

COASTAL CONSERVANCY

Staff Recommendation  
March 22, 2018

**ALAMEDA CREEK FISH PASSAGE PROJECT**

Project No. 17-038-01  
Project Manager: Jessica Davenport

**RECOMMENDED ACTION:** Authorization to disburse up to \$825,000 to Alameda County Water District to build two fish ladders on lower Alameda Creek that will enable steelhead trout to bypass a weir and two rubber dams and migrate to miles of available spawning and rearing habitat in the Alameda Creek Watershed.

**LOCATION:** City of Fremont, Alameda County

**PROGRAM CATEGORY:** San Francisco Bay Area Conservancy

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**EXHIBITS**

- Exhibit 1: [Project Location and Site Map](#)
  - Exhibit 2: [Project Photographs and Design Renderings](#)
  - Exhibit 3: [Project Design Plans](#)
  - Exhibit 4: [Initial Study/Mitigated Negative Declaration for Joint Lower Alameda Creek Fish Passage Improvements](#)
  - Exhibit 5: [Project Letters](#)
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**RESOLUTION AND FINDINGS:**

Staff recommends that the State Coastal Conservancy adopt the following resolution pursuant to Sections 31160-31165 of the Public Resources Code:

“The State Coastal Conservancy hereby authorizes disbursement of an amount not to exceed eight hundred twenty-five thousand (\$825,000) to Alameda County Water District to build two fish ladders on lower Alameda Creek that will enable steelhead trout to bypass a weir and two rubber dams and migrate to miles of available spawning and rearing habitat, subject to the following conditions:

1. No Conservancy funds shall be disbursed for the project until the Executive Officer of the Conservancy has reviewed and approved in writing:
  - a. A final work plan, including a budget and schedule.

- b. The name and qualifications of any contractors that the Alameda County Water District intends to retain to carry out the project.
  - c. A signage plan that acknowledges Conservancy funding.
2. The Alameda County Water District shall provide evidence that all necessary permits and approvals have been obtained.”

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 authorization is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, regarding the San Francisco Bay Area Conservancy Program.
2. The proposed project is consistent with the current Conservancy Project Selection Criteria and Guidelines.
3. The Conservancy has independently reviewed and considered the *Joint Lower Alameda Creek Fish Passage Improvements: Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impacts (IS/MND)* (SCH # 2013032074) adopted by the two co-lead agencies, the Alameda County Water District Board of Directors and the Alameda County Flood Control and Water Conservation District, on December 6, 2016 (Exhibit 4). The Conservancy finds that the project as mitigated avoids, reduces, or mitigates the possible significant environmental effects to a level of insignificance and there is no substantial evidence that the project, as mitigated, will have a significant effect on the environment.”

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### **PROJECT SUMMARY:**

Staff recommends that the Conservancy authorize a grant of up to eight hundred twenty-five thousand dollars (\$825,000) to Alameda County Water District (ACWD) to build two fish ladders on lower Alameda Creek that will enable steelhead trout to bypass a weir and two rubber dams and migrate to miles of available spawning and rearing habitat in the Alameda Creek Watershed.

The proposed project is located within a channelized, trapezoidal section of Alameda Creek that includes a flood control drop structure (also known as the BART Weir) and two inflatable dams. (See Exhibit 1.) One fish ladder will bypass Rubber Dam No. 1 and the BART Weir, and the other fish ladder will bypass Rubber Dam No. 3, further upstream. (See Exhibit 2.)

The goal of the project is to restore the native Central California Coast steelhead fishery in the Alameda Creek Watershed. The project will enable ACWD to achieve this goal while also maintaining the weir and rubber dams that are necessary to use of water from Alameda Creek as a critical, local water supply needed to recharge and sustainably manage groundwater.

Due to the opportunity for species recovery in the watershed, the National Marine Fisheries Service has given the Alameda Creek Watershed a high priority for steelhead restoration, as described by the National Marine Fisheries Service’s Central California Coast Steelhead

Recovery Plan. The California Department of Fish and Wildlife has also included removal of these fish barriers on lower Alameda Creek on its 2016 Fish Passage Priority List.

Construction of the two fish ladders will allow ACWD to maintain use of the rubber dams for water diversion operations at Quarry Lakes, the primary means of recharging the Niles Cone Groundwater Basin and protecting this critical aquifer from seawater intrusion.

The fish ladders will be operated in conjunction with flow releases from upstream dams in the winter to allow steelhead to migrate upstream to spawn. To help young fish migrate out toward the San Francisco Bay, the water levels behind the rubber dams will be lowered in the spring in order to increase the flow of water through the fish ladders.

ACWD is qualified to undertake this project because the agency has completed the environmental permitting, CEQA process, design, and construction of several other projects that are similar in scope within the Alameda Creek Flood Control Channel. These projects were the screening of water diversion pipelines at Fish Screen No. 1 (2008), Bunting Pond (2009) and Kaiser Pond (2014); removal of Rubber Dam No. 2 and modification of its concrete dam foundation to incorporate a fish passage facility (2009); and replacement of the inflatable fabric of Rubber Dam No. 1 (2016).

ACWD has actively participated in the Alameda Creek Fisheries Restoration Work Group, which is made up of local flood control agencies, water supply agencies, state resource agencies, and environmental groups, since its inception in 1999. Coordinated efforts with the Alameda County Flood Control and Water Conservation District (ACFCD) to develop and fund lower Alameda Creek fish passage facilities date back to the year 2000.

**Site Description:** The Alameda Creek Watershed is the largest watershed within southern San Francisco Bay, draining 700 square miles, or about 20% of the total drainage area for the South Bay. The project will support restoration of a historic migratory corridor for steelhead trout, an anadromous species which once inhabited the Alameda Creek Watershed in significant numbers prior to the construction of dams and other development in the watershed.

ACWD owns and operates the two inflatable dams and diversion structures that were installed to increase groundwater recharge via Quarry Lakes to the underlying Niles Cone Groundwater Basin, a significant source of water supply providing 35% of ACWD's water supply to a population of 344,000 in Fremont, Newark, and Union City. Most of the recharge to the Niles Cone Groundwater Basin occurs through the management of the two inflatable rubber dams that facilitate diversion of water into Quarry Lakes. Both dams currently block fish passage.

Additionally, the concrete apron of the BART Weir, located next to Rubber Dam No. 1, is an impassable fish barrier, due to its steep slope and the high sheeting velocities that occur over its surface.

Once fish ladders have been completed to enable fish to bypass both dams and BART Weir, the upstream migration of steelhead will be restored, allowing fish passage between the San Francisco Bay and historic upstream spawning and rearing habitats.

While many fish ladders in the State of California are set in remote and rarely visited locations, ACWD's fish ladders will be located in an urban river setting. The proposed project is located along a regional trail, and ACWD will work with other agencies and nonprofits on a complementary project to provide public education in the form of information panels.

**Project History:** In the 1960s, the U.S. Army Corps of Engineers converted lower Alameda Creek from a natural watercourse to a trapezoidal cross-sectioned flood control channel with little habitat for fish species. The rubber dams, along with water diversion structures, were built at the same time. The BART Weir was constructed in 1972 to prevent erosion of the supports for the railroad and BART tracks crossing over the channel.

These erosion control and water supply facilities did not provide for fish passage because the resource agencies managing the Alameda Creek Watershed at the time believed that anadromous fisheries no longer existed in Alameda Creek. However, several studies, including the National Marine Fisheries Service’s steelhead recovery plan, have since concluded that, historically, steelhead would likely have had complete or partial spawning access to many streams in the Alameda Creek Watershed, and restoration actions are warranted.

Since 1999, the Conservancy has participated in the Alameda Creek Fisheries Restoration Work Group, which has been working on a series of projects that will provide fish passage and improve instream habitat for Alameda Creek and some of its tributaries. To lay the groundwork for this proposed project, the Conservancy funded the report *Conceptual Design and Feasibility of a Natural Fishway at the Fremont BART Weir, Alameda Creek, California* (Center for Ecosystem Management and Restoration et al., 2005). Also relevant to this project, Conservancy funded the Alameda Creek Flow Studies Project, completed in 2013, which funded ACWD and the Center for Ecosystem Management and Restoration to manage and conduct technical studies of water flows necessary to restore steelhead fisheries to Alameda Creek. (See “Realization of prior Conservancy goals” below for additional information about Conservancy-funded projects in the watershed.)

**PROJECT FINANCING**

<b>Coastal Conservancy</b>	\$825,000
California Natural Resources Agency	\$3,000,000
United States Bureau of Reclamation	\$750,000
California Wildlife Conservation Board (pending)	\$5,358,000
ACFCD	\$2,844,200
ACWD	\$ 15,104,328
<b>Project Total</b>	<b>\$27,881,528</b>

The expected source of Conservancy funds for this project is the fiscal year 2017/18 appropriation to the Conservancy from the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Proposition 1, Water Code Section 79700 et seq.). Funds appropriated to the Conservancy derive from Chapter 6 (Sections 79730-79738) 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 79731(j) specifies that the Conservancy may apply this funding to watersheds in the San Francisco Bay Conservancy region. Section 79732 identifies specific purposes of Chapter 6, which include: protecting and restoring aquatic, wetland, and migratory bird ecosystems, including fish and wildlife corridors (Section 79732(a)(4)); removing barriers to fish passage (Section 79732(a)(6)); and assisting in the

recovery of endangered, threatened or migratory species by improving watershed health, instream flows, fish passage and coastal or inland wetland restoration (Section 79732(a)(12)).

The proposed project helps achieve the above-identified Chapter 6 purposes and provides multiple benefits. Alameda Creek is a watershed located in the San Francisco Bay Conservancy region. By constructing fish ladders to enable fish passage, the project will assist in the recovery of threatened steelhead trout by restoring historic access to spawning and rearing habitat.

The proposed project was selected 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 this "Project Financing" section, the "Project Summary" section and in the "Consistency with Conservancy's Project Selection Criteria & Guidelines" section of this report.

ACWD is providing matching funds for implementation of this project through income from ratepayers. ACWD is also using ratepayer funds to support the long-term maintenance and monitoring of the project. Because one of the fish ladders will provide fish passage around the BART Weir, which is ACFCD's flood control drop structure, ACFCD is contributing the amount listed above towards construction of this fish ladder.

Along with its own funding and ACFCD's contribution, ACWD has received grants from the California Natural Resources Agency's California Urban Rivers Grant Program and the U.S. Bureau of Reclamation. A grant from the California Wildlife Conservation Board is pending, as noted above. If the pending grant is not successful, ACWD will cover the remainder of the cost with ratepayer funds.

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

The proposed project is consistent with Chapter 4.5 of Division 21 of the Public Resources Code, Sections 31160-31165, which authorizes the Conservancy to award grants to address resource and recreational goals in the nine-county San Francisco Bay Area, which includes the Alameda Creek Watershed.

Consistent with Section 31162(b), the proposed project will help "to protect, restore, and enhance natural habitats and connecting corridors, watersheds, scenic areas, and other open-space resources of regional importance." ACWD intends to provide fish passage along the habitat corridor of lower Alameda Creek, which connects the Pacific Ocean and San Francisco Bay to spawning and rearing habitat for steelhead trout in upstream waterways the Alameda Creek Watershed.

Consistent with Section 31163(c), the project is 1) supported by adopted regional plans, including the *San Francisco Estuary Watershed Evaluation: Identifying Promising Locations for Steelhead Restoration in Tributaries of the San Francisco Estuary* (CEMAR, 2007), the Alameda Creek Watershed Steelhead Restoration Plan, the 2013 Bay Area Integrated Regional Water Management Plan, and the National Marine Fisheries Services (NMFS) Central California Coast Steelhead Multispecies Recovery Plan; 2) is regionally significant in terms of restoring passage for threatened steelhead trout to miles of upstream spawning and rearing habitat ; 3) can be implemented in a timely way, as the funding for the project has been secured; 4) provides opportunity to use currently available funds to successfully implement a steelhead restoration project that is the culmination of two decades of planning work, and, but for Conservancy

funding, would otherwise be deferred; and 5) includes a large proportion of local matching funds from water ratepayers, as well as additional state and federal grant funds.

**CONSISTENCY WITH CONSERVANCY'S 2018 STRATEGIC PLAN**

**GOAL(S) & OBJECTIVE(S):**

Consistent with Goal 12, Objective 12F of the Conservancy's 2018-2022 Strategic Plan, the proposed project will "enhance riparian and riverine habitat or other watershed functions and processes for the benefit of wildlife or water quality, including removal of barriers to fish passage or projects that ensure sufficient instream flow."

**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 4, 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:** The proposed acquisition project serves to promote and implement several state plans and policies, including:
  - *California Water Action Plan* (California Natural Resources Agency, California Department of Food and Agriculture, and California Environmental Protection Agency, 2016). This project is consistent with Policy No. 4, which calls for restoring important ecosystems, including eliminating barriers to fish migration, and Policy No. 6, which calls for expanding water storage capacity and improve groundwater management.
  - *State Wildlife Action Plan* (California Department of Fish and Wildlife, 2015). Chapter 5.3, Province-Specific Conservation Strategies – Bay Delta and Central Coast, Conservation Strategy 5 (Direct Management) calls for managing dams and other barriers to allow for fish passage.
  - *California @ 50 Million Plan* (Governor's Office of Planning and Research, 2012). By using more local water supply, the project will reduce ACWD's dependence on State Water Project imports, which reduces pumping requirements, thus leading the reduced energy consumption which will help reducing petroleum use by up to 50 percent by 2030.
  - *California Water Plan* (California Department of Water Resources, Updated 2013). By enabling continued groundwater recharge, the project is consistent with Volume 3, Resource Management Strategies, Chapter 14 – Surface Storage – Regional/Local; Recommendation 9, which supports conjunctive groundwater storage that augments consumptive water use.
4. **Support of the public:** Implementation of the Alameda Creek Fish Passage Project is a collaborative effort between the ACWD and ACFCD. It is supported by State Assemblymember Kansen Chu, Alameda County Supervisors Scott Haggerty and Richard

Valle, and several members of the Alameda Creek Fisheries Restoration Work Group, including Alameda Creek Alliance, East Bay Regional Park District, and the Alameda County Flood Control and Water Conservation District, Zone 7.

5. **Location:** The project is located in the County of Alameda, within the jurisdiction of the nine-county San Francisco Bay Area Conservancy Program.
6. **Need:** If the project were not funded with Conservancy funds, ACWD might defer project implementation due to budgetary constraints. By using Conservancy funds, the project will benefit from additional public support and increased motivation to move forward with this voluntary local effort to achieve statewide objectives.
7. **Greater-than-local interest:** The California Department of Fish and Wildlife has included the BART Weir and rubber dams on lower Alameda Creek on its 2016 Fish Passage Priority List. The project is included in the San Francisco Bay Regional Water Quality Control Board Watershed Management Initiative Integrative Plan (October 2004): Chapter 3.2, Alameda Watershed Management Area, lists fish passage barrier removal in Alameda Creek Watershed as a high priority project.
8. **Sea level rise vulnerability:** All project elements are at or more than 16 feet above sea level and are not threatened by sea level rise. However, as sea level rises, the threat of salt water intrusion into the Niles Cone Groundwater Basin will increase. The continued ability to recharge the basin, provided by the project, will become increasingly critical in preventing contamination of the potable water supply.

#### **Additional Criteria**

9. **Urgency:** If the project is delayed, ACWD would likely have to modify its operations by lowering the dams during and after storm events when steelhead may be attempting to ascend the watershed. In doing so, ACWD would lose a substantial amount of local recharge, resulting in more frequent deficit pumping of the aquifer and increased dependence on imported water from the State Water Project to supplement recharge. In addition, the project has been several decades in the making. Any delays due to lack of funds would hurt project momentum and further deny steelhead access to available habitat in the watershed.
10. **Resolution of more than one issue:** In addition to providing fish passage for threatened steelhead trout, the project will enable continued diversion of water to recharge the groundwater basin and the prevent salt water intrusion into an important local water source.
11. **Leverage:** See the “Project Financing” section above.
13. **Innovation:** The fish ladder design incorporates a series of vertical gates and automated controls to synchronize gate operation to provide the necessary degree of flow control into the ladder. Other fish ladders have used horizontal gates and have had problems with efficient water management and efficacy of the ladder for fish passage. If successful, this project may become the model for other fish ladder with similar operating parameters.
14. **Readiness:** The grantee has completed CEQA documentation, local funds are available to supplement Conservancy funds, and the grantee expects to have all necessary permits in time to start construction in 2018.

15. **Realization of prior Conservancy goals:** As mentioned above (see “Project History”), the Conservancy has participated in the Alameda Creek Fisheries Restoration Work Group, which has been working since 1999 on a series of projects that will remove or modify barriers to fish passage and improve instream habitat for Alameda Creek and some of its tributaries. In addition to the projects mentioned above, the Conservancy funded the Alameda Creek Fisheries Genetics Study Project, completed in 2004, which compiled existing genetic and population data on rainbow and steelhead trout in Alameda Creek Watershed, and involved sampling rainbow trout, analyzing the tissue, and preparing a supplementation plan. The Conservancy has also supported projects in the tributaries to Alameda Creek, such as Fish Passage Assessment of Private Stream Crossings on Lower Stonybrook Creek (Michael Love & Associates et al., 2005). This study was performed in conjunction with the Center for Ecosystem Management and Restoration’s development of the conceptual designs for replacing two Stonybrook Creek crossings on Palomares Road, which resulted in the Conservancy-funded report Stonybrook Creek Salmonid Migration Barrier Removal Project. (The Alameda County Resource Conservation District and Alameda County Public Works completed construction of the two fish passage projects in 2017 using other funding sources.) The Conservancy also funded the Northern Tributaries to Upper Alameda Creek Project, completed in 2017, which resulted in a Stream Management Master Plan for approximately 100 miles of stream corridors in the Alameda Creek watershed in eastern Alameda County. This project enabled Zone 7 Water Agency to fully integrate planning and design for habitat restoration with flood management and groundwater recharge.
17. **Cooperation:** The project is supported by the Alameda Creek Fisheries Restoration Work Group, made up of local flood control agencies, water supply agencies, state resource agencies, and environmental groups, which has been collaborating on studies and projects to restore the steelhead fishery in the watershed since 1999.
19. **Minimization of greenhouse gas emissions:** As mentioned above, by using more local water supply, the project will reduce ACWD’s dependence on State Water Project imports, which reduces pumping requirements, thus leading the reduced energy consumption which will help reducing petroleum use by up to 50 percent by 2030.

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

The project is included in the San Francisco Bay Regional Water Quality Control Board Watershed Management Initiative Integrative Plan (October 2004). Chapter 3.2, Alameda Watershed Management Area, lists fish passage barrier removal in Alameda Creek Watershed as a high priority project.

**COMPLIANCE WITH CEQA:**

The California Environmental Quality Act (CEQA) Guidelines (14 Cal. Code Regs. §§ 15000 *et seq.*) Section 15070(b) required ACWD, as lead agency, to prepare an Initial Study / Mitigated Negative Declaration (IS/MND) for the “Joint Lower Alameda Creek Fish Passage Improvements” (SCH # 2013032074), since the Initial Study identified potentially significant effects, but revisions to project plans would avoid or mitigate the effects to a point where no



significant effects would occur. On December 6, 2016, ACWD and ACFCD approved the IS/MND (Exhibit 4).

The IS/MND identified potentially significant impacts of the project in the areas of aesthetics, air quality, biological resources, hazards and hazardous materials, hydrology and water quality, noise, recreation, transportation and traffic, and cumulative impacts. The IS/MND also identified mitigation measures that would avoid impacts, or reduce them below the level of significance, such that the project would not result in significant adverse impacts on the environment. A majority of the impacts are short-term and associated with the construction phase of the project. Over the long term, the project would benefit fisheries in Alameda Creek. Potential project impacts and relevant mitigations include:

*Aesthetics:* Project construction would result in use of security and construction lighting. To avoid or reduce these adverse visual effects, ACWD will require project contractors to: direct security lighting away from housing and include provisions for manual, timed and motion sensor activation; monitor lighting levels outside of residences along the south bank of the flood control channel; use color-corrected halide lights for construction; direct construction lights away from the south bank of the flood control channel; place lights at the lowest feasible level; use light screens between the construction area and the housing; and, to the extent feasible, expedite construction downstream of the BART Bridge.

*Air Quality:* The principal concern about the effect of construction projects on air quality relates to the potential for earthwork and other activities to generate dust, including inhalable particulate matter that poses a human health hazard. To reduce the potential impact of dust generation on human health to less than significant levels, ACWD has included a project measure requiring project contractors to implement dust control measures, including the following: all exposed surfaces (e.g., parking areas, staging areas, soil piles, graded areas, and unpaved access roads) shall be watered two times per day; all haul trucks transporting soil, sand, or other loose material off-site shall be covered; all visible mud or dirt tracked-out onto adjacent public roads shall be removed using wet power vacuum street sweepers at least once per day; all vehicle speeds on unpaved roads shall be limited to 15 mph; all roadways, driveways, and sidewalks to be paved shall be completed as soon as possible, and building pads shall be laid as soon as possible after grading unless seeding or soil binders are used;

In addition, short-term tailpipe emissions could create a concern. To reduce these short-term impacts to less than a significant level, idling times shall be minimized either by shutting equipment off when not in use, or reducing the maximum idling time to two minutes to the extent feasible (consistent with the California airborne toxics control measure Title 13, Div. 3, Ch. 10, Art.1 Section 2485 of California Code of Regulations). Clear signage shall be provided for construction workers at all access points. All construction equipment shall be maintained and properly tuned in accordance with manufacturer's specifications. All equipment shall be checked by a certified visible emissions evaluator. ACWD will post a publicly visible sign with the telephone number and person to contact at the lead agency regarding dust complaints. This person shall respond and take corrective action within 48 hours. The Bay Area Air Quality Management District's phone number shall also be visible to ensure compliance with applicable regulations. ACWD and ACFCD will require the use of highway diesel fuel in all construction equipment to the extent feasible. Idling times of diesel-powered construction equipment shall be limited to two minutes, to the extent feasible.

*Biological Resources:* Potential effects of the project on threatened and endangered species include (a) construction, operation, and maintenance effects on species occurring in the construction reach, (b) water quality effects of construction and maintenance on species in the estuary reach, and (c) flow and temperature effects on species in the channels affected by on-going operations in the upstream reach. To reduce potential impacts to less than significant levels, the proposed project incorporates the following mitigation measures and best management practices:

To protect water quality, ACFCD will isolate in-channel construction areas from the active creek channel with sand bags, fiber mats, cofferdams, or other methods during construction; access the channel via areas where no riparian vegetation will be affected; and control potential downstream runoff from the site with sand bags, fiber mats, or other methods. ACWD and ACFCD will fuel and maintain construction equipment out of the channel. If this is not feasible, containment materials will be used. They will provide washout areas for vehicles outside of the channel and isolate these areas to ensure that concrete materials do not runoff into the channel or to recharge ponds. When working in the channel or where there may be runoff to the channel, ACWD and ACFCD will ensure that construction equipment will be fitted with absorbent materials at potential fuel, oil, and other fluid leak spots. During construction and post-construction maintenance involving use of equipment in or adjacent to the channel, ACWD and ACFCD will stockpile sand bags on site so that they may be immediately filled and placed around any spill. In addition, any spills not contained within the maintenance area will immediately be isolated from the active channel.

To protect special-status species, a qualified biologist will (a) be retained to monitor construction, and (b) will conduct mandatory contractor/worker awareness training for construction personnel if special-status species are found. Prior to construction, ACWD and ACFCD will provide for a qualified biologist to survey the site to determine whether special-status species are present. Given the importance of protecting threatened steelhead trout, a fish rescue program will be implemented. Following installation of barriers to isolate the construction site from the active channel, a qualified fisheries biologist and team will conduct a fish rescue program for stranded fish prior to initiation of construction activities. Fish removed from the site will be immediately returned to the active channel. A fish rescue and relocation plan will be provided to NMFS and California Department of Fish and Wildlife (CDFW) for review and approval prior to initiating the fish rescue. Prior to completion of all facilities, ACWD/ACFCD will monitor steelhead and salmon migrations from January through May. If steelhead are found to be migrating and operations of dams or unscreened diversions could adversely affect migrating steelhead, ACWD/ACFCD would consult with NMFS/CDFW and implement impact avoidance protocols which may include “trap and truck” of adult steelhead moving upstream, releasing them upstream of Mission Boulevard (in conjunction with East Bay Regional Park District, which currently conducts adult steelhead trap and truck efforts). Adult steelhead will not be allowed to move into Alameda Creek until the construction of fish ladders is completed and the facilities are fully functional. Additional mitigation measures include avoiding impacts to nesting burrowing owls and raptors, western pond turtles, and California horned lizard.

*Hazards and Hazardous Materials:* ACWD and ACFCD will implement BMPs to ensure that fluid leaks during construction in the creek channel do not contaminate groundwater at adjacent facilities.

*Hydrology and Water Quality:* ACWD and ACFCD will implement appropriate BMPs for all work to ensure that Joint Fish Passage Project construction does not adversely affect water quality. (See *Biological Resources* section.)

*Noise.* ACWD and ACFCD will comply with City of Fremont's noise policies, including scheduling of construction to avoid times when people are most sensitive to noise to the extent practical. The construction contract will include requirements for using sound mufflers on construction equipment.

*Recreation.* ACWD and ACFCD will coordinate with the East Bay Regional Parks District to post trail closure notices and schedule at all trail heads to ensure that the public knows when trails are likely to be closed well in advance. To the extent compatible with public safety, ACWD, ACFCD and/or the East Bay Regional Parks District, working together, will provide carefully signed detours around construction, and will separate these detours with temporary construction chain link fencing.

*Transportation and Traffic:* ACWD and ACFCD will require that all construction materials and equipment be transported in accordance with Caltrans and City of Fremont rules and regulations.

*Cumulative Impacts:* Mitigation measures described above, including adherence to all local requirements and permitting for construction vehicle traffic, and noise monitoring and the use of sound walls, will reduce the incremental and cumulative impacts of the project.

ACWD has prepared a Mitigation Monitoring and Reporting Plan (Exhibit 4) for the project and will comply with this plan.

Staff has concluded that the specified mitigation measures reduce any potentially significant effects to a level of insignificance. Staff therefore recommends that the Conservancy find that the proposed project, as mitigated, will not have a significant effect on the environment. Upon approval, staff will file a Notice of Determination for this project.