LOWER CRYSTAL SPRINGS DAM IMPROVEMENT PROJECT

Historic Properties Treatment Plan

U.S. Army Corps of Engineers, San Francisco District
File No. 30317S

Prepared for
San Francisco Public Utilities Commission

December 2010

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a joint venture

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1. Introduction and Purpose

On October 15, 2010, the San Francisco Public Utilities Commission (SFPUC) approved implementation of the Lower Crystal Springs Dam Improvements (LCSDI) project (SFPUC Resolution No. 10-0175). The LCSDI project will modify various features of the Lower Crystal Springs Dam (LCSD) to comply with requirements of the California Department of Water Resources, Division of Safety of Dams (DSOD). The primary alterations at the top of the dam include raising the parapet wall, widening the spillway, and reshaping the spillway crest. At the toe of the dam, the existing stilling basin will be demolished and replaced with a larger stilling basin. Downstream of the stilling basin, riprap grouted with concrete will be installed within the creek channel to protect the dam abutments and creek banks from erosion. Upon completion of construction, the SFPUC will raise the maximum operating level of the reservoir from the current DSOD-permitted water level elevation of 283.8 feet[1] to a normal maximum elevation of 287.8 feet, with an occasional increase in elevation up to 291.8 feet, the historical maximum elevation of the reservoir. This Historic Properties Treatment Plan (HPTP) sets forth the actions that will be taken in order to resolve direct adverse effects to the LCSD during project construction and operation.

The project is located in an unincorporated area of San Mateo County on lands owned by the City and County of San Francisco (CCSF). The project will improve reliability of the SFPUC's water supply system which serves customers in San Francisco and San Mateo Counties.

For this analysis, the Area of Potential Effect (APE) includes the LCSD, the construction and staging areas at the top and toe of the dam, the shoreline band around the perimeter of Crystal Springs Reservoir (from the current DSOD-restricted water levels to the post-project maximum water level elevation of 291.8 feet), plus a 50-foot buffer around the reservoir.

Implementation of the LCSDI project is subject to a Clean Water Act, Section 404 permit from the U.S. Army Corps of Engineers (USACE), and under this permit the project is also required to comply with federal environmental laws, including Section 106 of the National Historic Preservation Act of 1966 (NHPA), as amended. Consultation between USACE and the California State Historic Preservation Officer (SHPO) has determined that the project will result in adverse effect to one historic property previously determined eligible to the National Register of Historic Places (NRHP): the LCSD. One other historic property, the South Crystal Springs Cottage, has also been determined eligible to the NRHP and may be indirectly affected by the operation of the LCSDI project. Five other historic-period features such as roads and culverts located within the APE have been determined ineligible for the NRHP. SHPO concurred with the UCACE that one previously recorded archaeological resource (CA-SMO-126) does not exist within the APE. These findings are further described in this report.

This HPTP sets forth the actions that the SFPUC will institute in order to resolve direct adverse effects to the historic dam that will occur through construction of the LCSDI project, and to avoid

[1] Elevations are relative to the National Geodetic Vertical Datum of 1929.

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potential indirect effects to the South Crystal Springs Cottage through operation of the LCSDI project. The HPTP also describes the course of action to be taken in the event of an unanticipated discovery of additional cultural resources, including treatment of human remains. The treatment plan is designed to ensure that project effects to significant cultural resources are avoided or mitigated. This HPTP provides project background information, describes the NRHP-eligible historic properties, presents treatment measures, and outlines a timetable for the completion of these measures. The SFPUC will be responsible for completion of all measures described in this HPTP.

2. Setting

The LCSD is located on San Mateo Creek in unincorporated San Mateo County, about 12 miles south of San Francisco and three miles west of the city of San Mateo. The LCSD forms Lower Crystal Springs Reservoir, which is contiguous and hydraulically connected to Upper Crystal Springs Reservoir. Upper and Lower Crystal Springs Reservoirs occupy a valley in the San Andreas Rift Zone of the Coast Ranges between Sawyer and Cahill Ridges on the west and Buri Buri and Pulgas Ridges on the east, and west of Interstate 280. Crystal Springs Reservoir (upper and lower reservoirs combined) has a surface area of about 1,300 acres when the water level is at an elevation of 283.8 feet.

The APE is within the traditional territory of the Costanoan people, also referred to as Ohlone, Mutsun, and Rumsun (Levy, 1978:485–495). The Costanoan occupied a large territory from San Francisco Bay in the north to the Big Sur and Salinas Rivers in the south. Their territory encompassed both coastal and open valley environments that contained a wide variety of resources, including grass seeds, acorns, bulbs and tubers, bear, deer, elk, antelope, a variety of bird species, marine resources, and small mammals. The Costanoan acknowledged private ownership of goods and songs, and village ownership of rights to land and/or natural resources; they appear to have aggressively protected their village territories, requiring monetary payment for access rights in the form of clamshell beads, and even shooting trespassers if caught. After European contact, Costanoan society was severely disrupted by missionization, disease, and displacement. The APE is in the greater *Ramaytush* language area (Levy, 1978:485).

In historic times, the valley that now holds Crystal Springs Reservoir experienced a rapid transition from wilderness used by local Native American tribes, to ranching and agriculture, and then to use as a municipal water storage facility. In the wake of Mexican independence in 1822, the government began issuing large land grants on former Mission lands in many parts of California. The process accelerated after 1833, when the former mission lands were secularized and seized by the government. The vicinity of the APE forms the intersection between five such grants: Ranchos Feliz and Cañada Raymundo to the west, and Ranchos San Mateo, Buri Buri, and Las Pulgas to the east.

The Gold Rush of 1849 brought thousands of Anglo-American immigrants into the Bay Area. Many who did not find success in the gold fields decided to appropriate what they saw as empty land on ranchos around the Bay. On Rancho de las Pulgas, for instance, at least 23 squatters were

occupying land in 1853. From the 1850s to 1887, when construction of the LCSD began, the Crystal Springs Valley and its surroundings contained a community of farmers, loggers, and tradesmen, as well as the summer homes of wealthy urbanites. Land use in the APE and vicinity during the 1850s and 1860s was characterized by logging on the surrounding hills, and farming, transportation, and recreation in the valleys.

By the mid-1860s, the Spring Valley Water Company had begun to acquire land on a large scale, a development that would soon replace the residential character of the valley with large reservoirs. By the mid-1870s, the company had acquired enough land to begin construction of the Upper Crystal Springs Dam, which was known as the "Laguna Dam" in the local press at the time. Designed by Hermann Schussler, the German engineer who also supervised construction of earlier dams for Spring Valley, the UCSD was 70 feet high and 520 feet wide when completed in 1876.

Continuing growth in San Francisco's demand for water led engineer Schussler to design a second dam in the valley, this one to stretch across San Mateo Creek at the point where it turned east and flowed down out of the Crystal Springs/San Andreas Valley. The LCSD was architecturally innovative and marked a high point in Schussler's career. At 145 feet in height when completed in 1890, the LCSD was the largest concrete dam in the United States at the time, impounding 22 billion gallons of water over 1,483 acres (Shoup, 1989). By 1911, the need for increased water storage led to the construction of a 9-foot-tall parapet on the top of the dam, which brought the total height of the structure to its present height of 154 feet.

A number of cottages for Spring Valley Water Company employees were also constructed in the 1880s and 1890s, including Lower Crystal Springs Cottage (constructed in 1898), just north of the LCSD, Upper Crystal Springs Cottage (constructed in 1886), west of the UCSD, and the South Crystal Springs Cottage (constructed in 1891), on the east shore of Upper Crystal Springs Reservoir. Of these, only the South Crystal Springs Cottage is in the APE. The others were replaced in the 1950s, and these newer facilities are of outside the APE.

In 1930, the CCSF purchased Spring Valley Water Company's watershed lands and soon placed them under the administration of the newly formed San Francisco Water Department (which later became a part of the SFPUC). Crystal Springs Reservoir was selected to be the terminus of the pipeline system that brought water from the Sierra Nevada across the Central Valley and under San Francisco Bay. The first Hetch Hetchy water began flowing into Crystal Springs Reservoir on October 24, 1934 (Babal, 1990:42). Since 1938, the lands covered by the APE have been operated by the SFPUC as a reservoir site and surrounding watershed. Only minor changes in land use have occurred within the APE, predominantly associated with the SFPUC's management and operation of its water facilities.

Since the 1940s, interior and eastern San Mateo County has been transformed from a rural and agricultural region to a series of urban/suburban communities. The APE is located within the CCSF-owned 23,000-acre Peninsula watershed lands, which are managed by the SFPUC; these lands form the largest open space area for the communities along the San Francisco Peninsula.

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The APE is also at the nexus of two major transportation corridors: Highway 92 has become a major route for commuters from the coastal communities, while Interstate 280 forms one of the most important north-south transportation routes between San Francisco and the South Bay.

3. Previous Studies

The principal source of information for the LSCDI project is the *Historic and Archaeological Resource Inventory Report for the Lower Crystal Springs Dam Improvements Project* (ENTRIX/MSE JV, 2009). This report presents the results of extensive historic and archaeological surveys, together with the methods used and level of effort expended. Research for the LCSDI project also included review of other SFPUC reports prepared in support of various Water System Improvement Program (WSIP) facility improvement projects that are located within the APE. These include the following:

- *Final Crystal Springs/San Andreas Transmission Upgrade Project Archaeological Survey and Architectural Inventory and Evaluation Report for CEQA Compliance* (Jones and Stokes, September 2009).
- *Final Historic Resources Inventory for the San Francisco Public Utilities Commission Crystal Springs Pipeline No. 2 Replacement Project* (Circa Historic Property Development, March 2009).
- *Historic Resources Study for the Pulgas Discharge Channel Improvements Project* (Carey & Co., 2007).

As a result of these studies, seven historic cultural resources were identified within the APE. These include the LCSD, the South Crystal Springs Cottage, the Upper Crystal Springs Dam, the Pulgas Discharge Channel, a segment of the 1859 San Mateo-Crystal Springs Road, two segments of the 1883 San Mateo-Half Moon Bay Toll Road, and a single-gate concrete culvert under the San Mateo-Half Moon Bay Toll Road. One previously recorded prehistoric archaeological resource, CA-SMO-126, was also reported to be within the APE.

4. Determinations of Eligibility

The following NRHP eligibility summary is derived from the SHPO's concurrence letter sent to the USACE specifically for the LCSDI project, dated October 7, 2010.

The LCSD has been previously determined eligible for the NRHP under criteria A and C by Section 106 consensus (1989). The USACE has determined that South Crystal Springs Cottage is eligible for the NRHP under criterion A, and the SHPO has concurred with this determination.

The five additional historic architectural properties (the Upper Crystal Springs Dam, Pulgas Discharge Channel, one segment within the APE of the San Mateo to Crystal Springs Road, two segments within the APE of the San Mateo to Half Moon Bay Toll Road, and the single-gate concrete culvert beneath San Mateo to Half Moon Bay Toll Road) have been determined ineligible for the NRHP under any criteria, and the SHPO has concurred with this determination.

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After extensive relocation efforts failed to find evidence of prehistoric archaeological site CA-SMO-126, SHPO agreed that the site is not located within the APE. A determination of NRHP eligibility cannot be made for the site at this time.

5. Determination of Adverse Effects

Lower Crystal Springs Dam

Pursuant to 36 CFR Part 800.5(d)(2), SHPO concurred that of the NRHP-eligible historic properties, only the LCSD will be directly adversely affected by this undertaking.

In order to meet the LCSDI project objectives, the project requires substantial alteration of a number of the character-defining features that contribute to the historical significance of the LCSD. As mandated by the DSOD, the spillway design must accommodate the flow from the Probable Maximum Flood, which is more than five times larger than the flow for which the dam is currently designed. To meet these flow requirements, the parapet wall must be raised by 9 feet (from elevation 293 to 302 feet) and widened by about 120 feet (from 88 to about 208 feet); these alterations cannot be done without substantially modifying the appearance of the dam. Other design changes to the dam mandated by the DSOD flow requirements and affecting the appearance of the dam are: two new spillway bays that will be built on either side of the existing spillway; a new, curved concrete crest built on the spillway to permanently maintain the dam crest at an elevation of 291.8 feet; partial removal of the central part of the existing parapet wall (60 feet on each side of the existing spillway) to allow spillway expansion; demolition of the existing training walls and the supporting structure for the stoplogs; and installation of drainage improvements at the top of the dam to prevent ponding. In addition, the LCSDI project will replace the existing stilling basin at the downstream toe of the dam with a new stilling basin more than five times larger and including a 10.5-foot-thick concrete floor and concrete side walls that are 32.5 feet high; these DSOD-required modifications to the stilling basin needed to protect the dam's structural integrity from flow from the Probable Maximum Flood will contribute to the substantial alteration of the physical appearance of the LCSD. Any structural improvements to the LCSD that are required to comply with DSOD requirements, regardless of the specific design, will modify the historical characteristics of the dam.

The LCSDI project will significantly affect the integrity of the dam's design (new spillway, stilling basin, drainage control measures) as well as its setting (stilling basin), materials and workmanship (new spillway, reconstructed parapet wall, stilling basin, drainage control measures), and feeling and association (all of the above). Therefore, a number of the character-defining features that contribute to the eligibility of this property and convey its historical significance will be substantially altered, diminishing the integrity of the resource. The LCSDI project will result in a substantial adverse change because the project will materially impair the LCSD in a manner that will diminish the characteristics that justify its inclusion in the NRHP.

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South Crystal Springs Cottage

There is a possibility that the South Crystal Springs Cottage may be adversely affected by project operation. Operation of the LCSDI project would raise the maximum normal operating level of Crystal Springs Reservoir by 4 feet (from 283.8 to 287.8 feet) compared to existing operations. In addition, future operations are proposed to include periodic events when the reservoir level could be higher than 287.8 feet (referred to as short-term exceedances); these periodic exceedances are expected to occur two to three times per year and about one year in three, which could raise the water level to as high as 291.8 feet. This maximum water level is within about two feet of the terraced backyard of the historic South Crystal Springs Cottage. If water levels were to reach 291.8 feet in the future under the LCSDI project (even though these occurrences are expected to be infrequent), wave action over time could erode the terrace that supports this historic resource. While there will be no direct effects on the cottage structure itself, rising water levels and associated wave erosion during these short-term exceedances could occur during large storms over the watershed, and the combination of meteorological conditions and the elevated reservoir levels could indirectly endanger the cottage in the future through ground subsidence/soil erosion, which in turn could cause damage to the structure itself. In addition, the cottage is served by a small, ancillary pump house to the northeast that is located below the maximum water elevation that could occur under proposed operations. Damage to the pump house would inhibit use of the cottage and undermine fire safety for the historic cottage due to loss of water pressure/supply.

Inadvertent Discoveries

Although no NRHP-eligible archaeological properties are known to exist within the APE, this HPTP also contains protection and treatment measures in the event of an inadvertent discovery of heretofore unknown cultural resources. No archaeological resources were identified within the LCSD APE, including the dam site. The extended survey conducted in the recorded location of CA-SMA-126 did not uncover any cultural materials. The site either no longer possesses an archaeologically discernible deposit or is inundated by the reservoir, or the previously documented location is outside of the APE. There is, however, a low potential for uncovering unknown archaeological resources, including human remains and funerary objects, during ground-disturbing project construction efforts at the dam site.

Although considered unlikely, increased water levels associated with LCSDI project operation could also expose, and potentially damage, previously unrecorded archaeological resources, including human remains and funerary objects, anywhere along the reservoir shoreline. This occurrence is unlikely because increased water levels under project operations will be within the historical operating range of Crystal Springs Reservoir.

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6. Treatment Plan for Adversely Affected and Potentially Adversely Affected Sites

Lower Crystal Springs Dam

Three measures are available to reduce the severity of the adverse effect to the LCSD. They are: 1) Historic American Engineering Record (HAER) recordation, 2) public interpretation, and 3) a historic resources protection plan. Each of these is described below.

HAER Recordation

The SFPUC shall hire a qualified cultural resources specialist to document the LCSD with a historical narrative and large-format photographs in a manner consistent with HAER protocols. Copies of the narrative and photographs will be distributed to the San Francisco Public Library (Main Branch), branches of the San Mateo County Library system, as well as the San Mateo County Historical Association and San Mateo County History Museum, the History and Heritage Committee for Engineers, the Millbrae Historical Society, the Hillsborough Historical Society, and the Burlingame Historical Society. The preparation of the HAER document will follow standard National Park Service procedures (NPS, 1990).

There will be three main tasks: gather data, prepare photographic documentation, and prepare a written historical and descriptive report. Photographic documentation will include 4- by 5-inch negatives in labeled sleeves, 8- by 10-inch prints mounted on labeled photo cards, and an index to the photographs. Photographs will be taken of the LCSD's character-defining features, including but not limited to the parapet wall, spillway, stilling basin, abutments, an associated outlet structure, as well as the historical setting of the dam. The report will include photographic reproduction of original construction drawings.

Public Interpretation

The SFPUC will also develop interpretive panels for the LCSD. The panels will include a history of the resource and some drawings or photographs depicting the unique design and history of the dam. The panels will also include a brief history of Crystal Springs Valley prior to completion of the dam and reservoir, as well as information about the relationship between the dam and an associated outlet structure. The panels will be displayed at a publicly accessible area near the dam. The objective of the interpretive panels is to increase local and regional public awareness of this historic resource as well as awareness of the SFPUC's efforts to educate citizens about the history of the regional water system.

Historic Resources Protection Plan

The SFPUC has committed to implementing the following actions to minimize accidental damage to the historic dam during project construction:

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1. Protective Fencing (top of dam). The top of the dam is the proposed location for a construction staging area. The SFPUC shall require the construction contractors to install a temporary chain-link fence at the western edge of the top of the dam to prevent materials or equipment from accidentally falling off the top of the dam, and accidentally damaging the sloped, downstream (eastern) face of the dam. The fence will also protect construction workers from accidental falls. The fencing shall be no less than six feet high. The exact type of fence and method of fencing installation shall be determined by the contractor. The fencing shall remain in place for the duration of the construction period.

2. Protective Fencing and Covering (base of dam). The concrete stilling basin at the downstream base of the dam will be demolished and replaced with a larger concrete stilling basin. Although it is unlikely that heavy equipment such as excavators, dump trucks, concrete mixers, or other vehicles will approach the eastern face of the dam due to the steep topography of the area, the SFPUC shall nonetheless require the construction contractors to install a temporary chain-link fence at the base of the downstream (east-facing) façade of the dam to protect it from accidental damage. The fencing shall be no less than six feet high. The exact type of fence and method of fencing installation shall be determined by the contractor. The fencing shall remain in place for the duration of the construction period. As a substantial amount of concrete will be poured in this area to create the stilling basin, the SFPUC shall also require the contractor to install some type of protective covering over the exposed portions of the dam at its base. Similar to the fencing, the exact type of protective covering and method of covering installation shall be determined by the contractor. The covering shall remain in place for the duration of the concrete pour.

3. Explosives Containment. While the exact method of demolition of the stilling basin will be determined by the selected construction contractor, demolition of this feature may necessitate the use of low-velocity explosives to remove hard rock from the construction site. If explosives are used in the removal of hard rock beneath the stilling basin, the SFPUC shall require the construction contractors to install an explosives barrier directly on top of the rock, in the form of dense matting, to prevent fly-away rock from accidentally damaging the downstream (east-facing) façade of the dam. The matting will also protect construction workers from accidental injury. The exact type of barrier/matting and method of installation shall be determined by the selected construction contractor(s).

4. Worker Training. The SFPUC shall require the selected construction contractor(s) to implement a brief educational tutorial for all construction/demolition workers who will be operating at the dam site. The purpose is to inform the workers of the dam's historical importance and to share in the responsibility of protecting the dam from accidental damage during construction. The exact training method shall be determined by the selected construction contractor. At a minimum, however, the written report for the HAER project, described above, should be distributed to all workers prior to initiating construction work at the dam site. The construction foreman should also verbally convey the dam's historical importance to the workers at some point prior to the commencement of construction work (potentially by reading the first page of the HAER report which summarizes the dam's historical importance in one paragraph). This training effort should be coordinated with the *Procedures Addressing Inadvertent Discovery of Archaeological Resources*, described below, which states that, "prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc."

South Crystal Springs Cottage

Potential indirect effects to the South Crystal Springs Cottage from operation of the LCSDI project could adversely affect the integrity of this historic resource. The measure described below identifies further geotechnical studies to be performed, and potentially new structural improvements to be made, to ensure the future stability of this historical resource.

The SFPUC will conduct a geotechnical study to evaluate the structural condition of the existing masonry retaining wall along the western edge of the South Crystal Springs Cottage property. If the study determines that the wall cannot withstand the infrequent and short-term water-level exceedances up to 291.8 feet during large storms over the watershed, the wall shall be relocated a few feet back from the new shoreline edge and extended along the entire terraced edge of the cottage property to prevent soil erosion due to wave action. This effort will eliminate any potential future direct effects on the cottage due to rising water levels in the reservoir. If the study determines that the retaining wall can withstand the infrequent and short-term exceedances of 291.8 feet during large storms over the watershed, no improvements to the wall will be necessary. If implementation of the LCSDI project threatens the functionality of the ancillary pump house, the SFPUC shall relocate the pump house to higher ground to preserve water supply and fire fighting capability for the cottage.

Procedures Addressing Inadvertent Discovery of Archaeological Resources

To avoid any potential adverse project effects from the accidental discovery of buried or submerged historic resources, as defined in CEQA Guidelines Section 15064.5(a)(c), the SFPUC shall distribute the San Francisco Planning Department's archaeological resource "ALERT"[2] sheet to the project's prime contractor; any project subcontractor firms (including demolition, excavation, grading, foundation, pile driving, etc.); and/or utilities firm involved in soil-disturbing activities within the project site. Prior to any soil-disturbing activities, each contractor shall be responsible for ensuring that the ALERT sheet is circulated to all field personnel, including machine operators, field crew, pile drivers, supervisory personnel, etc. The SFPUC shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractors, and utilities firm) confirming that all field personnel have received copies of the ALERT sheet.

If the ERO determines that an archaeological resource may be present within the project site, the SFPUC shall retain the services of a qualified archaeological consultant. The archaeological

[2] The ALERT sheet states that in the event of discovery of the following cultural materials, all work must be stopped in the area and the Environmental Review Officer contacted to evaluate the find: concentrations of shellfish remains; evidence of fire (ashes, charcoal, burnt earth, fire-cracked rocks); concentrations of bones; recognizable Native American artifacts (arrowheads, shell beads, stone mortars [bowls], humanly shaped rock); building foundation remains; trash pits, privies (outhouse holes); floor remains; wells; concentrations of bottles, broken dishes, shoes, buttons, cut animal bones, hardware, household items, barrels, etc.; thick layers of burned building debris (charcoal, nails, fused glass, burned plaster, burned dishes, etc.); wood structural remains (building, ship, wharf, etc.); clay roof/floor tiles; stone walls or footings; or gravestones.

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consultant shall advise the ERO as to whether the discovery is an archaeological resource that retains sufficient integrity and is of potential scientific/historical/cultural significance. If an archaeological resource is present, the archaeological consultant shall identify and evaluate the archaeological resource. The archaeological consultant shall make a recommendation as to what action, if any, is warranted. Based on this information, the ERO may require, if warranted, specific additional measures to be implemented by the SFPUC. These measures might include: preservation in-situ of the archaeological resource; an archaeological monitoring program; or an archaeological evaluation program. If an archaeological monitoring program or archaeological testing program is required, it shall be consistent with the WSIP Archaeological Guidance (MEA, 2008) for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archaeological resource is at risk from vandalism, looting, or other damaging actions.

The project archaeological consultant shall submit an accidental discovery archaeological data recovery report (ADRR) to the ERO which, in addition to the usual contents of the ADRR, shall include: (1) an evaluation of the historical significance of any discovered archaeological resource; (2) a description of the archaeological and historical research methods employed in the archaeological monitoring/data recovery program(s) undertaken; and (3) a presentation, analysis, and interpretation of the recovered data. Information that may put at risk any archaeological resource shall be provided in a separate removable insert within the final report.

Once approved by the ERO, copies of the ADRR shall be distributed as follows: the relevant California Historical Resources Information System Information Center shall receive one copy, and the ERO shall receive a copy of the transmittal letter of the ADRR to the Information Center. The San Francisco Planning Department, Major Environmental Analysis Division shall receive three copies of the ADRR along with copies of any formal site recordation forms (California Department of Parks and Recreation Form 523 series) and/or documentation for nomination to the NRHP/CRHR. The SFPUC shall receive copies of the ADRR in the number requested. In instances of high public interest in or the high interpretive value of the resource, the ERO may require a different final report content, format, and distribution than that presented above.

Procedures Addressing Inadvertent Discovery of Human Remains

The treatment of human remains and associated or unassociated funerary objects discovered during any soil-disturbing activity shall comply with applicable state law (CA Health and Safety Code Section 7050.5). State law also requires immediate notification of the coroner of the county within which the project is located and, in the event of the coroner's determination that the human remains are Native American, notification of the California Native American Heritage Commission (NAHC), which would appoint a Most Likely Descendent (MLD) (PRC Section 5097.98). The MLD would make all reasonable efforts to develop an agreement for the treatment, with appropriate dignity, of human remains and associated or unassociated funerary objects (CEQA Guidelines Section 15064.5[d]). The agreement shall take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final

disposition of the human remains and associated or unassociated funerary objects. The Public Resource Code (PRC) allows 48 hours to reach agreement on these matters. If the MLD and the other parties do not agree on the treatment and disposition of the remains and funerary objects, the landowner shall follow PRC Section 5097.98(b), which states that "the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance."

7. Completion Timeline and Responsibilities

The treatment measures described above shall be completed by the SFPUC or its selected contractor(s) under the following timeline.

Treatment	Timeline	Responsibility
HAER Recordation	*Completion prior to construction, which is scheduled to begin in March, 2011*	SFPUC Bureau of Environmental Management (BEM)
Public Interpretation Panels	*Completion by Fall 2013, or upon completion of project construction, whichever is sooner*	SFPUC BEM
Historic Resources Protection Plan	*Completion prior to commencement of construction, which is scheduled to begin in March, 2011*	SFPUC BEM and Selected Contractor(s)
South Crystal Springs Cottage Geotechnical Investigation	*Completion by Fall 2013, or upon completion of project construction, whichever is sooner*	SFPUC BEM
Inadvertent Discoveries	*Ongoing throughout construction and operation*	SFPUC BEM and Construction Management Team

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