legged Frog *Rana draytonii*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2891>

California Tiger Salamander *Ambystoma californiense*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/2076>

Fishes

NAME

STATUS

Delta Smelt *Hypomesus transpacificus*

Threatened

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/321>

Insects

NAME

STATUS

Valley Elderberry Longhorn Beetle *Desmocerus californicus*

Threatened

dimorphus

There is **final** critical habitat for this species. Your location is outside the critical habitat.

<https://ecos.fws.gov/ecp/species/7850>

Crustaceans

NAME

STATUS

Vernal Pool Fairy Shrimp *Branchinecta lynchi* Threatened
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/498>

Vernal Pool Tadpole Shrimp *Lepidurus packardii* Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
<https://ecos.fws.gov/ecp/species/2246>

Critical habitats

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

THERE ARE NO CRITICAL HABITATS AT THIS LOCATION.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

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

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

Additional information can be found using the following links:

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

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip:

enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

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

NAME	BREEDING SEASON (IF A BREEDING SEASON IS INDICATED FOR A BIRD ON YOUR LIST, THE BIRD MAY BREED IN YOUR PROJECT AREA SOMETIME WITHIN THE TIMEFRAME SPECIFIED, WHICH IS A VERY LIBERAL ESTIMATE OF THE DATES INSIDE WHICH THE BIRD BREEDS ACROSS ITS ENTIRE RANGE. "BREEDS ELSEWHERE" INDICATES THAT THE BIRD DOES NOT LIKELY BREED IN YOUR PROJECT AREA.)
<p>Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.</p>	Breeds Jan 1 to Dec 31
<p>Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084</p>	Breeds May 20 to Jul 31
<p>Lawrence's Goldfinch <i>Carduelis lawrencei</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9464</p>	Breeds Mar 20 to Sep 20
<p>Long-billed Curlew <i>Numenius americanus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/5511</p>	Breeds elsewhere
<p>Nuttall's Woodpecker <i>Picoides nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410</p>	Breeds Apr 1 to Jul 20

<p>Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656</p>	Breeds Mar 15 to Jul 15
<p>Rufous Hummingbird <i>selasphorus rufus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/8002</p>	Breeds elsewhere
<p>Song Sparrow <i>Melospiza melodia</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA</p>	Breeds Feb 20 to Sep 5
<p>Spotted Towhee <i>Pipilo maculatus clementae</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/4243</p>	Breeds Apr 15 to Jul 20
<p>Tricolored Blackbird <i>Agelaius tricolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3910</p>	Breeds Mar 15 to Aug 10
<p>Whimbrel <i>Numenius phaeopus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9483</p>	Breeds elsewhere
<p>Yellow-billed Magpie <i>Pica nuttalli</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9726</p>	Breeds Apr 1 to Jul 31

Probability of Presence Summary

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

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be

used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

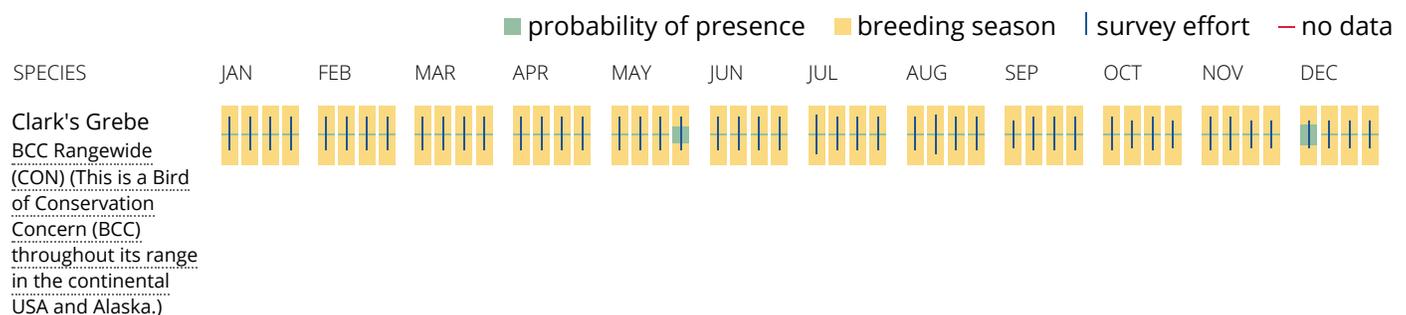
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

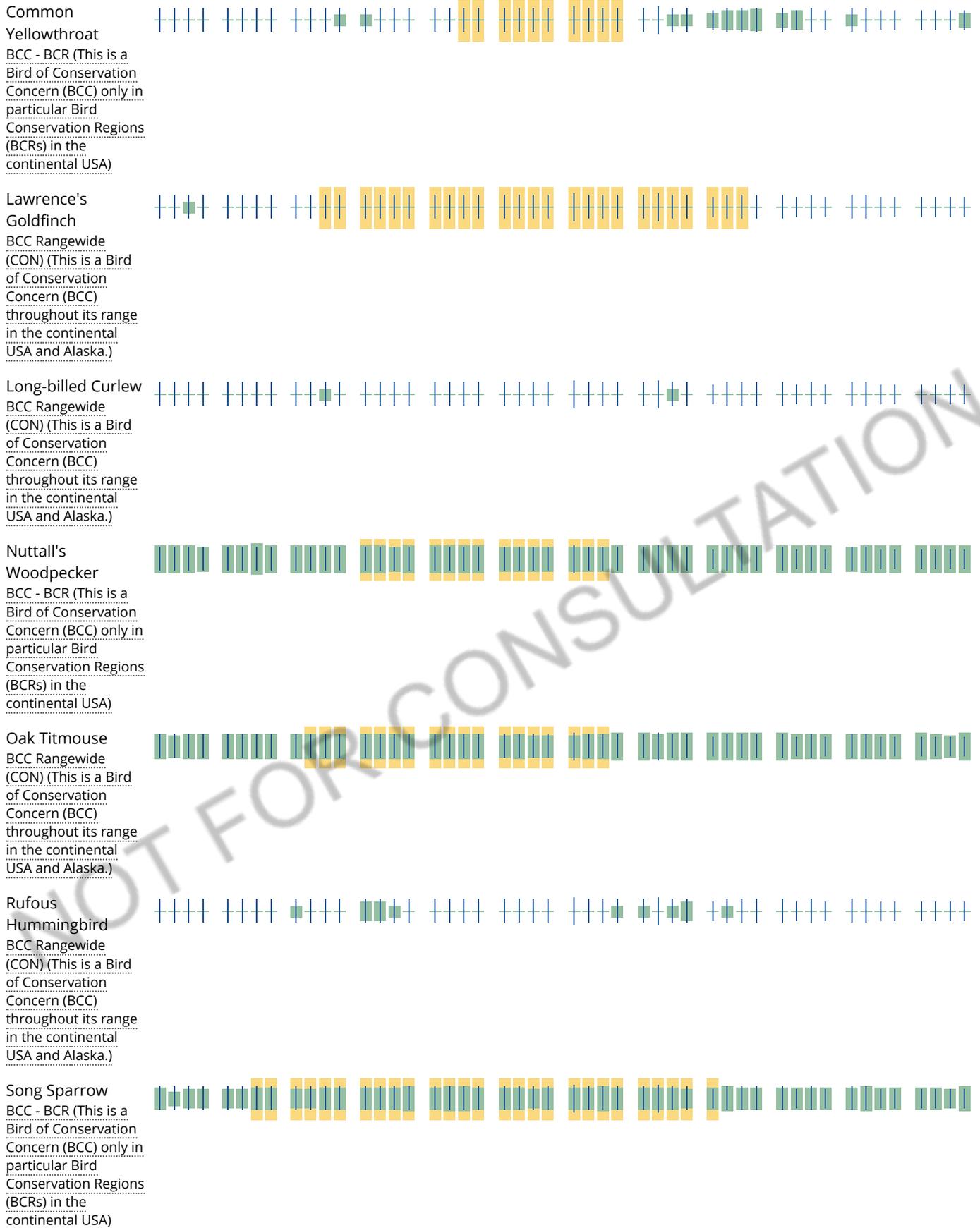
No Data (—)

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

Survey Timeframe

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







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

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

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

Facilities

National Wildlife Refuge lands

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

THERE ARE NO REFUGE LANDS AT THIS LOCATION.

Fish hatcheries

THERE ARE NO FISH HATCHERIES AT THIS LOCATION.

Wetlands in the National Wetlands Inventory

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

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

THERE ARE NO KNOWN WETLANDS AT THIS LOCATION.

Data limitations

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

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

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

Data exclusions

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

Data precautions

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



**PROGRAMMATIC AGREEMENT
BETWEEN
THE SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY,
THE CITY OF SACRAMENTO, POWERHOUSE SCIENCE CENTER,
THE UNITED STATES ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT,
AND THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER
REGARDING THE
REHABILITATION AND REUSE OF THE PG&E POWERHOUSE
AT 400 JIBBOOM STREET, SACRAMENTO, CALIFORNIA**

WHEREAS, the Powerhouse Science Center (Center), under a lease with the City of Sacramento (City), proposes to develop the Powerhouse Science Center Project (undertaking), at 400 Jibboom Street, Sacramento, California. The undertaking consists of the rehabilitation of the existing historic PG&E Powerhouse building, and the addition of new buildings, a parking garage, and other improvements to the site to develop a science education center and planetarium; and

WHEREAS, the United States Department of Housing and Urban Development (HUD) has released Community Development Block Grant (CDBG) funds to the Sacramento Housing and Redevelopment Agency (SHRA) and in order to receive the CDBG funds, SHRA, as the Responsible Entity designated by HUD under 24 CFR 58 Subpart A, is required to assume the responsibilities of the Federal Lead Agency; and

WHEREAS, the United States Army Corps of Engineers, Sacramento District (USACE) is processing a permit pursuant to Section 404 of the Clean Water Act to the Center for the Powerhouse Science Center Project, and has designated the SHRA, acting on behalf of HUD, as Lead Federal Agency; and

WHEREAS, the SHRA through Title I of the Housing and Community Development Act of 1974 (P.L. 93-383), as amended, for the Community Development Block Grant, will be the responsible entity in the undertaking; and

WHEREAS, the SHRA has determined that the undertaking will have an effect on the PG&E Powerhouse, which was listed in the National Register of Historic Places (NHRP) on September 23, 2010. SHRA has consulted with the California State Historic Preservation Officer (SHPO) pursuant to 36 CFR Part 800, the regulations implementing Section 106 of the National Historic Preservation Act (16 U.S.C. §470f), as amended (Section 106); and

WHEREAS, the City and the Center have participated in the Section 106 consultation and have been invited to be signatories in this Programmatic Agreement (Agreement); and

WHEREAS, the City is a Certified Local Government pursuant to Section 101(c)(1) of the National Historic Preservation Act (16 U.S.C. 470a(c)); and

WHEREAS, in accordance with the 36 CFR §800.6(a)(1), SHRA has notified the Advisory Council on Historic Preservation (ACHP) of the undertaking with specific documentation, and the ACHP has chosen not to participate in consultation pursuant to 36 CFR §800.6(a)(1)(a)(iii); and

NOW, THEREFORE, the SHRA, the USACE, and the SHPO agree that the undertaking shall be implemented in accordance with the following stipulations in order to take into account the effect of the undertaking on historic properties.

STIPULATIONS

SHRA, in coordination with the City, will ensure that the following measures are carried out:

1. The design of the undertaking shall be compatible with the historic and architectural qualities of the PG&E Powerhouse and shall be consistent with the recommended approaches for rehabilitation set forth in *The Secretary of the Interior's Standards for the Treatment of Historic Properties (Standards)* (U.S. Department of the Interior, National Park Service, 1992) and that the design and specifications for the project are developed in consultation with the SHPO and submitted to the SHPO for approval. If the Center applies for Part 2 Certification of the Investment Tax Credit Program pursuant to Part 48(g) of the Internal Revenue Code of 1986 (IRC) for the undertaking, and implements the provisions of stipulation 2, below, consultation with the SHPO about the design and specifications, pursuant to this stipulation, shall not be required.
2. For purposes of this PA, the review of the rehabilitation plans and specifications shall be undertaken within the context of the IRC if the Center submits a Part 2 Certification to the National Park Service (NPS). If the rehabilitation project receives Part 2 Certification without conditions from the NPS, it shall be deemed to conform to the *Standards* and will require no further review under this Agreement. SHRA shall ensure that the SHPO will be provided with a copy of the notice of the Part 2 Certification. If the Part 2 Certification is approved with conditions, SHRA, in coordination with the City, shall ensure that the Center's project documents are modified to comply with the conditions. If the SHPO agrees that the modified plans satisfy the Part 2 conditions, the rehabilitation project will require no further review under this PA. If the Center is denied Part 2 Certification or is unwilling to modify the plans to comply with any conditions to certification, SHRA shall initiate consultation with the SHPO pursuant to 36 CFR §§ 800.6(b)(2) or 800.7, as appropriate.
3. If SHRA, in coordination with the City, is unable to ensure the development of a design that is compatible with the *Standards*, prior to the alteration of the PG&E Powerhouse, SHRA shall consult with the SHPO to determine the level and kind of recordation that is required for the property. Unless otherwise agreed to by the SHPO, SHRA, in coordination with the City, shall ensure that all required documentation is completed and accepted by the SHPO prior to alteration of the PG&E Powerhouse, and that copies are made available to the SHPO and the North Central Information Center at California State University, Sacramento.
4. SHRA, in coordination with the City, will require that the work described above will be carried out by or under the direct supervision of a person(s) who meets the appropriate Professional Qualification Standards outlined in the *Secretary of the Interior's Professional Qualification Standards* (48 Federal Register 44738-39).
5. Should any signatory object at any time to the matter in which the terms of this Agreement are implemented, SHRA shall consult with the objecting party(ies) to resolve the objection. If SHRA determines within fifteen days of receipt that such objection(s) cannot be resolved, SHRA will forward all documentation relevant to the dispute to the Advisory Council on Historic Preservation (ACHP) in accordance with 36 CFR § 800.2(b)(2). SHRA, in reaching a final decision regarding the dispute, shall take any ACHP comment provided into account. It is SHRA's responsibility to carry out all other

actions under this Agreement that are not the subject of the dispute and will remain unchanged.

6. At any time during implementation of the measures stipulated in this Agreement, should an objection to any such measure or its manner of implementation be raised in writing by a member of the public, SHRA shall take the objection into account and consult, as needed, with the objecting party and the SHPO, for a period of time not to exceed fifteen days. If SHRA is unable to resolve the conflict, SHRA will forward all documentation relevant to the dispute to the ACHP, following the terms outlined in stipulation 5, above.
7. SHRA shall notify the SHPO as soon as practicable if it appears that any action covered by this Agreement will affect a previously unidentified property that may be eligible for inclusion in the National Register or affect a known historic property in an unanticipated manner. SHRA shall ensure that construction is stopped in the vicinity of the discovery and take all reasonable measures to avoid or minimize harm to the property and proceed pursuant to 36 CFR § 800.13(b).
8. If any signatory believes that the terms of this Agreement cannot be carried out, or that an amendment to its terms should be made, that signatory shall immediately consult with the other parties to develop amendments pursuant to 36 CFR §§ 800.6(c)(7) and 800.6(c)(8). If this Agreement is not amended as provided for in this stipulation, any signatory may terminate it, whereupon SHRA shall proceed in accordance with 36 CFR § 800.6(c)(8).
9. If either the terms of this Agreement or the undertaking have not been carried out within five years following the date of execution of the Agreement, the signatories shall reconsider its terms. If the signatories agree to amend the Agreement, they shall proceed in accordance with the amendment process referenced in stipulation 8, above.

EXECUTION and implementation of this Agreement by the Center, the City, the USACE, the SHRA and the SHPO, its filing with the ACHP in accordance with 36 CFR §800.6(b)(1)(iv), and subsequent implementation of its terms, shall evidence, pursuant to 36CFR§800.6(c), that this Agreement is an agreement with the ACHP for purposes of Section 110(l) of the NHPA (16 U.S.C. 470h-2(l)), and shall further evidence that the USACE and SHRA have afforded the ACHP a reasonable opportunity to comment on the undertaking and its effects on historic properties, that SHRA has taken into account the effects of the undertaking on historic properties, and that SHRA has satisfied its responsibilities under Section 106 and applicable implementing regulations.

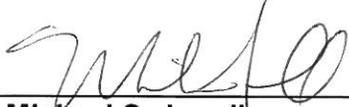
EXECUTION of this Agreement also evidences that the City and the Center shall comply with the terms of this Agreement with regard to development of the undertaking pursuant to the lease of the property between City and Center.

SIGNATORY PARTIES:

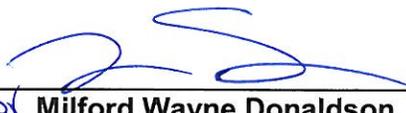
SACRAMENTO HOUSING AND REDEVELOPMENT AGENCY

By:  Date: 12/12/11
Title: **Executive Director**

UNITED STATES ARMY CORPS OF ENGINEERS, SACRAMENTO DISTRICT

By:  Date: 12/14/11
Title: **Chief, Regulatory Division**

CALIFORNIA STATE HISTORIC PRESERVATION OFFICER

By:  Date: 11/8/12
Title: **State Historic Preservation Officer**

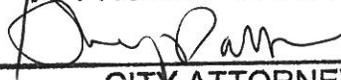
INVITED SIGNATORY PARTIES:

CITY OF SACRAMENTO

By:  Date: 12/24/11

Printed Name: James R. Rinehart
Title: Economic Development Director

APPROVED AS TO FORM:


CITY ATTORNEY

POWERHOUSE SCIENCE CENTER

By:  Date: 12/15/11
Title: **Executive Director**

Attest on: 1-10-12 (date)


Dawn Bullwinkel, Assistant City Clerk