

MITIGATION MONITORING AND REPORTING PROGRAM FOR BIOSOLIDS DIGESTER FACILITIES PROJECT				
MEASURES ADOPTED AS CONDITIONS OF APPROVAL	Implementation Responsibility	Mitigation Schedule	Monitoring/Reporting Responsibility	Monitoring Actions/Schedule and Verification of Compliance
MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT				
Cultural Resources (Historic Resources) Mitigation Measures				
<i>Applicable to Central Shops site</i> Mitigation Measure M-CR-1. Documentation of Historic Resources and Interpretive Display Prior to demolition, the SFPUC shall retain a professional who meets the Secretary of the Interior’s Professional Qualifications Standards for Architectural History to prepare written and photographic documentation of the Central Shops. The documentation effort shall be based on the National Park Service (NPS) Historic American Building Survey (HABS)/Historic American Engineering Record (HAER) Historical Report Level II Guidelines, and NPS’s policy for photographic documentation as outlined in the National Register of Historic Places and National Historic Landmarks Survey Photo Policy Expansion. The written historical data for this documentation shall follow HABS/HAER standards. Efforts shall be made to locate original construction drawings or plans of the Central Shops. If located, these drawings shall be reproduced and included in the dataset. Historical information, as well as copies of building plans gathered from the prior evaluations of the SEP and Central Shops, can be reused and reformatted for this effort. Digital photography shall be used. The ink and paper combinations for printing photographs shall be in compliance with National Register-National Historic Landmark (NR-NHL) Photo Policy Expansion¹ and have a permanency rating of approximately 115 years. Digital photographs shall be taken as uncompressed, Tagged Image File Format (TIFF) files. Each image shall be 1,600 by 1,200 pixels at 330 pixels per inch (ppi) or larger in size, color format, and printed in black and white. The file name for each electronic image shall correspond with the index of photographs and photograph label. Photograph views for the dataset shall include (a) contextual views; (b) views of each side of each building and interior views, where possible; (c) oblique views of buildings; and (d) detail views of character-defining features. All views shall be referenced on a photographic key. This photographic key shall be on a map of the property and shall show the photograph number with an arrow to indicate the direction of the view. Historic photographs shall also be collected, reproduced, and included in the dataset. The SFPUC shall transmit the datasets as hardcopies on archival paper and in electronic PDF format to the History Room of the San Francisco Public Library, the San Francisco Planning Department, the archives of the San Francisco Public Utilities Commission, and to the Northwest Information Center of the California Historical Information Resource System. The SFPUC shall scope the documentation measures with San Francisco Planning Department Preservation staff. Preservation staff shall also review and approve the submitted documentation for adequacy. In addition, the SFPUC shall provide a permanent display of interpretive materials (which may include, but are not limited to, a display of photographs, a brochure, educational website or an exhibitive display) concerning the history and architectural features of the Central Shops. Development of the interpretive materials shall be supervised by an architectural historian or historian who meets the Secretary of the Interior’s Professional Qualification Standards. The interpretative materials shall be placed in a prominent, public setting. A proposal describing the general parameters of the interpretive materials shall be approved by Planning Department Preservation staff prior to construction completion. The substance, media and other elements of such interpretive display shall be approved by Planning Department Preservation staff prior to completion of the project.	1. Qualified professional to prepare written and photographic documentation of the Central Shops 2. Qualified professional to prepare interpretative display material. 3. SFPUC to install interpretative display.	1. Prior to demolition. 2. During construction. 3. Prior to completion of the project.	1. SFPUC Bureau of Environmental Management (BEM) and San Francisco (SF) Planning Department Preservation staff 2. SFPUC BEM and SF Planning Department Preservation staff 3. SFPUC BEM and SF Planning Department Preservation staff	1. Distribution of approved HABS/HAER Historic Report to specified entities. 2. SF Planning Department Preservation staff approval of interpretative display material. 3. Documentation of installed interpretive display.

¹ National Park Service, *National Register Photo Policy Factsheet*, Updated May 15, 2013.

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MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT				
Cultural Resources (Archeological Resources) Mitigation Measures				
<i>Applicable to project site</i> Mitigation Measure M-CR-2a. Archeological Testing, Monitoring, and/or Data Recovery Based on the results of the project Archeological Research Design and Treatment Plan² (ARDTP), legally-significant prehistoric archeological resources are present within the archeological C-APE. The following measures shall be undertaken to avoid any potentially significant adverse effects from the project on an historical resource under CEQA. The SFPUC shall retain the services of a qualified archeological consultant(s), based on standards developed by the City and County of San Francisco Environmental Review Officer (ERO). The archeological consultant(s) shall have demonstrated experience in geoarcheology and historical archeology. The archeological consultant shall implement archeological testing and other treatment as specified in the project ARDTP, as detailed below, which shall include archeological monitoring and data recovery as required pursuant to findings of ongoing testing and this measure. The archeological consultant’s work shall be conducted in accordance with this measure and with the requirements of the project ARDTP at the direction of ERO or its designated representative and in coordination with the SFPUC. In instances of inconsistency between the requirement of the project ARDTP and of this archeological mitigation measure, the requirements of this archeological mitigation measure shall prevail. Project design changes after finalizing the ARDTP eliminated the portion of the C-APE that was identified in the ARDTP as sensitive for historical archeological resources. Testing as discussed below for historical archeological resources shall only be required if future design changes call for excavation in that location. If future project design changes further revise other parts of the C-APE, then testing shall only be required in archeologically sensitive areas that potentially would be adversely affected by project implementation. All plans and reports prepared by the consultant as specified herein shall be submitted directly to the ERO for review and comment and concurrently to the SFPUC for review and comment, and shall be considered draft reports, subject to revision until final approval by the ERO. Archeological monitoring and/or data recovery programs required by this measure could suspend construction of the affected area of the project for up to a maximum of four weeks. At the direction of the ERO, the suspension of construction can be extended beyond four weeks only if such a suspension is the only feasible means to reduce to a less-than-significant level potential effects on a significant archeological resource as defined in CEQA Guidelines Section 15064.5 (a) and (c).	SFPUC BEM to retain qualified professional archeologist determined, in consultation with EP archaeologist, to have specialized expertise in geoarchaeology and historical archaeology	Prior to ground disturbing activities.	SFPUC Archeological consultant to prepare and submit archeological testing plan and archaeological monitoring plan to the ERO for review and approval. BEM and ERO.	Considered complete when SFPUC retains a qualified professional archeological consultant, archeological consultant’s scope has been approved by the ERO, and required plans and reports have been submitted to and approved by the ERO and submits any required reports to ERO for the archeological testing plan.
Consultation with Descendant Communities. On discovery of an archeological site³ associated with descendant Native Americans, the Overseas Chinese, or other potentially interested descendant group, an appropriate representative⁴ of the descendant group, the ERO, and the SFPUC shall be contacted. The representative of the descendant group shall be given the opportunity to monitor archeological field investigations of the site and to offer recommendations to the ERO and SFPUC regarding appropriate archeological treatment of the site, of recovered data from the site, and, if applicable, any interpretative treatment of the associated archeological site. A copy of the Final Archeological Resources Report (FARR) shall be provided to the representative of the descendant group.	1. SFPUC and archeological consultant to inform descendant group and ERO on discovery of site 2. Qualified archaeological consultant to prepare FARR 3. SFPUC to provide FARR to representative of the descendant group	1. For the duration of soil-disturbing activities 2. Prior to completion of the project.	1. SFPUC BEM and ERO 2. SFPUC BEM and ERO	1 & 2. Considered complete upon documentation of consultation and submittal of FARR to descendant group(s).

² Byrd, Brian F., Philip Kaijankoski, Rebecca Allen, and Matthew Russell, Archaeological Research Design and Treatment Plan for the Biosolids Digester Facility Project, Southeast Water Pollution Control Plant, San Francisco, California. Prepared for San Francisco Public Utilities Commission, October, 2016.

³ The term “archeological site” is intended here to minimally include any archeological deposit, feature, burial, or evidence of burial.

⁴ An “appropriate representative” of the descendant group is here defined to mean, in the case of Native Americans, any individual listed in the current Native American Contact List for the City and County of San Francisco maintained by the California Native American Heritage Commission and in the case of the Overseas Chinese, the Chinese Historical Society of America. An appropriate representative of other descendant groups should be determined in consultation with the Department archeologist.

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MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT				
Cultural Resources (Archeological Resources) Mitigation Measures (cont.)				
Archeological Testing Program–Prehistoric Archeology. Depending on the results of on-going prehistoric archeological testing outlined in the project ARDTP, additional testing may be required to define site boundaries of CA-SFR-171 or other prehistoric deposits at the SEP, and to assess whether redeposited and/or reworked prehistoric archeological material identified in the project ARDTP within the C-APE has sufficient integrity to contribute to the significance of known resources at SEP. At the direction of the ERO and in coordination with SFPUC, additional testing may be rolled into a subsequent data recovery program (see below).	1. Qualified archeological consultant to scope additional testing if warranted, in consultation with the ERO, and to implement that testing 2. Qualified consultant to prepare supplemental testing report if warranted and report of supplemental archeological testing	If additional testing is warranted, it shall be carried out prior to any soil disturbing activities that, in the assessment of the project archaeologist in consultation with ERO, have the potential to disturb archeological resources based on the results of Phase 1 and Phase 2 preconstruction archeological testing.	SFPUC BEM and ERO	1. Considered complete upon finding by the ERO that the archaeological testing program has been adequate to identify and assess resources likely to be present and that supplemental testing is not required. 2. If supplemental testing is required, considered complete upon submittal of the supplemental archaeological testing report.
Archeological Testing Program–Historical Archeology. If future design changes would affect the area identified as sensitive for historical archeological resources, the archeological consultant shall implement the historical archeological testing plan outlined in the project ARDTP for potential historical archeological resources that could be adversely affected by the project. The archeological testing program shall be conducted in accordance with the approved ARDTP. The project ARDTP identifies the property types of the expected archeological resource(s) that could be adversely affected by the project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of historical archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA. If future project design changes further alter the C-APE from what is identified in the ARDTP, then the archeological consultant shall prepare and submit to the ERO for review and approval an archeological testing plan (ATP) for both prehistoric and historical archeological resources to address any area added to the C-APE to accommodate the project design changes. The archeological testing program shall be conducted in accordance with the approved ATP. The ATP shall identify the property types of the expected archeological resource(s) that potentially could be adversely affected by the project, the testing method to be used, and the locations recommended for testing. The purpose of the archeological testing program will be to determine to the extent possible the presence or absence of archeological resources and to identify and to evaluate whether any archeological resource encountered on the site constitutes an historical resource under CEQA.	1. If future design changes would affect sensitive historical archaeological resources outside the C-APE but within the ATP outlined in the ARDTP, a qualified archeological consultant shall implement the ATP as outlined in the ARDTP. 2. Qualified archaeological consultant to prepare, implement and report upon an updated ATP for any new areas outside the C-APE in consultation with the ERO	1. Prior to any soil disturbing activities. 2. Prior to any soil disturbing activities.	1. SFPUC BEM and ERO 2. SFPUC BEM and ERO	1. Considered complete upon approval of the ATP in the ARDTP by the ERO and finding by the ERO that the ATP has been implemented and no further testing is warranted based on testing results. 2. Considered complete upon approval of the updated ATP by the ERO, finding by the ERO that the ATP has been implemented, and submittal and approval of a supplemental archaeological testing report.
At the completion of the archeological testing program, as required, the archeological consultant shall submit a written report of the findings to the ERO and the SFPUC. If based on the archeological testing program the archeological consultant finds that significant archeological resources may be present, the ERO in consultation with the archeological consultant and coordination with the SFPUC shall determine if additional measures are warranted. Additional measures that may be undertaken include additional archeological testing, archeological monitoring, and/or an archeological data recovery program. No archeological data recovery shall be undertaken without the prior approval of the ERO or the Planning Department archeologist. If the ERO determines that a significant archeological resource is present and that the resource could be adversely affected by the project, at the discretion of the SFPUC either: A) The project shall be re-designed so as to avoid any adverse effect on the significant archeological resource; or B) An archeological data recovery program shall be implemented, unless the ERO determines that the archeological resource is of greater interpretive than research significance and that interpretive use of the resource is feasible.	1. Based on findings of approved testing report, and if impacts cannot be avoided, SFPUC BEM and qualified archeological consultant will consult with ERO, to determine, based on relationship between locations of known and suspected resources and anticipated soil disturbance, whether additional treatment is warranted, and appropriate scope of additional treatment. 2. Qualified archaeological consultant to prepare archeological data recovery program (ADRP)	1. Upon completion of the archeological testing program and ERO approval of the archaeological testing report, and prior to ground disturbing activity at the project site. 2. Upon completion of ERO consultation on scope and prior to any ground disturbing activity.	1. SFPUC BEM, qualified archaeological consultant and ERO 2. SFPUC BEM, qualified archaeologist and ERO	1. Considered complete after ERO review and approval of report(s) on ATP findings, and after concurrence by ERO on appropriate scope of ADRP. 2. Considered complete after ERO review and approval of ADRP and implementation of the ADRP and/or interpretive program.

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MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT				
Cultural Resources (Archeological Resources) Mitigation Measures (cont.)				
Archeological Monitoring Program. Preparation of an archeological monitoring program (AMP) may be required prior to project construction depending on the results of the prehistoric and historical archeological testing programs outlined above. If the ERO in consultation with the archeological consultant determines that an archeological monitoring program shall be implemented, the archeological monitoring program shall minimally include the following provisions: • The archeological consultant, SFPUC, and ERO shall meet and consult on the scope of the AMP reasonably prior to commencement of any project-related soils disturbing activities. The ERO in consultation with the archeological consultant shall determine what project activities shall be archeologically monitored based on the results of pre-construction archeological testing currently approved and underway or planned, and archeological sensitivity assessment based on the results of that testing; • The archeological consultant shall advise all project contractors to be on the alert for evidence of the presence of the expected resource(s), of how to identify the evidence of the expected resource(s), and of the appropriate protocol in the event of discovery of a potential archeological resource; • The archeological monitor(s) shall be present on the project site according to a schedule agreed upon by the archeological consultant and the ERO or until the ERO has, in consultation with project archeological consultant, otherwise determined that project construction activities could have no effects on significant archeological deposits and monitoring can conclude; • The archeological monitor shall record and be authorized to collect soil samples and artifactual/ecofactual material as warranted for analysis; • If an intact archeological deposit is encountered, all soils-disturbing activities in the vicinity of the deposit shall cease. The archeological monitor shall be empowered to temporarily redirect demolition/excavation/construction activities and equipment until the deposit is evaluated. The archeological consultant shall immediately notify the ERO and the SFPUC of the encountered archeological deposit. The archeological consultant shall make a reasonable effort to assess the identity, integrity, and significance of the encountered archeological deposit, and present the findings of this assessment to the ERO and the SFPUC. Whether or not significant archeological resources are encountered, the archeological consultant shall submit a written report of the findings of the monitoring program to the ERO and the SFPUC.	1. Qualified archaeological consultant to prepare an AMP 2. Qualified archaeological consultant to implement the AMP, including notification of ERO of any potentially significant discoveries, and consultation with the ERO on scope of subsequent assessment and treatment 3. Qualified archaeological consultant to prepare written report of findings during construction. Monitoring results may be included in FARR.	1. AMP to be subject to approval by ERO prior to construction. Qualified archaeologist to conduct construction crew training prior to soil disturbing activities 2. During construction 3. Post-construction	1. SFPUC BEM and ERO 2. SFPUC BEM and ERO 3. SFPUC BEM and ERO	1. Considered complete on approval of AMP(s) by ERO. 2. ERO to be notified quarterly of monitoring progress including any proposed changes in monitoring schedule or intensity; notified immediately of any potentially significant discoveries; and consulted in development of proposed assessment and treatment plan in the event of a discovery 3. ERO approval of written report of monitoring findings/ FARR.
Archeological Data Recovery Program. An archeological data recovery program shall be implemented in accord with an archeological data recovery plan (ADRP). The ADRP shall incorporate (1) programmatic-level procedures for deeply buried prehistoric archeological deposits; (2) site-specific procedures for identified prehistoric archeological deposits; (2) and site-specific procedures for historical archeological deposits (as warranted). The archeological consultant, SFPUC, and ERO shall meet and consult on the scope of the ADRP prior to preparation of a draft ADRP. The archeological consultant shall submit a draft ADRP to the ERO and SFPUC. The ADRP shall identify how the proposed data recovery program will preserve the significant information the archeological resource is expected to contain. That is, the ADRP shall identify what scientific/historical research questions are applicable to the expected resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable research questions. Data recovery, in general, should be limited to the portions of the historical resource	1. Qualified archeological consultant to prepare an ADRP to address those portions of the historic resources that could be adversely affected by the project. 2. Archaeological consultant to implement the ADRP. 3. Archaeological consultant to prepare written report of findings of the data recovery program.	1. Prior to soil disturbing activities 2. Prior to and during soil-disturbing construction activities. 3. Upon completion of all soil-disturbing activities that may trigger ADRP implementation, and upon completion of all ADRP analyses.	1. SFPUC BEM and ERO 2. SFPUC BEM and ERO	1. ERO approval of the ADRP 2. ERO approval of the final archaeological report(s) documenting implementation of the ADRP and curation of resultant archaeological collections.

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Cultural Resources (Archeological Resources) Mitigation Measures (cont.)				
that could be adversely affected by the project. Destructive data recovery methods shall not be applied to portions of the archeological resources if non-destructive methods are practical. The scope of the ADRP shall include the following elements: • <i>Field Methods and Procedures.</i> Descriptions of proposed field strategies, procedures, and operations for the following elements: 1) Programmatic-level procedures for deeply buried prehistoric archeological deposits potentially uncovered during excavation for deep foundations (e.g., driven, drilled, or augured piles). 2) Site-specific procedures for known/identified prehistoric archeological deposits potentially affected by project excavation activities (e.g. CA-SFR-171). 3) Site-specific procedures for historical archeological deposits (as warranted) potentially affected by project excavation activities. • <i>Cataloguing and Laboratory Analysis.</i> Description of selected cataloguing system and artifact analysis procedures. • <i>Discard and Deaccession Policy.</i> Description of and rationale for field and post-field discard and deaccession policies. • <i>Interpretive Program.</i> Consideration of an on-site/off-site public interpretive program during the course of the archeological data recovery program. • <i>Security Measures.</i> Recommended security measures to protect the archeological resource from vandalism, looting, and non-intentionally damaging activities. • <i>Final Report.</i> Description of proposed report format and distribution of results. • <i>Curation.</i> Description of the procedures and recommendations for the curation of any recovered data having potential research value, identification of appropriate curation facilities, and a summary of the accession policies of the curation facilities.				
Human Remains and Associated or Unassociated Funerary Objects. The treatment of human remains and of associated or unassociated funerary objects discovered during any soils disturbing activity, in the context of an archeological deposit or in isolation, shall comply with applicable state and federal laws. This shall include immediate notification of the Coroner of the City and County of San Francisco and in the event of the Coroner’s determination that the human remains are Native American remains, notification of the California State Native American Heritage Commission (NAHC) who shall appoint a Most Likely Descendant (MLD) (PRC Section 5097.98). PRC 5097.98 indicates that " The descendants shall complete their inspection and make their recommendation within 48 hours of their notification by the Native American Heritage Commission." The archeological consultant, SFPUC, ERO, and MLD shall have up to but not beyond six days of discovery to make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Section 15064.5[d]). The agreement should take into consideration the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. Nothing in existing State regulations or in this mitigation measure compels the SFPUC and the ERO to accept recommendations of an MLD. The archeological consultant shall retain possession of any Native American human remains and associated or unassociated burial objects until completion of any scientific analyses of the human remains or objects as specified in the treatment agreement if such as agreement has been made or, otherwise, as determined by the archeological consultant and the ERO.	SFPUC and qualified archeological consultant, in consultation with the San Francisco Coroner, NAHC, ERO, and MLD.	In the event human remains and/or funerary objects are encountered, during soils disturbing activity; immediately, upon each such discovery	SFPUC BEM and ERO	Considered complete on notification of the San Francisco County Coroner and ERO, and if Native American remains are discovered, then notification to NAHC, and MLD, and completion of treatment agreement and/or analysis and archaeological reporting.

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Cultural Resources (Archeological Resources) Mitigation Measures (cont.)				
<i>Applicable to project site</i> Final Archeological Resources Report. The archeological consultant shall submit a Draft Final Archeological Resources Report (FARR) to the ERO and SFPUC that evaluates the historical significance of any discovered archeological resource and describes the archeological and historical research methods employed in the archeological testing/monitoring/data recovery program(s) undertaken. The FARR shall include new updated DPR forms, as applicable. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report. Once approved by the ERO, copies of the FARR shall be distributed as follows: Northwest Information Center (NWIC) of the California Historical Resources Information System shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound, one unbound and one unlocked, searchable PDF copy on CD of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. 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.	1. SFPUC and qualified archeological consultant to consult with ERO regarding interpretive value of identified resources and, if so, to develop an interpretive plan 2. Qualified archeological consultant to prepare the FARR and/or FARR with interpretive augmentation	1. Post-construction, upon recommendation by qualified archaeologist based on preliminary analytical results 2. Within one year of the completion of all soil disturbing activity at the project site that has potential for archaeological impacts	1. SFPUC BEM, qualified archaeologist and ERO 2. SFPUC BEM and qualified archaeologist	1. If the ERO determines that the findings have high interpretive value, completion and approval of an interpretive report or other interpretive product, to be scope in consultation between the ERO, SFPUC and the qualified archaeological consultant 2. Considered complete on submittal of FARR and approval by ERO, written confirmation the FARR has been distributed to specified entities and that any archaeological collections have been curated as specified in the ADRP.
<i>Applicable to project site, 1550 Evans, and Piers 94 and 96 staging areas</i> Mitigation Measure M-CR-2b. Accidental Discovery of Archeological Resources The following mitigation measure is required to avoid any potential adverse effect from the project on accidentally discovered buried or submerged historical resources as defined in CEQA Guidelines Section 15064.5(a) and (c). The project sponsor shall distribute the Planning Department archeological resource “ALERT” sheet to the project prime contractor; to any project subcontractor (including demolition, excavation, grading, foundation, pile installation, etc. firms); or utilities firm involved in soils disturbing activities within the project site. Prior to any soils disturbing activities being undertaken each contractor is responsible for ensuring that the “ALERT” sheet is circulated to all field personnel including, machine operators, field crew, pile drivers, supervisory personnel, etc. A preconstruction training shall be provided to all construction personnel by a qualified archeologist prior to their starting work on the project. The training may be provided in person or using a video and include a handout prepared by the qualified archeologist. The video and materials shall be reviewed and approved by the ERO and the SFPUC. The purpose of the training is to enable personnel to identify archeological resources that may be encountered and to instruct them on what to do if a potential discovery occurs. Images or video of expected archeological resource types and archeological testing and data recovery methods should be included in the training. As possible, video or images should utilize archeological investigations that have occurred at the project site. The training should also include general information about the known archeological resources identified within the project site. The project sponsor shall provide the Environmental Review Officer (ERO) with a signed affidavit from the responsible parties (prime contractor, subcontractor[s], and utilities firm) to the ERO confirming that all field personnel have received copies of the Alert Sheet and have taken the preconstruction training. Should any indication of an archeological resource be encountered during any soils disturbing activity of the project, the project Head Foreman and/or project sponsor shall immediately notify the ERO and the SFPUC and shall immediately suspend any soils disturbing activities in the vicinity of the discovery until the ERO, in coordination with the SFPUC, has determined what additional measures should be undertaken.	1. SFPUC Construction Management Bureau (CMB)/BEM to prepare training materials and conduct preconstruction training and provide signed affidavit. 2. Qualified archaeological consultant to notify the ERO and the SFPUC, immediately suspend any soils disturbing activities in the vicinity of the discovery, and consult with ERO to assess significance and identify appropriate treatment measures. 3. Qualified archaeological consultant to implement significance assessment and treatment measures 4. Qualified archaeological consultant to prepare a FARR.	1. Prior to any ground disturbing activity. 2. In the event archeological resources are encountered during soil disturbing activity 3. Upon concurrence by ERO on significance assessment and treatment measures proposed by qualified archaeologist and prior to further construction activities that would impact the resource. 4. Post construction	1. SFPUC BEM and ERO 2. SFPUC BEM and ERO 3. SFPUC BEM and ERO 4. SFPUC BEM and ERO	1. Considered complete on approval of training materials and when signed affidavit from responsible parties is received by ERO. 2. Considered complete on notification of the ERO, and completion of ERO consultation on treatment 3. Upon completion of agreed upon significance assessment/treatment of the discovery. 4. SF Planning Department approval of FARR and confirmation that FARR has been distributed to specified entities and the collection has been curated as specified in the ADRP.

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If the ERO determines that the find may represent an archeological resource, the project sponsor shall retain the services of an archeological consultant. The archeological consultant shall advise the ERO and the SFPUC as to whether the discovery is an archeological resource, retains sufficient integrity, and is of potential scientific/historical/cultural significance. If an archeological resource is present, the archeological consultant shall identify and evaluate the archeological resource. The archeological 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 project sponsor. Measures might include: preservation in situ of the archeological resource; an archeological monitoring program; or an archeological testing program. If an archeological monitoring program or archeological testing program is required, it shall be consistent with the Environmental Planning (EP) division guidelines for such programs. The ERO may also require that the project sponsor immediately implement a site security program if the archeological resource is at risk from vandalism, looting, or other damaging actions. The project archeological consultant shall submit a Final Archeological Resources Report (FARR) to the ERO and the SFPUC that evaluates the historical significance of any discovered archeological resource and describing the archeological and historical research methods employed in the archeological monitoring/data recovery program(s) undertaken. Information that may put at risk any archeological resource shall be provided in a separate removable insert within the final report. Copies of the Draft FARR shall be sent to the ERO for review and approval and concurrently to the SFPUC for review and comment. Once approved by the ERO, copies of the FARR shall be distributed as follows: California Archaeological Site Survey Northwest Information Center (NWIC) shall receive one (1) copy and the ERO shall receive a copy of the transmittal of the FARR to the NWIC. The Environmental Planning division of the Planning Department shall receive one bound copy, one unbound copy and one unlocked, searchable PDF copy on CD three copies of the FARR along with copies of any formal site recordation forms (CA DPR 523 series) and/or documentation for nomination to the National Register of Historic Places/California Register of Historical Resources. In instances of high public interest or interpretive value, the ERO may require a different final report content, format, and distribution than that presented above.				
Noise and Vibration Mitigation Measures				
<i>Applicable to work at Southeast Greenhouses Staging Area</i> Mitigation Measure M-NO-1a. Shielding of Concrete Saw Operations Project contractors shall erect temporary shielding when concrete saw operations are conducted within 100 feet of a sensitive receptor. Shielding shall be sufficient to reduce noise levels to 80 dBA at a distance of 100 feet (an approximate 5 dBA reduction), consistent with the noise limit specified in Section 2907 of the Noise Ordinance.	Contractors to erect shielding when concrete saw operations are conducted within 100 feet of a sensitive receptor.	Prior to conducting concrete saw operations within 100 feet of a sensitive receptor.	SFPUC BEM	Documentation of compliance
<i>Applicable to work at Southeast Greenhouses Staging Area</i> Mitigation Measure M-NO-1b. Construction Noise Control Measures at Southeast Greenhouses Staging Area Project contractors shall implement noise control measures at the Southeast Greenhouses staging area, such as one of the following strategies, to ensure that construction-related noise does not exceed 77 dBA at the closest residences located across Phelps Street or 70 dBA at the daycare center (including its outdoor play area) at the Southeast Community Facility (this performance standard is based on the City’s ambient +10 dBA noise limit):	Contractor to implement noise control measures; SFPUC CMB to post sign.	Prior to and during construction activities at the Southeast Greenhouses staging area.	SFPUC BEM	Documentation of compliance

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MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT				
Noise and Vibration Mitigation Measures (cont.)				
• Restrict Use of Heavy Equipment. Restrict operation of heavy equipment and trucks in the southern portion of the Southeast Greenhouses staging area within approximately 200 feet of the daycare center (including the outdoor play area) and residences across Phelps Street such that noise levels are maintained below this performance standard. • Temporary Noise Barrier. Erect temporary noise barrier(s) along the southern and eastern boundaries of the Southeast Greenhouses staging area to shield the daycare facility and residences from noise generated by staging area activities necessary to achieve this performance standard. • The SFPUC shall also post a sign on-site describing permitted construction days and hours, noise complaint procedures, and a complaint hotline number (available during construction hours).				
Air Quality Mitigation Measures				
<i>Applicable to all project locations</i> Mitigation Measure M-AQ-1a. Construction Emissions Minimization The SFPUC’s contractors shall comply with the following: A. Engine Requirements. 1. All off-road equipment with larger engines (greater than or equal to 140 horsepower) shall meet United States Environmental Protection Agency (USEPA) or California Air Resources Board (CARB) Tier 4 Final off-road emission standards, while equipment with smaller engines (less than 140 horsepower) shall meet or exceed Tier 2 off-road emission standards and be equipped with diesel particulate filters (DPFs), which is equivalent to a Level 3 verified diesel emission control strategy (VDECS). 2. At least 80 percent of haul trucks (i.e., trucks used to remove or deliver backfill soil, excavated soil, and demolition debris) used must have 2010 or newer engines. The SFPUC should strive to exceed this requirement when possible; if trucks with 2010 or newer engines are available in the Contractor’s, or subcontractor’s fleet, then those should be used for the project. The SFPUC, through its Contractors Assistance Center, will work with the BAAQMD’s Strategic Incentives Division and interested, eligible truckers to pursue funding to replace vehicles or retrofit engines to comply with the lower emissions requirement, including but not limited to conducting informational presentations at the Contractors Assistance Center to notify truckers about the grants and incentives and assisting with the completion of applications to the grant programs. 3. All diesel-powered haul trucks and off-road equipment must use renewable diesel. B. Waivers. 1. Pursuant to the Clean Construction Ordinance, the SFPUC General Manager (GM) or designee may waive the alternative source of power requirement if an alternative source of power is limited or infeasible at the project site. If the SFPUC GM grants the waiver, the contractor shall submit documentation that the equipment used for on-site power generation meets the requirements of Subsection (A)(1).	SFPUC CMB and contractor.	Implement prior to and during construction activities.	SFPUC BEM.	Considered complete upon Planning Department review and approval of documentation.

MITIGATION MONITORING AND REPORTING PROGRAM FOR BIOSOLIDS DIGESTER FACILITIES PROJECT												
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MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT												
Air Quality Mitigation Measures (cont.)												
2. The SFPUC GM or designee may waive the equipment requirements of Subsection (A)(1) but only under any of the following unusual circumstances: if a particular piece of off-road equipment with Tier 4 Final standards or CARB Level 3 VDECS is technically not feasible; the equipment would not produce desired emissions reduction due to expected operating modes; installation of the equipment would create a safety hazard or impaired visibility for the operator; or there is a compelling emergency need to use off-road equipment that is not retrofitted with a CARB Level 3 VDECS. If the SFPUC GM or designee grants the waiver, the contractor shall use the next cleanest piece of off-road equipment, according to the following table: <table><tr><th>Compliance Alternative</th><th>Engine Emission Standard</th></tr><tr><td>1</td><td>Tier 4 Interim</td></tr><tr><td>2</td><td>Tier 3</td></tr><tr><td>3</td><td>Tier 2</td></tr></table> NOTES: How to use the table: If the SFPUC GM or designee determines that the equipment requirements cannot be met, then the contractor shall meet Compliance Alternative 1. If the SFPUC GM or designee determines that the contractor cannot supply off-road equipment meeting Compliance Alternative 1, then the contractor shall meet Compliance Alternative 2. If the SFPUC GM or designee determines that the contractor cannot supply off-road equipment meeting Compliance Alternative 2, then the contractor shall meet Compliance Alternative 3.	Compliance Alternative	Engine Emission Standard	1	Tier 4 Interim	2	Tier 3	3	Tier 2				
Compliance Alternative	Engine Emission Standard											
1	Tier 4 Interim											
2	Tier 3											
3	Tier 2											
Mitigation Measure M-AQ-1b. Emission Offsets During the five-year construction period and prior to project completion, the SFPUC, with the oversight of the Planning Department, shall implement either of the following two options or a combination of both: 1. Directly implement a specific offset program (such as replace equipment) to achieve reductions of 2.3 tons per year of ozone precursors, subject to Environmental Review Officer (ERO) approval. To qualify under this mitigation measure, the specific emissions retrofit project must result in emissions reductions within the San Francisco Bay Area Air Basin (SFBAAB) that are real, surplus, quantifiable, enforceable, and would not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement. Prior to implementation of the offset project, the SFPUC must obtain Planning Department’s approval of the proposed offset project by providing documentation of the estimated amount of emissions of 2.3 tons per year of ozone precursors within the SFBAAB from the emissions reduction project(s). The project sponsor shall notify the Planning Department within six months of completion of the offset project for verification. 2. Pay a mitigation offset fee to the Bay Area Air Quality Management District’s (BAAQMD) Bay Area Clean Air Foundation (Foundation) in an amount to be determined at the time of the impact. The mitigation offset fee will be no less than \$30,000 per weighted ton of ozone precursors per year requiring emissions offsets plus an administrative fee of no less than 5 percent, to fund one or more emissions reduction projects within the SFBAAB. The \$30,000 will be adjusted to reflect annual California Consumer Price Index adjustments between 2017 and the estimated first year of exceedance. This fee will be determined by the Planning Department in consultation with the SFPUC and BAAQMD and based on the type of projects available at the time of impact. This fee is intended to fund emissions reduction projects to achieve reductions of 2.3 tons per year of ozone precursors.	SFPUC	Offset program: During construction and notify the Planning Department within 6 months of completion of the offset project(s). and/or Mitigation Fee: Pay amount determined at time of impact	Offset program: SFPUC and ERO Mitigation Fee: BAAQMD	Offset program: Documentation of offset projects implemented. Mitigation Fee: BAAQMD confirmation of receipt of payment.								

MITIGATION MONITORING AND REPORTING PROGRAM FOR BIOSOLIDS DIGESTER FACILITIES PROJECT				
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MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT				
Air Quality Mitigation Measures (cont.)				
For this option, the SFPUC is required to enter into a Memorandum of Understanding (MOU) with the BAAQMD’s Foundation. The MOU will include details regarding the funds to be paid, administrative fee and the timing of the emissions reductions project. Acceptance of this fee by the BAAQMD shall serve as an acknowledgment and commitment by the BAAQMD to: (1) implement an emissions reduction project(s) within a time frame to be determined based on the type of project(s) selected, after receipt of the mitigation fee to achieve the emission reduction objectives specified above; and (2) provide documentation to the ERO and the SFPUC describing the amount of and the project(s) funded by the mitigation fee, including the amount of emissions of NOx reduced (tons per year) within the SFBAAB from the emissions reduction project(s). If there is any remaining unspent portion of the mitigation offset fee following implementation of the emission reduction project(s), the SFPUC shall be entitled to a refund in that amount from the BAAQMD. To qualify under this mitigation measure, the specific emissions reduction project must result in emission reductions within the SFBAAB that are real, surplus, quantifiable, enforceable, and would not otherwise be achieved through compliance with existing regulatory requirements or any other legal requirement.				
Biological Resources Mitigation Measures				
<i>Applicable to buildings and structures to be demolished, trees to be removed, and buildings/structures and trees within 100 feet of construction activity.</i> Mitigation Measure M-BI-1: Protective Measures for Special Status Bats and Maternity Roosts The San Francisco Public Utilities Commission (SFPUC) shall engage a qualified biologist to conduct a pre-construction survey of buildings and other structures to be demolished, vacant buildings within 100 feet of construction activities, trees to be removed, and trees located within 100 feet of construction activities to locate potential roosting habitat for special-status bats and active maternal colonies. The pre-construction surveys shall occur no more than two weeks in advance of initiation of building demolition or renovation activities on-site or initiation of construction. No activities that could disturb active roosts of special-status bats or maternal roosts shall proceed prior to the completed surveys. The pre-construction survey shall include at a minimum: • Identification of potential direct and indirect project-related bat- disturbing activities; and • Locations of active roosting habitat and maternal colonies. If the pre-construction survey does not identify signs of potentially active bat roosts (e.g., guano, urine staining, dead bats, etc.) then no further action is required. If the pre-construction survey identifies signs of potentially active bat roosts, the following measures shall be implemented: • Removal of structures and trees shall occur when bats are active, approximately between the periods of March 1 to April 15 and August 15 to October 15; outside of bat maternity roosting season (approximately April 15 to August 31); and outside of months of winter torpor (approximately October 15 to February 28). On structures where bats were observed during the pre-construction survey, exclusion devices (i.e., one-way doors) shall be installed prior to removal of the structures. Exclusion devices shall be left in place for a minimum of four nights prior to demolition of the structures. • If removal of structures and trees during the periods when bats are active is not feasible and active bat roosts being used for maternity or hibernation purposes are found on or in the immediate vicinity of the project site where structure demolition or renovation is planned, a no-disturbance buffer of 100 feet or less if determined adequate by a qualified biologist in coordination with the California Department of Fish and Wildlife (CDFW) based on site-specific conditions shall be established around the roost sites until they are determined to be no longer active or volant by a qualified biologist.	1. Qualified biologist to conduct preconstruction surveys no more than two weeks in advance of building demolition or renovation activities onsite 2. If active bat roosts are identified, qualified biologist to implement one of the avoidance/protective measures.	1. Prior to construction Conduct pre-construction surveys no more than two weeks in advance of initiation of building demolition or renovation activities on-site or initiation of construction. 2. During construction	1. SFPUC BEM 2. SFPUC BEM	1. Documentation of surveys 2. Documentation that avoidance / protective measures were taken.

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MITIGATION MEASURES FOR THE BIOSOLIDS DIGESTER FACILITIES PROJECT				
Biological Resources Mitigation Measures (cont.)				
- The qualified biologist shall be present during structure and tree disturbance if active bat roosts are present. Structures and trees with active roosts shall be removed only when no rain is occurring or is forecast to occur for three days and when daytime temperatures are at least 50 degrees Fahrenheit (°F). - Structures or trees containing or suspected to contain active bat roosts shall be dismantled or removed under the supervision of the qualified biologist in the evening and after bats have emerged from the roost to forage. Structures shall be partially dismantled to significantly change the roost conditions, causing bats to abandon and not return to the roost. - If significant bat roosting habitat (e.g., maternity roosts or special-status non-maternity roost sites) is destroyed during structure or tree removal, artificial bat roosts shall be constructed in an undisturbed area in the project site vicinity away from human activity and at least 200 feet from project demolition/construction activities. The design and location of the artificial bat roost(s) shall be determined by a qualified bat biologist. - Bat roosts that begin during construction are presumed to be unaffected, and no buffer would be necessary.				
Geology and Soils Mitigation Measures				
<i>Applicable to project site</i> Mitigation Measure M-GE-4: Paleontological Resources Monitoring and Mitigation Program The SFPUC shall retain the services of a qualified paleontological consultant having expertise in California paleontology to design and implement a Paleontological Resources Monitoring and Mitigation Program (PRMMP) for construction activities that would disturb the upper layered sediments that are sensitive for paleontological resources. The PRMMP shall not require monitoring in shallower excavations that do not encounter the upper layered sediments. The PRMMP shall include a description of when and where construction monitoring would be required; emergency discovery procedures; sampling and data recovery procedures; procedure for the preparation, identification, analysis, and curation of fossil specimens and data recovered; pre-construction coordination procedures; and procedures for reporting the results of the monitoring program. The PRMMP shall be consistent with the Society for Vertebrate Paleontology (SVP) Standard Guidelines for the mitigation of construction-related adverse impacts on paleontological resources and the requirements of the designated repository for any fossils collected. During construction, earth-moving activities shall be monitored by a qualified paleontological consultant having expertise in California paleontology in the areas where these activities have the potential to disturb the upper layered sediments. Monitoring need not be conducted for construction activities that would disturb only artificial fill material and/or young bay mud. The consultant’s work shall be conducted in accordance with this measure and at the direction of the City’s Environmental Review Officer (ERO) in coordination with the SFPUC. Plans and reports prepared by the consultant shall be submitted first and directly to the ERO for review and comment and concurrently to the SFPUC for review and comment, and shall be considered draft reports subject to revision until final approval by the ERO. Paleontological monitoring and/or data recovery programs required by this measure could suspend construction of the project in an appropriate buffer zone around a discovered paleontological resource or area determined in the PRMMP to be sensitive for paleontological resources for up to a maximum of four weeks. At the direction of the ERO and in coordination with the SFPUC, the suspension of construction may be extended beyond four weeks for a reasonable time required to implement appropriate measures in accordance with the PRMMP only if such a suspension is the only feasible means to reduce potential effects on a significant paleontological resource as previously defined to a less-than-significant level.	- PRMMP: qualified paleontological consultant. - Monitoring: Paleontological consultant and SFPUC CMB	- PRMMP: Before the start of any ground disturbing activities. - Monitoring: During construction	- SFPUC BEM and ERO - SFPUC BEM and ERO	- Final PRMMP approved by ERO - Documentation of compliance