

Staff Report 19

APPLICANT:

Brannan - Andrus Levee Maintenance District

PROPOSED ACTION:

Issuance of a General Lease - Public Agency Use.

AREA, LAND TYPE, AND LOCATION:

Sovereign land in the Sacramento River, adjacent to Highway 160, near Isleton, Sacramento County.

AUTHORIZED USE:

Construction, installation, and maintenance of the Sacramento River Levee Erosion Control/Habitat Enhancement Project (Project).

TERM:

20 years, beginning June 29, 2021.

CONSIDERATION:

The public use and benefit, with the State reserving the right at any time to set a monetary rent if the Commission finds such action to be in the State's best interests.

SPECIFIC LEASE PROVISIONS:

- Contractor Liability Insurance in an amount no less than \$5,000,000 per occurrence.
- No refueling, maintenance, or repairs to any equipment or vehicles will be permitted within the Sacramento River.
- The lease includes a provision to remove and relocate obstacles from the river including pilings, a dock, and agricultural water diversion structures and pipes.
- Lessee shall submit "as built" drawings for the project, certified (stamped, signed, and dated) by a California registered Civil/Structural Engineer,

showing all design changes or other amendments to the construction drawings as originally approved within 60 days of project completion.

- Based on the “as-built” drawings received, Lessor shall then replace Exhibit A (Land Description) and Exhibit B (Site and Location Map) to the Lease as necessary to accurately reflect the final location of the authorized improvements. Once approved by Lessor's Executive Officer or designee and Lessee, the revised Exhibits shall replace the Exhibits incorporated in the Lease at the time of Lease execution. The replaced Exhibits shall be incorporated in the Lease as though fully set forth therein.
- At all times while construction activities are taking place in the River, Lessee shall install warning signs and buoys, upstream and downstream of the construction site, in order to provide to the public that construction activities are taking place in the River and to exercise caution.
- The Lessee acknowledges that the Mitigation Monitoring Program, attached as Exhibit C and by reference made a part of this Lease, is adopted by the Lessor at the time of approval of this Lease, and Lessee agrees to be bound by and perform all conditions contained in the Mitigation Monitoring Program adopted by Lessor. Lessee shall be responsible for all costs associated with the Mitigation Monitoring Program.

STAFF ANALYSIS AND RECOMMENDATION:

AUTHORITY:

Public Resources Code sections 6005, 6216, 6301, 6501.1, and 6503; California Code of Regulations, title 2, sections 2000 and 2003.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

The Applicant was legislatively created in 1967 to oversee the levees in three reclamation districts with the purpose of managing the repair and maintenance of such levees around both Brannan and Andrus Islands.

The Applicant's proposed Project is located in the primary zone of the Sacramento - San Joaquin Delta along the southern bank of the Sacramento River, on Brannan Island, near Isleton. The purpose of the Project is to repair three areas of levee erosion at River Miles 14.60 to 15.18, 16.36 to 17.00, and 17.13 to 17.34, near the confluence of Steamboat Slough, Cache Slough, and the Sacramento River, respectively; increase levee stability; improve the level of flood protection; and

provide a net increase in waterside habitat acreage for Brannan and Andrus Islands. The proposed erosion control methods would provide enhanced habitat in this reach of the Sacramento River that currently provides limited fish habitat.

Habitat benches would be constructed to facilitate growth of wetland or riparian plant species, alternating between stretches of wetland bench and riparian bench, as determined by the characteristics and elevations at each erosion control site.

The width of the existing levee toe and waterside bench areas vary from a minimum of 6 feet to 15 feet depending on the location. The Project would involve the construction of approximately 2.72 acres of riparian forest habitat above mean high water at an elevation that allows for occasional inundation (e.g., during high flow conditions). The Project also includes construction of approximately 0.90 acres of freshwater marsh habitat below mean high water at an elevation to allow inundation and development of aquatic and semi-aquatic habitat. Construction at each of the three erosion control sites would occur sequentially, beginning at Site 1 and moving upstream to Sites 2 and 3.

Construction would occur in three phases: 1) placing Rock Slope Protection (RSP) and smaller rock backfill material; 2) placing geogrid material and Slope Stabilization Bags (Bags); and 3) placing planting fill to complete final grade. Work on the levee slopes would occur using vessels based in the Bay Area including barges, work boats, and tugs, and an excavator, except in sensitive locations (i.e., around mature trees) where smaller, single-operator equipment would be used. Rock material would be placed using a derrick barge with a specialized rock bucket. The RSP would be used to create a base for the new levee slope and initial foundation for the riparian and wetland habitat benches. Wetland plants would be installed into the soil/rock filled bench and along its face. Smaller rock material may be placed via derrick barge on top of the RSP material to finish the foundation of the riparian habitat bench.

Bag dimensions are approximately 6 inches (tall) x 24 inches (long) x 12 inches (wide). The Bags are filled with a mixture of 75 percent sand and 25 percent topsoil. Each segment of geogrid would secure approximately two layers of Bags to the slope. Geogrid would extend between layers of Bags, through the face of the slope, wrap back over two layers of Bags, and be embedded/secured in the compacted backfill. After construction is complete, the levee slope at each erosion control site would include a riprap base and a wetland bench with Bags that extend below the ordinary high-water mark.

Two permitted encroachments have been identified within the proposed project footprint and will be removed or replaced. The first encroachment is a former permitted water diversion facility, consisting of an agricultural pump and platform

on pilings and a connecting pipe that extends over to the levee and up the slope to near the top of the levee crown. This facility was previously permitted by Reclamation District 407 and qualifies under Public Resources Code Section 6327 for water diversion facilities. Therefore, a lease for the portion extending onto State sovereign land is not required. This agricultural diversion facility, with existing in-channel pilings and platform, will be removed by crane and disposed of offsite. The diversion intake would be relocated and replaced downstream. The vertical pump would be replaced with a new slant in-line pump which would be installed above the 1957 design water surface elevation flood elevation and thereby eliminate the existing pump station obstruction in the wetted channel. The new intake line would be placed along and slightly above the new levee slope and bench location. Once the new pump is permitted and installed, the landowner will be responsible for screening the diversion. At this same location, concrete rubble associated with a former barge landing will also be removed and disposed off-site.

The second identified encroachment is an existing private dock associated with Lease Number PRC 5615 located within Site 3 ([Item C39, February 2, 2019](#)). An amendment to the lease to remove and relocate the dock will be considered at a future Commission meeting. Both the dock and the pilings supporting the dock installation will be removed. This will necessitate the installation of a new pedestrian bridge and gangway connected to a new concrete landing installed near the levee crown.

Three new steel pilings (12-inches in diameter) would be placed in the new rip-rap toe location to relocate the dock slightly waterward into the channel. This would be done to gain boat clearance from the added habitat bench and revetment. Two smaller steel pilings (8-inches in diameter) would be installed into the water, but closer to the levee and also in an area to be filled with rip-rap to support the new connecting bridge and to serve as the hinge point for the new gangway. All new pilings will be installed from the water with a crane equipped with a vibratory driver over the course of one day. The new dock, pedestrian bridge, and gangway configuration would be the same or less square footage than the existing configuration.

The riverbanks in the Project area have limited public access currently. The levees were constructed very close to the river channel and with a steep slope. The erosion control measures included placement of rock rip-rap. Highway 160 is a two-lane road with no shoulder or designated parking areas. The proposed Project will not undertake the massive reconstruction required to change any of these limitations on public access. However, creation of the habitat benches will provide local, regional, and statewide benefits through restoration and enhancement of ecosystem processes and protection from levee erosion. The Project will increase

the amount and quality of fish habitat through the creation of wetland and riparian benches on the Sacramento River channel margin. The Project will have a minor enhancement on public access by providing narrow areas that could be accessed by boat from the river or used as areas for fishing.

The proposed lease includes certain lease provisions protecting the public use of the proposed lease area. In addition, the Applicant and its Contractor are required to insure the lease premises and to indemnify the State for any liability incurred as a result of the Lessee's activities. The existing levees have existed for many years at this location, and the proposed facilities do not significantly alter the land. The lease does not alienate the State's fee simple interest and does not permanently impair public rights. The lease is limited to a 20-year term and does not grant the lessee exclusive rights to the lease premises. Upon termination of the lease, the lessee may be required to remove all improvements from State land.

CLIMATE CHANGE:

Climate change impacts, including sea-level rise, more frequent and intense storm events, and increased flooding and erosion, affect both open coastal areas and inland waterways in California. The subject facilities are located on the shoreline band of the Sacramento River, Sacramento County, in a tidally influenced site vulnerable to flooding at current sea levels and at a higher risk of flood exposure given projected scenarios of sea-level rise.

The California Ocean Protection Council updated the State of California Sea-Level Rise Guidance in 2018 to provide a synthesis of the best available science on sea-level rise projections and rates. Commission staff evaluated the "high emissions," "medium-high risk aversion" scenario to apply a conservative approach based on both current emission trajectories and the lease location and structures. The San Francisco tide gauge was used for the projected sea-level rise scenario for the region as listed in Table 1.

Table 1. Projected Sea-Level Rise for San Francisco

Year	Projection (feet)
2030	0.8
2040	1.3
2050	1.9
2100	6.9

Source: Table 13, State of California Sea-Level Rise Guidance: 2018 Update

Note: Projections are with respect to a 1991 to 2009 baseline.

This effect could increase the Sacramento River's inundation levels within the lease area. In addition, as stated in *Safeguarding California Plan: 2018 Update* (California Natural Resources Agency 2018), climate change is projected to increase the frequency and severity of natural disasters related to flooding, fire, drought, extreme heat, and storms (especially when coupled with sea-level rise). In rivers and tidally influenced waterways, more frequent and powerful storms can result in increased flooding conditions and damage from storm-created debris as well as decreased bank stability and structure. Conversely, climate-change induced droughts could decrease river levels and flow for extended periods of time which could impact coastal areas. Climate change and sea-level rise will further influence these areas by changing erosion and sedimentation rates. Flooding and storm flow, as well as runoff, will likely increase scour and decrease bank stability at a faster rate.

The combination of these projected conditions could increase the likelihood of damage to the shoreline along the Sacramento River and the proposed levee improvement measures. For example, the potential for more frequent and stronger storm events may expose the lease area to higher wave action from severe storms and cause the rip rap to be dislodged, presenting hazards to public safety. Conversely, prolonged drought conditions could potentially lead to increased wear-and-tear on the levee improvements rip rap.

Any shoreline improvements must be adaptable to variable water levels, allowing them to withstand the variability of rising and falling water levels with storms and droughts thus increasing their resiliency to some climate change impacts, but may require more frequent maintenance to ensure continued function during and after storm seasons and to avoid any dislodgement. All fixed features, such as bank protection may need reinforcement to withstand higher levels of tidal and wave exposure and more frequent storm events. Regular maintenance, as required by the terms of the lease, will reduce the likelihood of severe structural degradation or dislodgement.

Pursuant to the proposed lease, the Applicant acknowledges that the lease premises and adjacent upland (not within the lease area) are located in an area that may be subject to effects of climate change, including sea-level rise.

CONCLUSION:

For all the reasons above, Commission staff believes that the proposed Project will not substantially interfere with the Public's Trust needs and values over the lease term and is in the best interests of the State.

OTHER PERTINENT INFORMATION:

1. Approval or denial of the application is a discretionary action by the Commission. Each time the Commission approves or rejects a use of sovereign land, it exercises legislatively delegated authority and responsibility as trustee of the State's Public Trust lands as authorized by law. If the Commission denies the application, the Applicant will not be allowed to install or maintain the Sacramento River Levee Erosion Control/Habitat Enhancement Project. Upon expiration or prior termination of the lease, the lessee also has no right to a new lease or to renewal of any previous lease.
2. This action is consistent with the "Meeting Evolving Public Trust Needs" and "Leading Climate Activism" Strategic Focus Areas of the Commission's 2021-2025 Strategic Plan.
3. A Mitigated Negative Declaration, State Clearinghouse No. 2020100329 and a Mitigation Monitoring Program were prepared by the Brannan-Andrus Levee Maintenance District and adopted on December 10, 2020, for this Project. Staff reviewed these documents and prepared an independent MMP (attached, Exhibit C) incorporating the Brannan-Andrus Levee Maintenance District's document and recommends adoption by the Commission.
4. This activity involves lands identified as possessing significant environmental values pursuant to Public Resources Code section 6370 et seq., but such activity will not affect those significant lands. Based upon staff's consultation with the persons nominating such lands and through the California Environmental Quality Act (CEQA) review process, it is staff's opinion that the project, as proposed, is consistent with its use classification.

APPROVALS REQUIRED:

California Department of Fish and Wildlife
Central Valley Regional Water Quality Control Board
Central Valley Flood Protection Board
U.S. Army Corps of Engineers
U.S. Coast Guard
U.S. Fish and Wildlife Service

EXHIBITS:

- A. Land Description

- B. Site and Location Map
- C. Mitigation Monitoring Program

RECOMMENDED ACTION:

It is recommended that the Commission:

CEQA FINDING:

Find that a Mitigated Negative Declaration, State Clearinghouse No. 2020100329 and a Mitigation Monitoring Program were prepared by the Brannan-Andrus Levee Maintenance District and adopted on December 10, 2020, for this project, and that the Commission has reviewed and considered the information contained therein; that in the Commission's independent judgment, the scope of activities to be carried out under the lease to be issued by this authorization have been adequately analyzed; that none of the events specified in Public Resources Code section 21166 or the State CEQA Guidelines section 15162 resulting in any new or substantially more severe significant impact has occurred; and, therefore no additional CEQA analysis is required.

Adopt the Mitigation Monitoring Program, as contained in the attached Exhibit C.

PUBLIC TRUST AND STATE'S BEST INTERESTS:

Find that the proposed lease will not impact the public rights to navigation and fishing or substantially interfere with the Public Trust needs and values at this location, at this time, and for the foreseeable term of the lease; and is in the best interests of the State.

SIGNIFICANT LANDS INVENTORY FINDING:

Find that this activity is consistent with the use classification designated by the Commission for the land pursuant to Public Resources Code section 6370 et seq.

AUTHORIZATION:

Authorize issuance of a General Lease – Public Agency Use to the Applicant beginning June 29, 2021, for a term of 20 years, for the construction, installation, and maintenance of the Sacramento River Levee Erosion Control/Habitat Enhancement Project as described in Exhibit A and shown on Exhibit B (for reference purposes only) attached and by this reference made a part hereof; consideration to be the public use and benefit, with the State reserving the right, at any time, to set a monetary rent as specified in the lease if the Commission finds

such action to be in the State's best interests; and contractor liability insurance in an amount no less than \$5,000,000 per occurrence.

EXHIBIT A

A 2483

LAND DESCRIPTION

Three parcels of tide and submerged land situate in the bed of the Sacramento River, lying adjacent to the north portion of Brannan Island, County of Sacramento, State of California and more particularly described as follows:

PARCEL 1

Bounded on the west by the line 2100 feet westerly of and parallel with the westerly line and its northerly prolongation of Parcel B as shown on Parcel Map filed on August 13, 1984 in Book 82 of Parcel Maps at Page 11, Sacramento County Recorder Office;

Bounded on the east by the line 800 feet easterly of and parallel with the westerly line and its northerly prolongation of Parcel B as shown on Parcel Map filed on August 13, 1984 in Book 82 of Parcel Maps at Page 11, Sacramento County Recorder Office;

Bounded on the south by the centerline of State Highway 160;

Bounded on the north by the line 100 feet northerly of and parallel with the centerline of State Highway 160;

EXCEPTING THEREFROM any portion lying landward of the ordinary high water mark of the left bank of the Sacramento River.

PARCEL 2

Bounded on the west by the line 550 feet westerly of and parallel with the northerly prolongation of the most easterly line of Reminder Parcel as shown on Parcel Map filed on August 11, 2006 in Book 194 of Parcel Maps at Page 16, Sacramento County Recorder Office;

Bounded on the east by the line 2750 feet easterly of and parallel with the northerly prolongation of the most easterly line of Reminder Parcel as shown on Parcel Map filed on August 11, 2006 in Book 194 of Parcel Maps at Page 16, Sacramento County Recorder Office;

Bounded on the south by the centerline of State Highway 160;

Bounded on the north by the line 100 feet northerly of and parallel with the centerline of State Highway 160;

EXCEPTING THEREFROM any portion lying landward of the ordinary high water mark of the left bank of the Sacramento River.

PARCEL 3

Bounded on the west by the line 100 feet easterly of and parallel with the most westerly city limit boundary line of the City of Isleton as shown on the Map approved and adopted on February 3, 1958 by the Council of the City of Isleton (Resolution No. 470) and filed in Book 48 of Official Maps at Page 17 (Sheet 1), Sacramento County Recorder Office;

Bounded on the east by the line 1100 feet easterly of and parallel with the most westerly city limit boundary line of the City of Isleton as shown on the Map approved and adopted on February 3, 1958 by the Council of the City of Isleton (Resolution No. 470) and filed in Book 48 of Official Maps at Page 17 (Sheet 1), Sacramento County Recorder Office;

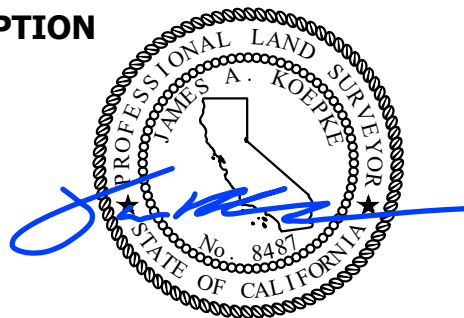
Bounded on the south by the centerline of State Highway 160;

Bounded on the north by the line 100 feet northerly of and parallel with the centerline of State Highway 160;

EXCEPTING THEREFROM any portion lying landward of the ordinary high water mark of the left bank of the Sacramento River.

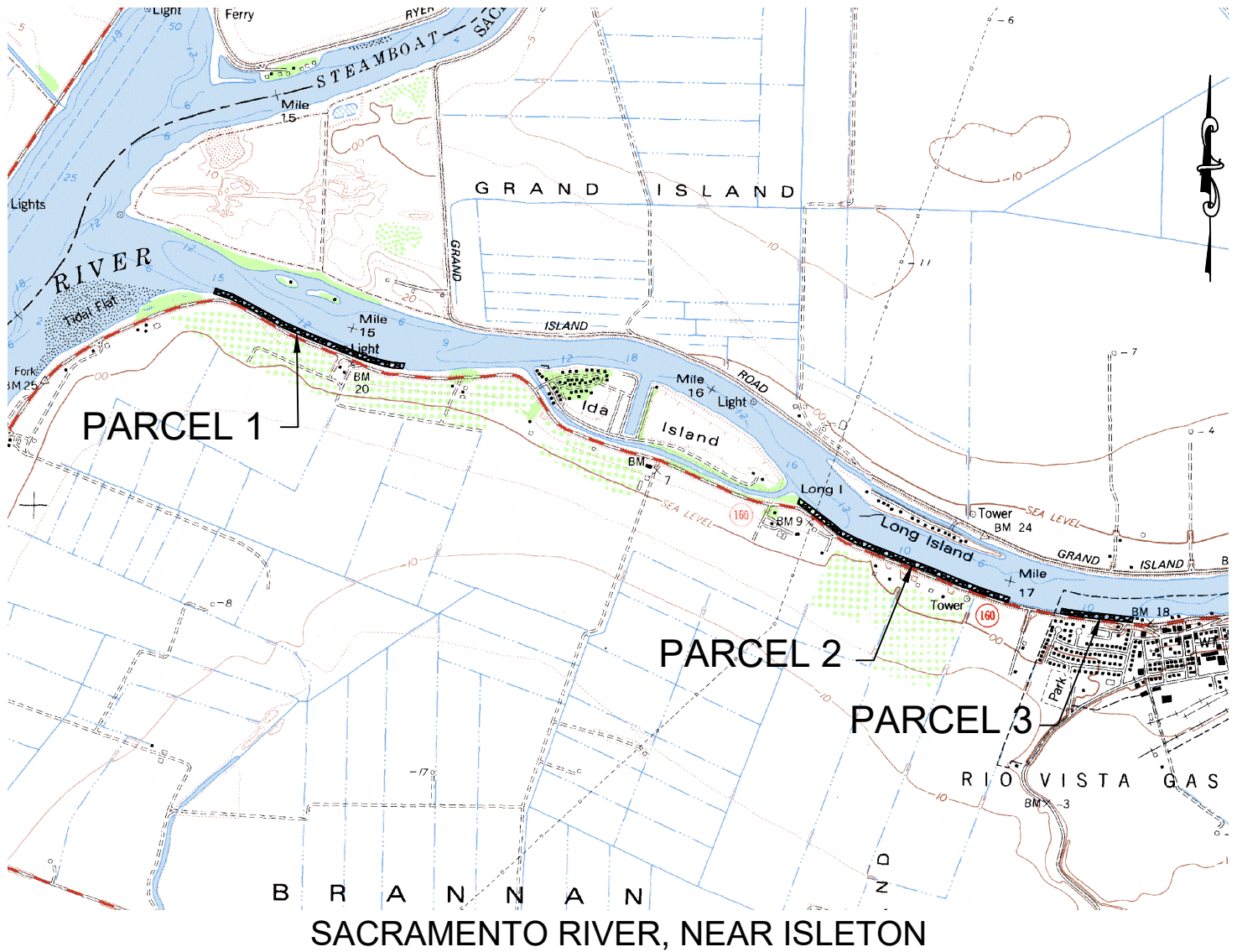
END OF DESCRIPTION

Prepared 12/31/2020 by the California
State Lands Commission Boundary Unit



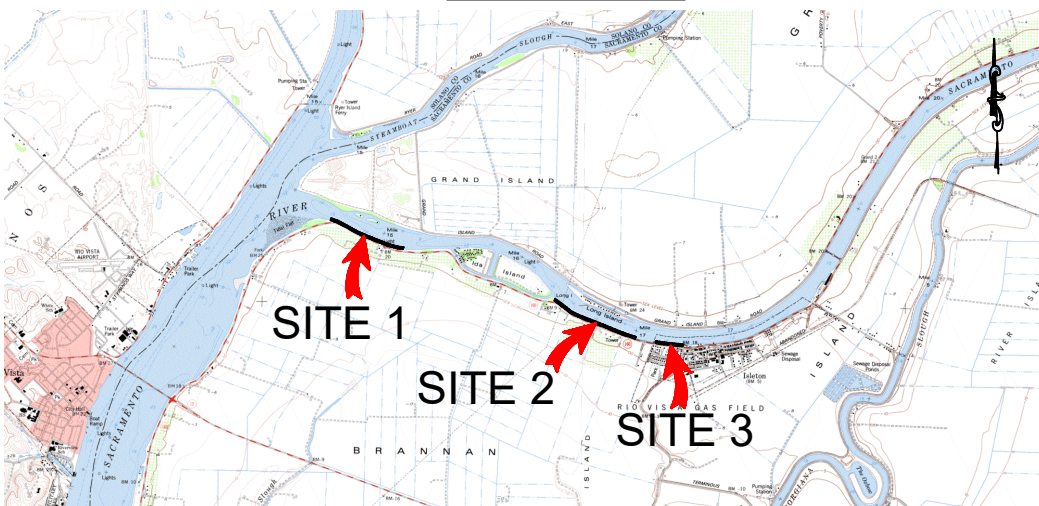
NO SCALE

SITE



NO SCALE

LOCATION



MAP SOURCE: USGS QUAD

Exhibit B

A 2483
BRANNAN-ANDRUS LEVEE
MAINTENANCE DISTRICT
APNs: MULTIPLE
GENERAL LEASE-
PUBLIC AGENCY USE
SACRAMENTO COUNTY



TS 12/31/2020

This Exhibit is solely for purposes of generally defining the lease premises, is based on unverified information provided by the Lessee or other parties and is not intended to be, nor shall it be construed as, a waiver or limitation of any State interest in the subject or any other property.

EXHIBIT C
CALIFORNIA STATE LANDS COMMISSION
MITIGATION MONITORING PROGRAM
SACRAMENTO RIVER EROSION CONTROL AND
HABITAT ENHANCEMENT PROJECT
(A2483, State Clearinghouse No. 2020100329)

The California State Lands Commission (Commission or CSLC) is a responsible agency under the California Environmental Quality Act (CEQA) for the Sacramento River Erosion Control and Habitat Enhancement Project (Project). The CEQA lead agency for the Project is the Brannan-Andrus Levee Maintenance District (BALMD).

In conjunction with approval of this Project, the Commission adopts this Mitigation Monitoring Program (MMP) for the implementation of mitigation measures for the portion(s) of the Project located on Commission lands. The purpose of a MMP is to impose feasible measures to avoid or substantially reduce the significant environmental impacts from a project identified in an Environmental Impact Report (EIR) or a Mitigated Negative Declaration (MND). State CEQA Guidelines section 15097, subdivision (a), states in part:¹

In order to ensure that the mitigation measures and project revisions identified in the EIR or negative declaration are implemented, the public agency shall adopt a program for monitoring or reporting on the revisions which it has required in the project and the measures it has imposed to mitigate or avoid significant environmental effects. A public agency may delegate reporting or monitoring responsibilities to another public agency or to a private entity which accepts the delegation; however, until mitigation measures have been completed the lead agency remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with the program.

The lead agency adopted an MND, State Clearinghouse No. 2020100329, adopted a Mitigation Monitoring and Reporting Program for the whole of the Project (see Exhibit C, Attachment C-1), and remains responsible for ensuring that implementation of the mitigation measures occurs in accordance with its program. The Commission's action and authority as a responsible agency apply only to the mitigation measures listed in Table C-1 below. The full text of each mitigation measure, as set forth in the MMP prepared by the CEQA lead agency and provided in Attachment C-1, is incorporated by reference in this Exhibit C. Any mitigation measures adopted by the Commission that differ substantially from those adopted by the lead agency are shown as follows:

- Additions to the text of the mitigation measure are underlined.

¹ The State CEQA Guidelines are found at California Code of Regulations, title 14, section 15000 et seq.

Table C-1. Project Impacts and Applicable Mitigation Measures

Potential Impact	Mitigation Measure (MM) ²	Difference Between CSLC MMP and Lead Agency MMP
AQ-1: Potential Impacts to Air Quality During Construction	MM AQ-1: Best Available Construction Measures	None
BIO-1: Potential Impacts to Special-Status Plant Species	MM BIO-1: Special Status Plants Avoidance	None
BIO-3: Potential Impacts to General Wildlife	MM BIO-3: General Wildlife Best Management Practices	None
BIO-6: Potential Impacts to Green Sturgeon Habitat	MM BIO-6: Green Sturgeon Mitigation Acreage and Mitigation Credits	None
CULT-1: Potential Impacts to Unanticipated Discovery of Archaeological Resources	MM CULT-1: Unanticipated Discovery of Archaeological Resources	See Below
CULT-2: Potential Impacts to Human Remains on-site	MM CULT-2: Discovery of Human Remains	See Below
GEO-1: Potential Impacts to Accidental Discovery of Paleontological Resources	MM GEO-1: Measures to reduce Impacts to Accidental Discovery of Paleontological Resources	None
TCR-1: Potential Impacts to Accidental Discovery of Tribal Cultural Resources	MM TCR-1: Measures to Reduce Impacts to the Accidental Discovery of Tribal Cultural Resources	See Below

Additions to existing MM CULT-1: Unanticipated Discovery of Archaeological Resources

BALMD will implement the following measures to reduce impacts to cultural resources:

If prehistoric or historic artifacts, or other indications of archaeological resources such as unusual deposits of stone, bone or shell, stone artifacts, or historic trash deposits or foundations are discovered once ground-disturbing activities are underway, the find(s) shall be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation shall be made available, as provided in §15064.5 of the CEQA Guidelines. Such measures may include, but not be limited to, Phase II archaeological evaluation and Phase III data recovery excavation. Work may continue on other parts of the Proposed Project Area while historical or unique archaeological resource mitigation takes place on-site. California State Lands Commission staff shall be notified of any archaeological resource discovered on lands under the jurisdiction of the Commission so that the Commission may fulfill its responsibilities as the landowner.

² See Attachment C-1 for the full text of each MM taken from the MMP prepared by the CEQA lead agency.

Additions to existing MM CULT-2: Discovery of Human Remains.

BALMD will implement the following measures to reduce impacts to human remains if discovered:

If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of being granted access and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If the landowner or authorized representative rejects the recommendation of the MLD, either the landowner or the MLD may request mediation by the NAHC, which would include the meaningful and timely discussion and careful consideration of the views of each party to come to an agreement. If the NAHC is unable to identify a MLD or the MLD fails to make a recommendation within 24 hours after notification by the NAHC, or the landowner or his authorized agent rejects the recommendation by MLD and mediation by the NAHC fails to provide a measure acceptable to the landowner, then the landowner or his authorized representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. California State Lands Commission staff shall be notified of any human remains discovered on lands under the jurisdiction of the Commission so that the Commission may fulfill its responsibilities as the landowner.

Additions to existing MM TCR-1: Accidental Discovery of Tribal Cultural Resources.

BALMD will implement the following measures to reduce impacts to cultural resources:

If any resources of Native American origin are discovered once ground-disturbing activities are underway, the BALMD shall contact local Native Americans to consult on the find. If the find is determined to be a tribal cultural resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation determined in consultation with local Native Americans shall be made available. Work may continue on other parts of the project site while tribal cultural resource mitigation takes place on-site. California State Lands Commission staff shall be notified of any Tribal Cultural Resource on lands under the jurisdiction of the Commission so that the Commission may fulfill its responsibilities as the landowner.

ATTACHMENT C-1

**Mitigation Monitoring and Reporting Program Adopted by the
Brannan-Andrus Levee Maintenance District**

EXHIBIT C
MITIGATION MONITORING AND REPORTING PROGRAM
BRANNAN-ANDRUS LEVEE MAINTENANCE DISTRICT
SACRAMENTO RIVER EROSION CONTROL AND HABITAT ENHANCEMENT
PROJECT

December 10, 2020

In accordance with Section 15074(d) of the California Environmental Quality Act (CEQA) Guidelines, the following Mitigation Monitoring and Reporting Program (MMRP) identifies the mitigation measures for the Brannan-Andrus Levee Maintenance District (BALMD) Sacramento River Erosion Control/Habitat Enhancement Project (Project). BALMD staff will be responsible for ensuring that the following mitigation measures are implemented for the Project. This includes ensuring that, where applicable, the appropriate mitigation measures are included in construction contracts and construction specifications and drawings that are prepared for the Project. The BALMD also will be responsible for overseeing field inspections that are conducted (as necessary) on a timely basis to ensure that the specified mitigation measures are being implemented. The construction contractor(s) selected for the Project will be required to implement the specified measures in a timely manner.

The following measures shown in **Table 1** must be adopted by the BALMD Board of Directors as part of the approval of this Project. The following table provides the adopted mitigation measures, including the timing, implementing responsibility, and monitoring responsibility for each measure.

CEQA Mitigation Monitoring and Reporting Program
Brannan-Andrus Levee Maintenance District
Sacramento River Erosion Control and Habitat Enhancement Project (BA-15-1.0-SP)

Measure	Timing	Implementation Responsibility	Monitoring/Reporting Responsibility
AIR QUALITY			
<p>Mitigation Measure AQ-1: Best Available Construction Measures.</p> <p>BALMD would ensure Project contractors implement/adopt the relevant Sacramento Metropolitan Air Quality Management District Basic Control Emission Control Practices (also known as BMPs) during project construction including:</p> <ul style="list-style-type: none"> • Control of fugitive dust is required by District Rule 403 and enforced by District staff. • Watering of all exposed surfaces two times daily. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads. • Covers or maintenance of at least two feet of free board space on haul trucks transporting soil, sand, or other loose material on the site. Any haul trucks that would be traveling along freeways or major roadways should be covered. • Using wet power vacuum street sweepers to remove any visible track-out mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited. 	<p>Phase: Pre-construction and during construction.</p>	<p>Responsible Party: BALMD and environmental consultants.</p> <p>Activity: Conduct pre-construction surveys.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measure in the Project's construction specifications issued to contractors.</p>
BIOLOGICAL RESOURCES			
<p>Mitigation Measure BIO-1: Special Status Plants Avoidance.</p> <p>BALMD would retain a qualified botanist to conduct special status plant surveys using the approved CDFW 'Protocols for Surveying and Evaluating Impacts to Special-Status Native Plant Populations and Natural Communities (2018)' during the</p>	<p>Phase: Pre-construction and during construction.</p>	<p>Responsible Party: BALMD and environmental consultants.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measure in the Project's construction</p>

CEQA Mitigation Monitoring and Reporting Program
 Brannan-Andrus Levee Maintenance District
 Sacramento River Erosion Control and Habitat Enhancement Project (BA-15-1.0-SP)

Measure	Timing	Implementation Responsibility	Monitoring/Reporting Responsibility
<p>appropriate season for identification of covered and no-take plant species as follows:</p> <ul style="list-style-type: none"> • If detected, the location of all individual special status plant species shall be mapped. Where feasible, individuals shall be fenced for avoidance during construction. Where avoidance is not possible, losses shall be offset through inclusion of these species into the restoration planting palette. To the extent feasible, rhizomes of the Suisun Marsh aster and Mason's lilaeopsis shall be salvaged and stored in damp soil and cared for by a qualified biologist or nursery professional until restoration plantings are implemented. Salvage of Mason's lilaeopsis may require additional authorizations from CDFW due to its status as State rare species. Any consultation with CDFW, including the requirement to obtain a CESA Section 2081 incidental take permit, if this and other CESA listed plant species are found, shall be completed prior to the start of construction in occupied areas, and the applicant shall submit written documentation of the results of such consultations. Black walnut, Mason's lilaeopsis, and Suisun Marsh aster shall be included in the plant palette at a minimum 3 to 1 ratio of individuals planted to individuals removed. • BALMD will implement efforts to avoid the spread or introduction of invasive weeds during implementation of the Proposed Project. Appropriate BMPs (AMM 3) that are intended and designed to curtail the spread of invasive plant species shall be implemented during construction. These include, but are not limited to, the following: 		<p>Activity: Conduct pre-construction surveys.</p>	<p>specifications issued to contractors.</p>

CEQA Mitigation Monitoring and Reporting Program
Brannan-Andrus Levee Maintenance District
Sacramento River Erosion Control and Habitat Enhancement Project (BA-15-1.0-SP)

Measure	Timing	Implementation Responsibility	Monitoring/Reporting Responsibility
<ul style="list-style-type: none"> • All reasonable efforts to ensure imported material is free of invasive plant species will be made • Equipment and vehicles must be free of caked on mud and weed seeds/propagules before accessing and leaving the project site. • Landscaping materials will not include invasive, non-native ornamentals as identified by the California Invasive Plant Council (Cal-IPC) Inventory. 			
<p>Mitigation Measure BIO-2. Roosting Bats Impact Avoidance and Minimization.</p> <p>Prior to removal of trees or large shrubs, BALMD would ensure a qualified biologist conduct a survey of potential bat roosts to determine if roosting bats are present.</p> <ul style="list-style-type: none"> • If a bat roost is found, further analysis shall be conducted sufficient to determine the species present and the type of roost (day, night, maternity, etc.). • If the bats are not part of an active maternity colony, passive exclusion measures may be implemented prior to removal of the affected vegetation. These exclusion measures may include one-way valves that allow bats to exit the structure but are designed so that the bats may not re-enter if the roost is a cavity roost. • For non-maternity tree roosts, the roost shall be checked daily until the bats have moved and then vegetation removal can proceed with a monitor present. • Maternal bat colonies shall not be disturbed while young are present and dependent on the roost. • Any tree trimming or tree removal required for the project shall be limited to seasonal periods of bat activity: between August 31 and October 15, when bats 	<p>Phase: Pre-construction.</p>	<p>Responsible Party: BALMD and environmental consultant.</p> <p>Activity: Conduct pre-construction surveys and establish exclusions if active roosts are found.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>

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would be able to fly and feed independently, and between March 1 and April 15 to avoid hibernating bats, and prior to the formation of maternity colonies.			
<p>Mitigation Measure BIO-3. General Wildlife Best Management Practices.</p> <p>BALMD would ensure the following general wildlife Best Management Practices are implemented during project construction:</p> <ul style="list-style-type: none"> No pets shall be allowed at the project site. All trash that may attract predators shall be properly contained in covered containers and removed from the work site on a regular basis. No plastic monofilament netting shall be utilized on-site. 	<p>Phase: Pre-construction and during construction.</p>	<p>Responsible Party: BALMD and environmental consultant.</p> <p>Activity: Conduct regular inspections.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>
<p>Mitigation Measure BIO-4: Raptor Avoidance and Minimization Efforts.</p> <p>BALMD will implement the following measures to minimize and avoid impacts to raptors:</p> <ul style="list-style-type: none"> If feasible, all vegetation clearing, tree removal and tree trimming shall occur outside of the nesting season (February 15 through August 31). If construction activity is scheduled during the nesting season, a qualified biologist shall conduct a pre-construction survey for active Swainson's hawk and white-tailed kite nests. Surveys shall be conducted within two weeks of the start of construction activities that are scheduled to occur during the nesting/breeding season. Specific surveys for Swainson's Hawk will be conducted in accordance with the Swainson's Hawk Technical Advisory Committee's Recommended Timing and 	<p>Phase: Pre-construction and during construction.</p>	<p>Responsible Party: BALMD and environmental consultant.</p> <p>Activity: Conduct pre-construction surveys and establish buffer zones if active nests are found.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>

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<p>Methodology for Swainson’s Hawk Nesting Surveys in California’s Central Valley (Swainson’s Hawk Technical Advisory Committee 2000). The survey shall include the project site plus a 0.5-mile buffer. The pre-construction survey shall be conducted during the time of day when the birds are active and shall be of sufficient duration to reliably conclude presence/absence of Swainson’s hawk and white-tailed kite nests. A report of the survey results shall be submitted to the BALMD prior to issuance of any grading or building permits. As a fully protected species, there is no allowable “take” for white-tailed kite under any circumstances. As a State endanger species, there is no “take” of Swainson’s hawk without “take” authorization from CDFW.</p> <ul style="list-style-type: none"> • If no active Swainson’s hawk or white-tailed kite nests are detected, no additional action is required. • If active Swainson’s hawk nests are observed within 0.5 mile of the project site, a minimum 0.25-mile avoidance buffer shall be established around each nest. If active white-tailed kite nests are identified within 0.5 mile of the project, a minimum avoidance buffer of 500 feet shall be established. Any variance for smaller avoidance buffers shall only be allowed through approval by the CDFW and the BALMD. Active nests shall be monitored by a qualified biologist during project-related activities. The avoidance buffer shall be maintained for the duration of the project, unless the biologist has determined that the young have fledged or are no longer dependent upon the nest and parental care. • If a Swainson’s hawk or white-tailed kite is observed perched or foraging in the project area, all project-related 			

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<p>work shall cease and the individual shall be allowed to leave the project site unimpeded and of its own accord before work may resume.</p> <ul style="list-style-type: none"> • Work activities shall be prohibited within active raptor nest buffers until the qualified biologists has determined that young birds have fledged and left the nest(s). Readily visible exclusion zones shall be established in areas where nests must be avoided. 			
<p>Mitigation Measure BIO-5: Non-Raptor Avoidance and Minimization Efforts.</p> <p>BALMD will implement the following avoidance and minimization efforts:</p> <ul style="list-style-type: none"> • If feasible, removal and/or trimming of trees shall be scheduled to occur in the outside of the nesting season during non-breeding fall/winter months (September 1 through February 14), after fledging and before the initiation of the nesting season. • Nesting Bird Assessment and Avoidance: Prior to the initiation of construction, including ground disturbing activities scheduled to occur between February 15 and September 15, the Qualified Biologist shall conduct a habitat assessment and nesting survey for nesting bird species no more than five (5) days prior to the initiation of work. Surveys shall encompass all potential habitats (e.g., grasslands and tree cavities) within 250 feet of the Project site. The Qualified Biologist conducting the surveys shall be familiar with the breeding behaviors and nest structures for birds known to nest in the Project site. Surveys shall be conducted during periods of peak 	<p>Phase: Pre-construction and during construction.</p>	<p>Responsible Party: BALMD and environmental consultant.</p> <p>Activity: Conduct pre-construction surveys and establish buffer zones if active nests are found.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>

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<p>activity (early morning, dusk) and shall be of sufficient duration to observe movement patterns. Survey results, including a description of timing, duration and methods used, shall be submitted to CDFW for review forty- eight hours prior to the initiation of the Project. If a lapse in Project activity of seven days (7) or more occurs, the survey shall be repeated, and no work shall proceed until the results have been submitted to CDFW. If nesting birds are found, as described above, then no work shall be initiated until species-specific buffers have been established in consultation with CDFW. The buffer area(s) shall be demarked from work activities and avoided until the young have fledged, as determined by the Qualified Biologist. Active nests found inside the limits of species-specific buffer zones or nests within the vicinity of the Project site showing signs of distress from Project activity as determined by the Qualified Biologist shall be monitored daily during the duration of the Project for changes in bird behavior. Buffer areas of active nests within the vicinity of the Project site showing signs of distress or disruptions to nesting behaviors from Project activity, as determined by the Qualified Biologist, shall have their buffers immediately adjusted by the Qualified Biologist until no further interruptions to breeding behavior are detectable.</p> <ul style="list-style-type: none"> • If no active nests are detected, no additional action is required. • If applicable (i.e., nests are detected as a result of the pre-construction surveys), the qualified biologist shall perform at least two hours of preconstruction monitoring of the nest to characterize “typical” bird behavior. The 			

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<p>qualified biologist shall monitor the nesting birds and shall increase the buffer if the qualified biologist determines the birds are showing signs of</p> <ul style="list-style-type: none"> unusual or distressed behavior by project activities. Atypical nesting behaviors which may cause reproductive harm include, but are not limited to, defensive flights/vocalizations directed toward project personnel, standing up from a brooding position, and flying away from the nest. If applicable, the qualified biologist shall have authority to order the behavior which may cause reproductive failure (nest abandonment and loss of eggs and/or young) until an appropriate buffer is established. To prevent encroachment, the established buffer(s) shall be clearly marked by high visibility material. The established buffer(s) shall remain in effect until the young have fledged or the nest has been abandoned as confirmed by the qualified biologist. Any sign of nest abandonment shall be reported to CDFW within 48 hours. 			
<p>Mitigation Measure BIO-6: Green Sturgeon Mitigation Acreage and Mitigation Credits.</p> <p>BALMD will implement the following mitigation/avoidance and minimization efforts for the Project:</p> <ul style="list-style-type: none"> Mitigation acreage created by habitat benches: <ul style="list-style-type: none"> 0.96 acres of riparian forest 0.90 acres of freshwater marsh/tule habitat 0.73 acres of scrub shrub Total acreage created = 2.59 acres 	<p>Phase: Prior to construction.</p>	<p>Responsible Party: BALMD.</p>	<p>Responsible Party: BALMD and Mitigation Bank.</p> <p>Activity: Provide proof of purchase to NMFS and USACE.</p>

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<ul style="list-style-type: none"> Impacts (5.63) less created bench habitat (2.59) will require purchase of 3.04 acres of Green Sturgeon mitigation credit. Mitigation bank credits will be purchased from Fremont Landing Conservation Bank (operated by Wildlands) prior to project impacts. 			
CULTURAL RESOURCES			
<p>Mitigation Measure CULT-1. Unanticipated Discovery of Archaeological Resources.</p> <p>BALMD will implement the following measures to reduce impacts to cultural resources:</p> <ul style="list-style-type: none"> If prehistoric or historic artifacts, or other indications of archaeological resources such as unusual deposits of stone, bone or shell, stone artifacts, or historic trash deposits or foundations are discovered once ground-disturbing activities are underway, the find(s) shall be immediately evaluated by a qualified archaeologist. If the find is determined to be a historical or unique archaeological resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation shall be made available, as provided in §15064.5 of the CEQA Guidelines. Such measures may include, but not be limited to, Phase II archaeological evaluation and Phase III data recovery excavation. Work may continue on other parts of the Proposed Project Area while historical or unique archaeological resource mitigation takes place on-site. 	<p>Phase: During construction</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Retain qualified archaeologist to conduct survey if resources are found onsite and consult on other appropriate avoidance and mitigation actions.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>

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<p>Mitigation Measure CULT-2. Discovery of Human Remains.</p> <p>BALMD will implement the following measures to reduce impacts to human remains if discovered:</p> <ul style="list-style-type: none"> If human remains are found, the State of California Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the county coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. In the event of an unanticipated discovery of human remains, the county coroner must be notified immediately. If the human remains are determined to be prehistoric, the coroner shall notify the Native American Heritage Commission (NAHC), which will determine and notify a most likely descendant (MLD). The MLD shall complete the inspection of the site within 48 hours of being granted access and may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. If the landowner or authorized representative rejects the recommendation of the MLD, either the landowner or the MLD may request mediation by the NAHC, which would include the meaningful and timely discussion and careful consideration of the views of each party to come to an agreement. If the NAHC is unable to identify a MLD or the MLD fails to make a recommendation within 24 hours after notification by the NAHC, or the landowner or his authorized agent rejects the recommendation by MLD and mediation by the NAHC fails to provide a measure acceptable to the landowner, then the landowner or his authorized representative shall rebury the human 	<p>Phase: During construction</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Halt all work within a minimum of 50 feet of the discovery site and notify the County Coroner.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>

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remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances.			
GEOLOGY/SOILS			
<p>Mitigation Measure GEO-1. Accidental Discovery of Paleontological Resources.</p> <p>BALMD will implement the following measures to reduce impacts to paleontological resources:</p> <ul style="list-style-type: none"> • If vertebrate fossils (e.g., teeth, bones) are unearthed by the construction crew anywhere on the project, the finds should be set aside and all excavation activity cease at the specific place of discovery until a paleontologist has assessed the find and, if deemed significant, salvaged the find in a timely manner. The decision to conduct paleontological salvage operations will be determined by the paleontologist in consultation with District staff. Work may proceed on other parts of the project while assessment and/or salvage by the paleontologist is underway. Finds determined significant by the paleontologist shall be conserved and deposited with a recognized repository such as the University of California Museum of Paleontology. • The final disposition of archaeological, historical, and paleontological resources recovered on State lands under the jurisdiction of the California State Lands Commission must be approved by the Commission. 	<p>Phase: During construction</p>	<p>Responsible Party: BALMD and environmental consultant</p> <p>Activity: Halt all work within a minimum of 50 feet of the discovery site and retain qualified paleontologist to conduct survey. Consult on other appropriate avoidance and mitigation actions.</p>	<p>Responsible Party: BALMD and construction contractors</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>

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NOISE			
<p>Mitigation Measure NZ-1. Minimize Woodchipper Related Noise.</p> <p>BALMD and its construction contractor will implement the mitigation measure listed below, to reduce woodchipper-related noise:</p> <ul style="list-style-type: none"> • Selection of low noise components, e.g. engine. • Optimization of the knife mounting configuration to reduce noise. • Selection of a low noise exhaust system; and/or • Use of low-noise operating mode. 	<p>Phase: During construction.</p>	<p>Responsible Party: BALMD and construction contractors</p> <p>Activity: Project construction will occur between 7:00 a.m. and 10:00 p.m.</p>	<p>Responsible Party: BALMD and construction contractors</p> <p>Activity: Include the identified measure in the Project's construction specifications issued to contractors.</p>
TRIBAL CULTURAL RESOURCES			
<p>Mitigation Measure TCR-1. Accidental Discovery of Tribal Cultural Resources.</p> <p>BALMD will implement the following measures to reduce impacts to cultural resources:</p> <ul style="list-style-type: none"> • If any resources of Native American origin are discovered once ground-disturbing activities are underway, the BALMD shall contact local Native Americans to consult on the find. If the find is determined to be a tribal cultural resource, contingency funding and a time allotment to allow for implementation of avoidance measures or appropriate mitigation determined in consultation with local Native Americans shall be made available. Work may continue on other parts of the project site while tribal cultural resource mitigation takes place on-site. 	<p>Phase: During construction.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Retain qualified archaeologist to conduct survey if resources are found onsite and consult on other appropriate avoidance and mitigation actions.</p>	<p>Responsible Party: BALMD and construction contractors.</p> <p>Activity: Include the identified measures in the Project's construction specifications issued to contractors.</p>