

COASTAL CONSERVANCY

Staff Recommendation

May 16, 2019

**Big Canyon Creek Phase 2A Restoration and Estuary Adaptation**

Project No. 17-018-02

Project Manager: Evyan Sloane

**RECOMMENDED ACTION:** Authorization to disburse up to \$1,049,991 to the Newport Bay Conservancy to prepare final designs and implement Phase 2A of the Big Canyon Creek Phase 2A Restoration and Estuary Adaptation Project within the 60-acre Big Canyon Nature Park in the City of Newport Beach and County of Orange and adoption of findings under the California Environmental Quality Act.

**LOCATION:** Big Canyon Nature Park, City of Newport Beach, County of Orange

**PROGRAM CATEGORY:** Integrated Coastal and Marine Resources Protection; Resource Enhancement

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**EXHIBITS**

Exhibit 1: [Project Location](#)

Exhibit 2: [Phase I Project Photos](#)

Exhibit 3: [September 28, 2017, Staff Recommendation](#)

Exhibit 4: [Project Letters](#)

Exhibit 5: [Initial Study / Final Mitigated Negative Declaration for the Big Canyon Creek Restoration and Adaptation Project](#)

Exhibit 6: [City Response to IS/MND Comments](#)

Exhibit 7: [Mitigation Monitoring and Reporting Plan](#)

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**RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31111 31220, 31251-31270 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes the disbursement of up to one million forty-nine thousand nine hundred ninety-one dollars (\$1,049,991) to the Newport Bay Conservancy to prepare final designs and implement the restoration of approximately 11 acres of coastal sage upland, riparian, and freshwater marsh habitats in the Phase 2A project areas of the Big Canyon Creek Phase 2A Restoration and Estuary Adaptation Project within the Big Canyon Nature Park.

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This authorization is subject to the following conditions:

1. Prior to disbursement of funds for each phase of the project, the City shall submit for the review and written approval of the Executive Officer of the Conservancy (Executive Officer) the following items:
  - a. A detailed work program, schedule, and budget.
  - b. Names and qualifications of any contractors to be retained.
  - c. Evidence of all required permits and approvals have been obtained.
  - d. Evidence that all necessary funds for implementation of each phase the project have been obtained.
2. In implementing the project, the Newport Bay Conservancy shall:
  - a. Acknowledge Conservancy and US Fish and Wildlife Service funding in accordance with a plan that has been approved by the Executive Officer.
  - b. Ensure compliance with all applicable impact avoidance, minimization and mitigation measures and monitoring and reporting requirements for the project identified in (1) the *Big Canyon Coastal Habitat Restoration and Adaptation Project—Phase 2A Initial Study and Mitigated Negative Declaration*, and the Mitigation Monitoring and Reporting Program and (2) in any permits, approvals or other environmental documentation for the project. Ensure compliance with all requirements of the USFWS grant, including compliance with the National Environmental Policy Act.”

Staff further recommends that the Conservancy adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the State Coastal Conservancy hereby finds that:

1. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
2. The Conservancy has independently reviewed and considered the *Big Canyon Coastal Habitat Restoration and Adaptation Project—Phase 2A Initial Study and Mitigated Negative Declaration* and the Mitigation Monitoring and Reporting adopted by the City of Newport Beach pursuant to the California Environmental Quality Act (“CEQA”). The Conservancy finds that the proposed project as designed and mitigated avoids, reduces, or mitigates the potentially significant environmental effects to a less-than-significant level and that there is no substantial evidence based on the record as a whole that the project may have a significant effect on the environment, as defined in 14 Cal. Code Regulations Section 15382.
3. The Newport Beach Conservancy is a nonprofit organization organized under section 501(c)(3) of the U.S. Internal Revenue Code, with purposes consistent with Division 21 of the Public Resources Code.”

**PROJECT SUMMARY:**

Staff recommends the Conservancy provide up to \$1,049,991 to the Newport Bay Conservancy (NBC) to prepare final designs and implement restoration of 11 acres of coastal sage upland, riparian, and freshwater marsh habitats within the 60-acre Big Canyon Nature Park in the City of Newport Beach and County of Orange (Exhibit 1, Phase 2A). Funds for this authorization primarily derive from a grant to the Conservancy of \$1,000,000 from the US Fish and Wildlife Service (USFWS) National Coastal Wetlands Conservation Program (NCWC) specifically for this project. The remaining \$30,445 in USFWS grant funds will be used to pay for Conservancy staff project management costs. The proposed project aims to improve the water quality, restore natural riparian habitat, and protect and restore estuary habitats.

Big Canyon Creek is in urgent need of habitat restoration and enhancement due to watershed impacts from channel incision, loss of floodplain, unstable banks, poor water quality, and aggressive encroachment of invasive species. Without restoration efforts requested in this proposal, the remaining native habitats and associated wildlife will rapidly disappear from this important coastal tributary of Upper Newport Bay. Increased impacts from poor water quality will degrade both the creek and downstream Upper Newport Bay Ecological Reserve.

The project will remove a dense, invasive Brazilian peppertree forest, lay back Big Canyon Creek's banks to address incision and reconnect the creek to the floodplain, and restore native habitats that are resilient to the newly arrived invasive beetle Polyphagous Shot Hole Borer. The project will also enhance public access and education with improved trails and closure of illegal trails. The proposed project is Phase 2A of a larger watershed restoration and will build upon the lessons-learned and outcomes of the previous phase of restoration (Phase 1). Phase 1 implementation, carried out by the City of Newport Beach in 2017, restored a 6-acre parcel including 650 feet of creek restoration, 2 acres of riparian habitat restoration, and 1-acre of wetland habitat creation and enhancement for storm water treatment (See Exhibit 1 for map of all project phases & Exhibit 2 for photos of Phase 1). Future project phases (Phase 2B & 2C) include the remediation and restoration of a selenium impacted freshwater pond, the creation of new transitional salt marsh habitat to adapt to sea-level rise, and improved public access and education. The overall Big Canyon Restoration project (Phases 1 & 2A-C) will result in a mosaic of native and resilient wetland habitats that will support threatened and endangered species and persist in the face of environmental stressors such as the invasive shot-hole borer and sea-level rise.

**Site Description:** The proposed project is located within the 60-acre Big Canyon Nature Park (Canyon) at the downstream end of the Big Canyon watershed in the City of Newport Beach and Orange County (Exhibit 1).

The Big Canyon watershed covers approximately two square miles located on the east side of the Upper Newport Bay. Big Canyon Creek winds through the Canyon in a general southeast to northwest direction and then discharges into Upper Newport Bay. The Big Canyon Nature Park (Canyon) is the only natural, undeveloped portion of the Big Canyon watershed and is the only significant remaining natural canyon on the east side of Newport Bay. The Canyon has been influenced by the construction of a freshwater pond that is now almost filled with cattails, historical placement of dredge and fill material, an interim restoration effort, and other anthropogenic activities within and adjacent to the Canyon including the construction of culverts,

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roads and other structures. Stockpiling of dredge fill during the 1950s and 1960s within Big Canyon raised the elevations within the Canyon and consequently channelized the creek to the north. The Canyon has also been heavily invaded by non-native species especially the hyper-invasive Brazilian pepper tree (*Schinus terebinthifolius*). Finally, Big Canyon Creek runs through the Canyon and is one of the few perennial streams that discharges to Newport Bay. Big Canyon Creek is listed as an impaired waterbody for selenium. A total maximum daily load (TMDL) has been established for the creek and concentrations of selenium above water quality guidelines have been measured in dry weather flows.

The 45-acre parcel of the Canyon is owned by the City of Newport Beach (City) and the lower 15-acre portion of the Canyon is owned by the California Department of Fish and Wildlife (CDFW).

**Project History:** The Conservancy has been funding Big Canyon technical studies to support more developed restoration plans since 2002. While those studies and the initial restoration plans were successful in determining the necessary hydrologic and biological changes required to restore ecosystem function in Big Canyon, the discovery of high levels of selenium prevented the implementation of any previous design plans. In 2009 through 2011, the source of selenium and the extent of contamination were unknown. With the completion of Conservancy-funded technical studies, the selenium source has been identified as a seepage at the base of Jamboree Road at the top of the Canyon that flows through a geologic formation containing California Monterey Rock. This type of rock naturally contains high concentrations of selenium.

The City of Newport Beach, along with the Santa Ana Regional Water Quality Control Board (SARWQCB), is currently implementing an early phase of the project aimed to restore riparian habitat, reduce selenium inputs, and monitor water quality in Big Canyon (see Phase I project area in Exhibit 1 and Phase I photos in Exhibit 2). By diverting and capturing the water that flows through the Monterey Rock formation, the City has successfully reduced the amount of selenium entering the proposed project area. The monitoring results to-date demonstrate this success. In light of this new scientific evidence and the need to now address the remnant selenium concentrations present in the project area (i.e., mainly in the freshwater pond), there is momentum among the landowners and agency partners to move forward with a new restoration design.

On September 28, 2017, the Conservancy granted \$640,00 to the Newport Bay Conservancy (NBC) to conduct feasibility studies and prepare designs, engineering, environmental analysis, and permit applications for Phases 2A-C (Exhibit 3). Following completion of 60% designs, NBC worked with the Conservancy to submit a proposal to the USFWS in July 2018. The USFWS awarded the grant to the Conservancy in March 2019.

**PROJECT FINANCING**

<b>Coastal Conservancy (USFWS NCWC grant)</b>	\$969,555
<b>Coastal Conservancy</b>	\$80,436
<b>Project Total</b>	<b>\$1,049,991</b>

The source of funding for the proposed authorization is a USFWS National Coastal Wetlands

Conservation Grant awarded to the Conservancy for the project. The USFWS has awarded \$1,000,000 to the Conservancy for project implementation. Approximately \$970,000 of the grant will support project implementation directly, while the remaining \$30,000 will pay for Conservancy staff costs. To meet required matching funds for the NCWC grant opportunity, the Conservancy is anticipated to provide an additional eighty thousand four hundred thirty-six dollars (\$80,436). The anticipated source of funding for the \$80,436 of match is the 2016 fiscal-year appropriation from the *Water Quality, Supply, and Infrastructure Improvement Act of 2014* (Proposition 1, codified at Water Code section 79700 *et seq.*). Funds appropriated to the Conservancy derive from Chapter 6 of the Act and may be used “for multi-benefit water quality, water supply, and watershed protection and restoration projects for the watersheds of the state” (Section 79731). Section 79732(b) states more specifically that these funds may be used for “implement[ing] watershed adaptation projects in order to reduce the impacts of climate change on California’s communities and ecosystems” and “protect and restore aquatic, wetland, and migratory bird ecosystems.” Consistent with these provisions, the proposed project will restore coastal sage upland, riparian, and freshwater marsh habitats. The project area will also provide habitat connectivity to an adjacent, future project area (Phase 2C) where adaptive measures will be constructed to respond to sea level rise.

The proposed project was reviewed and subsequently recommended for funding through a competitive grant process under the Conservancy’s *Proposition 1 Grant Program Guidelines* adopted in June 2015 (“Prop 1 Guidelines”). (See section 79706(a)). The proposed project meets each of the evaluation criteria in the Prop 1 Guidelines as described in further detail in the following sections of this staff recommendation: “Project Summary” (sections above) and “Consistency with Conservancy’s Project Selection Criteria & Guidelines” (section below).

The NBC, City of Newport Beach, California Department of Fish and Wildlife, and Irvine Ranch Conservancy will provide significant in-kind contributions of staff time, valued at ninety-two thousand two hundred seventy-three dollars (\$92,273).

#### **CONSISTENCY WITH CONSERVANCY’S ENABLING LEGISLATION:**

Conservancy funding of the proposed project is consistent with Chapters 5 and 6 (Sections 31220 and 31251-31270) of the Conservancy’s enabling legislation, Division 21 of the Public Resources Code, regarding enhancement of coastal resources, as well as Section 31111 of the Public Resources Code.

Pursuant to Section 31220, the Conservancy may award grants to protect and restore coastal habitats if the project “restores coastal wetlands, riparian areas, floodplains, and other sensitive watershed lands.” The area of the proposed restoration project is within the Big Canyon Creek, coastal watershed. Consistent with Section 31220(b), the project will achieve the following objectives: (1) restore fish and wildlife habitat within a coastal watershed (31220(b)(2)), (2) reduce threats to coastal fish and wildlife (31220(b)(3)), and (3) restore riparian areas, floodplains, and other sensitive watershed lands, including watershed lands draining to sensitive coastal or marine areas (31220(b)(6)).

As Section 31220(c) requires, the proposed project is consistent with local and state watershed plans, The Conservancy has consulted with the State Water Resources Control Board in the development of the project to ensure consistency with Chapter 3 of Division 20.4 of the Public Resources Code regarding water quality. (See Exhibit 4, Project Letters) Section 31220(c) also

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states that “projects funded pursuant to this section shall include a monitoring and evaluation component.” A monitoring plan is being prepared as part of the final design phase of the overall project. The proposed project is consistent with applicable and relevant Integrated Regional Water Management programs, local watershed management plans, and water quality control plans adopted by the state or regional water quality control boards, as discussed in the “Consistency with Local Watershed Management Plan/State Water Quality Plan” sections below.

Pursuant to Section 31251, the Conservancy may award grants to nonprofit organizations to enhance coastal resources that, because of human-induced events, or incompatible land uses, have suffered loss of natural and scenic values. Such grants may be used to provide corrective measures that will enhance the natural and scenic character of coastal areas. The proposed project will implement the corrective measures, i.e., restoration, that are necessary to enhance the natural and scenic character of the Big Canyon Nature Park, which has been significantly degraded from fill and invasive species.

As required by Section 31252, the area for the proposed project is identified in the City of Newport Beach’s Local Coastal Program as an environmentally sensitive area and is designated for passive recreation and wildlife habitat restoration. See additional discussion in the “Consistency with Local Coastal Program Policies” section, below.

Section 31253 states that the Conservancy may provide up to the total cost of a coastal resource enhancement project. Consistent with Section 31253, the following factors were considered in determining the amount of Conservancy funding for this project: the total amount of funding available for coastal resource enhancement projects, the fiscal resources of the applicant, the urgency of the project, and the Conservancy’s project selection criteria, as described in detail below, under the heading “Consistency with Conservancy's Project Selection Criteria & Guidelines.”

Pursuant to Section 31111, the Conservancy “may fund and undertake plans and feasibility studies and may award grants to public agencies and nonprofit organization” to restore coastal habitat and other functions prescribed in Division 21. Consistent with this section, the proposed project provides funds to complete restoration and management designs to enhance estuarine and wildlife habitat.

The Conservancy has consulted with the State Water Resources Control Board in the development of the project to ensure consistency with Chapter 3 of Division 20.4 of the Public Resources Code regarding water quality. Section 31220(c) states that “projects funded pursuant to this section shall include a monitoring and evaluation component.” A monitoring plan is being prepared as part of the final design phase of the overall project. The proposed project is consistent with applicable and relevant Integrated Regional Water Management programs, local watershed management plans, and water quality control plans adopted by the state or regional water quality control boards, as discussed in the “Required Criteria” and “Consistency with Local Watershed Management Plan/State Water Quality Plan” sections below.

**CONSISTENCY WITH CONSERVANCY'S 2018-2022 STRATEGIC PLAN GOALS & OBJECTIVES:**

Consistent with **Goal 6, Objective B** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will restore and enhance coastal habitats, including 11.32 acres of coastal sage upland, riparian, and freshwater marsh habitats.

Consistent with **Goal 6, Objective D** of the Conservancy's 2018-2022 Strategic Plan, the proposed project will enhance coastal floodplains, including 11.32 acres of coastal sage upland, riparian, and freshwater marsh habitats along Big Canyon Creek.

**CONSISTENCY WITH CONSERVANCY'S PROJECT SELECTION CRITERIA & GUIDELINES:**

The proposed project is consistent with the Conservancy's Project Selection Criteria and Guidelines, last updated on October 2, 2014, in the following respects:

**Required Criteria**

1. **Promotion of the Conservancy's statutory programs and purposes:** See the "Consistency with Conservancy's Enabling Legislation" section above.
2. **Consistency with purposes of the funding source:** See the "Project Financing" section above.
3. **Promotion and implementation of state plans and policies:**
  - A Strategy for California @ 50 Million: Supporting California's Climate Change Goals **Steward and Protect Natural and Working Landscapes; Incorporate climate change adaptation into all planning and investment.** The proposed project will accomplish these goals by restoring and enhancing a sensitive coastal and riparian ecosystem by improving ecological functions in a way that supports native species as well as designing for tidal marsh migration as sea levels rise.
  - California Water Action Plan. **Protect and restore important ecosystems (restore coastal watersheds and strategic coastal estuaries):** The proposed project is designed to accomplish this goal by restoring 11.32 acres of coastal sage upland, riparian, and freshwater marsh habitats.
  - Southern California Wetlands Recovery Project (WRP). **Preserve and restore coastal wetland ecosystems.** The proposed project is on the WRP Work Plan and is designed to accomplish the WRP's goals.
4. **Support of the public:** The project is supported by the City of Newport Beach, California Department of Fish and Wildlife, Assemblyman Mathew Harper, and Senator John M. W. Moorlach (see Exhibit 4).
5. **Location:** The proposed project would be located within the coastal zone of the City of Newport Beach.
6. **Need:** Support from the Conservancy is critical at this moment because the City of Newport Beach has started implementation on the early phases of restoring Big Canyon Creek and in

order to maximize those restoration benefits, the adjacent areas need to be restored quickly so that the entire Big Canyon area can function as a holistic, connected ecosystem.

7. **Greater-than-local interest:** The proposed project will restore critical riparian and wetland habitats in Upper Newport Bay, which provides plant and wildlife habitat of regional and statewide importance for resident and migratory species.
8. **Sea level rise vulnerability:** The Phase 2A project area is not vulnerable to sea level rise. However, the overall Big Canyon Creek Restoration and Estuary Adaptation Project will include a site-specific analysis of the effects of flooding, inundation, accretion, and sea level rise on the project area using habitat evolution modeling. The modeling results will then be used to develop restoration designs for estuarine-upland transition areas needed for coastal wetlands to migrate upland as the sea rises, particularly in Phases 2B and 2C.

#### **Additional Criteria**

9. **Urgency:** The project area has been invaded by a prevalent non-native tree, the Brazilian peppertree. Further exacerbating the invasive species problem, the Polyphagous Shot Hole Borer has killed many native riparian trees in the area. The proposed project is needed to halt further the spread of non-native tree species and the deadly fungal pathogen transmitted by the Polyphagous Shot Hole Borer.
10. **Resolution of more than one issue:** The proposed project will not only restore valuable wetland and riparian habitat, it will also reduce the naturally-occurring water contaminant, selenium, reduce channel erosion and incision, provide resilience against the effects of the Polyphagous Shot Hole Borer, and remove a non-native tree species.
11. **Leverage:** See the “Project Financing” section above.
12. **Innovation:** The project is innovative in that it will use traditional and new pest management techniques to combat the Polyphagous Shot Hole Borer (PSHB) in consultation with the University of California Riverside. These activities may include heavy pruning of the existing infested mature trees, the application of soil amendments (e.g., mycorrhizal inoculum and compost tea), and tree injections to improve the resilience of existing woody plants. The project will utilize woody species and herbaceous plants with demonstrated low susceptibility to PSHB. Soil amendments, such as gypsum and mulch, will be added also to reduce salinity levels. Without these management measures, the existing and proposed riparian habitat will be impacted by the PSHB infestation through the loss of mature trees that provide habitat to endangered species.
13. **Readiness:** Project partners have already successfully implemented Phase 1 of the project. The NBC and its partners have also completed 60% designs and CEQA for Phase 2A. They are ready to complete the final designs and implement the restoration as soon as funds are available and anticipate securing the necessary funds to proceed to implement by the end of 2019.
14. **Realization of prior Conservancy goals:** “See “Project History” above.”
15. **Cooperation:** The grantee will work with the City of Newport Beach and the California Department of Fish and Wildlife (property owners) to finalize the design and engineering plans to develop the least impactful and most cost-effective restoration approach to the



project area. These partners are also moving forward with preparation of a Memorandum of Understanding describing their partnership roles and responsibilities.

16. **Vulnerability from climate change impacts other than sea level rise:** Estuarine-upland transition zone habitat that is infrequently influenced by tidal flows is more drought and fire tolerant compared to other upland habitats that experience no tidal inundation. The proposed project will develop restoration designs for estuarine-upland transition zone habitat thus increasing the project area's resiliency to predicted increases in drought and fires with global climate change.

#### **CONSISTENCY WITH LOCAL COASTAL PROGRAM POLICIES:**

The City of Newport Beach's Local Coastal Program policies 4.2.1-1 & 4.2.1-2 recognize the freshwater wetlands of Big Canyon should be protected and maintained for "biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes." Restoration of coastal sage upland, riparian, and freshwater marsh habitats in the Phase 2A project area within the 60-acre Big Canyon Nature Park is consistent with the policies cited above.

#### **CONSISTENCY WITH LOCAL WATERSHED MANAGEMENT PLAN/ STATE WATER QUALITY CONTROL PLAN:**

The project is consistent with the *Water Quality Control Plan for the Santa Ana River Basin* (February 2016). The project proposal and IS-MND were reviewed by the Regional Water Quality Control Board and found to comply with State water quality standards outlined in the Water Quality Control Plan for the Santa Ana River Basin.

#### **COMPLIANCE WITH CEQA:**

The City of Newport Beach ("City"), as lead agency under the California Environmental Quality Act ("CEQA") prepared and adopted an Initial Study Mitigated Negative Declaration ("IS-MND", Exhibit 5) and a Mitigation Monitoring and Reporting Plan ("MMRP", Exhibit 7) for the Big Canyon Creek Restoration and Estuary Adaptation Phase 2A Project. The IS-MND indicates that the proposed project could have significant effects on the environment associated with biological resources, cultural resources, and human annoyance. However, mitigation measures have been incorporated into the proposed project design to mitigate these potential effects below a level of significance.

The City submitted a draft IS-MND for public review on September 4, 2018. During the 30-day public comment period, three letters were received, one email, and one phone message from Citizens of the Bluffs, Tony Knox, Orange County Public Works, Robert B. Olds, and Anonymous. On October 4, 2018, the City responded to each of the comments set forth which is attached as Exhibit 6 to this staff recommendation. The City approved the IS-MND on January 25, 2019.

The Final IS-MND indicated that the proposed project would not have a significant effect on the environment. The only potential effects, which have been mitigated, are in the areas of noise,

cultural resources, and biological resources. The City will be responsible for compliance with the mitigation measures. The potential significant effects on biological resources, water quality and cultural resources will be mitigated by the following mitigation measures:

**Mitigation Measure BIO-1(Biological Resources) - Special-Status Plants.** The following mitigation will be implemented to avoid temporary construction-related impacts to special-status plant species within the project site:

- a. Within two weeks prior to construction activities, preconstruction surveys will be conducted by a qualified Project Biologist to confirm presence/absence of special-status plant species within the project site. The locations of any special-status plant species identified during the pre-construction botanical survey, including those with a CRPR of 1, 2, or 3 shall be flagged (or otherwise delineated and marked) by a biologist and shall be avoided. To verify avoidance during construction, a qualified biologist will be onsite during any ground disturbing activities within 10 feet of a special-status plant species population.
- b. If special-status plant species are observed during the preconstruction surveys within the portion of the project site proposed for restoration and if avoidance of the special-status plant species is not feasible, coordination with USFWS and CDFW will be required to confirm suitable mitigation before ground-disturbing activities. At a minimum, the plan must include a description of the existing conditions, site selection criteria, site preparation and planting methods, maintenance and monitoring schedule, performance standards, adaptive management strategies, and identification of responsible parties.

**BIO-2: Nesting Birds.** Impacts to nesting birds will be avoided by conducting all grading and construction activities outside of the bird breeding season (February 15 to August 31; January 15 to August 31 for raptors). If breeding season cannot be avoided, the following measures will be followed.

- a. During the avian breeding season, a qualified Project Biologist will conduct a pre-construction avian nesting survey no more than seven days before vegetation disturbance or site clearing, with additional surveys if there is a week-long break in construction during breeding season.
- b. The nest survey will cover all reasonably potential nesting locations on and within 300 feet of the proposed areas where construction activities will occur.
- c. If an active nest is found during an avian nest survey, a qualified Project Biologist will create a 300-foot minimum avoidance buffer for special-status species (e.g., coastal California gnatcatcher, least Bell's vireo); a 500-foot minimum avoidance buffer for all raptor species; and 300-foot minimum avoidance buffer (or other buffer as determined appropriate by the Project Biologist) for other passerine birds. The nest site area shall not be disturbed until the nest becomes inactive or the young have fledged.

**BIO-3: Special-Status Bats.** Impacts to special-status bat species will be avoided by conducting all grading and construction activities outside of the maternity roosting season (mid-March through August). If maternity roosting season cannot be avoided, the following measures would be followed.

- a. If grading/construction activities must occur during the maternity season, a qualified biologist will conduct a pre-construction survey to identify potential active roosts. If no bats are observed, work may proceed in the proposed work area the following day and will remain cleared for the duration of the work activity. If active roosts are observed, no grading/construction activities

may take place in the proposed work area the following day and not until it can be verified with thermal imaging that bats have left the area or the maternity roosting season is over.

b. Additional pre-construction surveys will be required in new work areas located more than 100 feet away from the previously surveyed work area.

**CR-1 (Cultural Resources) : Archaeological Monitoring.** An archaeological monitor will be retained to observe all ground-disturbing activities. Before start of ground-disturbing activities, the archaeologist will conduct cultural resources sensitivity training for all construction personnel. Archaeological monitoring shall be conducted by an archaeologist familiar with the types of archaeological resources that could be encountered within the project site. The qualified archaeologist, in coordination with the City, may reduce or discontinue monitoring if it is determined that the possibility of encountering buried archaeological deposits is low based on observations of soil stratigraphy or other factors. After monitoring has been completed, the qualified archaeologist shall prepare a monitoring report that details the results of monitoring. If archaeological resources are encountered during monitoring, and if it is determined that the discovered archaeological resource constitutes a historic property under Section 106 of the National Historic Preservation Act (NHPA) or a historical resource under CEQA, avoidance and preservation in place is the preferred manner of treatment. In the event that preservation in place is demonstrated to be infeasible and data recovery through excavation is the only feasible mitigation available, a Cultural Resources Treatment Plan would be prepared and implemented by a qualified archaeologist in consultation with the Corps and the City. The plan will provide for the adequate recovery of the scientifically consequential information contained in the archaeological resource.

**CR-2: Native American Monitoring.** The City will retain a Native American monitor to observe all ground-disturbing activities, including but not limited to brush clearance, vegetation removal, grubbing, grading, and excavation. The Native American monitor will be selected from amongst the Native American groups that have an affiliation with the project area and consulted pursuant to CEQA. All authorities ascribed to the archaeological monitor, including the authority to stop work in the event of the discovery of cultural resources, will also apply to the Native American monitor. If archaeological materials are encountered, the Native American monitor shall participate in any discussions involving treatment and subsequent mitigation.

**NOI-1 (Noise):** The construction contractor will ensure proper maintenance and working order of equipment and vehicles and that all construction equipment is equipped with manufacturers approved mufflers and baffles.

**NOI-2:** The construction contractor(s) shall endeavor to use quieter equipment as opposed to noisier equipment (such as rubber-tired equipment rather than track equipment), when feasible. Noisy equipment will be switched off when not in use.

**NOI-3:** Construction activities will be scheduled to avoid operating several pieces of equipment simultaneously, which causes high noise levels, to the extent feasible.

**NOI-4:** The construction contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors nearest the project site.

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If the proposed funding authorization is approved, Conservancy staff will file a notice of determination.