9 Mitigation Monitoring and Reporting Program

Section 15097 of the California Environmental Quality Act (CEQA) Guidelines requires that, whenever a public agency approves a project based on a mitigated negative declaration or an environmental impact report (EIR), the public agency shall establish a mitigation monitoring or reporting program to ensure that all adopted mitigation measures are implemented.

This mitigation monitoring and reporting program (MMRP) for the Laguna Creek Diversion Retrofit Project (Proposed Project) has been prepared pursuant to CEQA (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (14 California Code of Regulations, Chapter 3, Sections 15074 and 15097). This MMRP is intended to be used by City of Santa Cruz Water Department (SCWD) staff and mitigation monitoring personnel to ensure compliance with mitigation measures during project implementation. Mitigation measures identified in this MMRP were developed in the Draft EIR prepared for the Proposed Project. A master copy of this MMRP shall be kept in the office of the SCWD and shall be available for viewing upon request.

The Draft EIR for the Proposed Project presents a detailed set of mitigation measures required for implementation. As noted above, the intent of the MMRP is to ensure the effective implementation and enforcement of all adopted mitigation measures. The MMRP includes all mitigation measures identified in the Draft EIR and, for each measure, the party responsible for implementation and implementation timing (see Table 9-1). The MMRP also includes the City's standard construction practices, which are described in Chapter 3, Project Description, and would be implemented by the City and its contractors during project construction activities.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
Mitigation Measures Identified in the Environmental Impact Report		
Biological Resources		
MM BIO-1a: Conduct Worker Environmental Awareness Training. A qualified biologist shall conduct an education program for all persons employed on the Proposed Project prior to performing work activities. The presentation given by the qualified biologist will include a discussion of the biology and general behavior of any special-status species that may be in the area, how they may be encountered within the work area, and procedures to follow when they are encountered. The qualified biologist shall prepare and distribute handouts containing all of this information for workers to carry on site. Interpretation shall be provided for non-English speaking workers. All personnel working on the site will receive this training, and will sign a sign-in sheet showing they received the training. Any personnel joining the work crew after the training has been administered shall receive the same training before beginning work.	City responsible for hiring qualified biologist. Contractor responsible for completing training.	Prior to initiation of construction activities.
MM BIO-1b: Conduct Special-Status Amphibian Species Survey and Monitoring. A pre-construction survey for Santa Cruz black salamander, California giant salamander, and California red-legged frog shall be conducted within 48 hours prior to the onset of construction activities. The survey area shall include all suitable habitat within the project site, plus a 50-foot buffer. Suitable habitat for these species in the project site consists of damp upland areas near/adjacent to existing aquatic features associated with Laguna Creek, and the wetted portion of Laguna Creek. Additionally, a qualified biologist shall be on site daily during construction activities to ensure impacts to special-status wildlife are avoided and minimized. A daily pre-construction sweep for wildlife within all staging and work areas shall be conducted followed by construction monitoring when work is conducted within suitable habitat. Salamanders. If any individuals of Santa Cruz black salamander or California giant salamander are observed during the pre-construction survey or subsequent monitoring, their location(s) shall be recorded and identified for avoidance. Individuals found should be allowed to move out of the area on their own. If avoidance is not feasible, they shall be moved to the nearest appropriate habitat outside of the construction footprint by a qualified biologist. Qualified biologists shall be approved by the California Department of Fish and Wildlife prior to handling/translocating individuals of these species. California Red-Legged Frogs. Although determined to have a low potential to occur within the project site, initial ground-disturbing activities shall avoid the period when California red-legged frogs are most likely to be moving through upland areas (November 1 through March 31). When ground-disturbing activities must take place between November 1 and March 31, a qualified biologist shall monitor construction activity daily for the species to ensure avoidance. If any California red-legged frogs are observed and take authorization has been provided for the Proposed Project, relevant conservation	City responsible for hiring qualified biologist to conduct pre-construction survey and daily monitoring and implement relocation, if needed.	Pre-construction survey: 48 hours prior to initiation of construction activities. Daily monitoring: During construction.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
measures from the applicable take authorization shall be implemented. If any California red-legged frogs are observed and take authorization has not been provided for the Proposed Project, the monitoring biologist shall have the authority to temporarily stop work to allow the species to move out of the work area on its own volition. The U.S. Fish and Wildlife Service shall be contacted if frogs remain in work areas and appropriate avoidance and minimization measures shall be implemented, as determined by the qualified biologist and approved by the City, to ensure protection of the frogs.		
MM BIO-1c: Conduct San Francisco Dusky-Footed Woodrat Survey and Relocation. A pre-construction survey to locate woodrat middens shall be conducted by a qualified biologists within 48 hours prior to the onset of construction activities. The survey area shall include all suitable habitat within the project site, plus a 50-foot buffer. Woodrat middens found shall be mapped and flagged with high visibility flagging tape for avoidance. If middens are found and complete avoidance is not feasible, the following measures shall be implemented: • If construction is to occur during the breeding season (generally between January 1 and September 31), and young are suspected to be present, the existing midden shall be left undisturbed until such a time as the qualified biologist determines the young are capable of independent survival. • A qualified biologist shall construct replacement woodrat middens for each midden that would be removed. The replacement middens shall be located in similar habitat outside the area of disturbance. • A qualified biologist shall trap woodrats and relocate them to the constructed middens outside the area of disturbance. After trapping is complete, the biologist will disassemble the existing woodrat middens by hand to allow any remaining woodrats inside to escape unharmed. • Prior to implementation of any disturbance of the existing woodrat middens and/or trapping/ relocation, approval from the California Department of Fish and Wildlife will be obtained.	City responsible for hiring qualified biologist to conduct pre-construction survey and implement relocation, if needed.	Pre-construction survey: 48 hours prior to initiation of construction activities.
MM BIO-1d: Conduct Pre-Construction Nesting Bird and Roosting Bat Survey. Construction and tree removal activities should avoid the migratory bird nesting season (typically February 1 through August 31), to reduce any potentially significant impact to birds that may be nesting on the study area. If construction and tree removal activities must occur during the migratory bird nesting season, an avian nesting survey of the project site and contiguous habitat within 300 feet of all impact areas must be conducted for protected migratory birds and active nests. The avian nesting survey shall be performed by a qualified wildlife biologist within 7 days prior to the start of ground or vegetation disturbance. Once construction has started, if there are breaks in ground or vegetation disturbance that exceed 14 days, then another avian nesting survey shall be conducted. If an active bird nest is found, the nest shall be flagged and mapped on the construction plans along with an appropriate no disturbance buffer, which will be determined by the biologist based on the species' sensitivity to disturbance (typically 250 feet for passerines and 500 feet for raptors and special-status species). The nest area shall be avoided until	City responsible for hiring qualified biologist to conduct surveys.	Nesting bird pre-construction survey: Within 7 days prior to initiation of construction activities. Roosting bat survey: Within 30 days prior to tree removal.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
the nest is vacated and the juveniles have fledged. The nest area shall be demarcated in the field with flagging and stakes or construction fencing. To the extent practicable, tree removal should occur outside peak bat activity timeframes when young or overwintering bats may be present, which generally occurs from March through April and August through October, to ensure protection of potentially occurring bats and their roosts on the project site. Additionally, daily restrictions on the timing of any construction activities should be limited to daylight hours to reduce disturbance to roosting (and foraging) bat species. Additionally, a visual bat survey should be conducted within 30 days prior to the removal of any trees. The survey should include a determination on whether active bat roosts are present on or within 50 feet of the project site. If a non-breeding and non-wintering bat colony is found, the individuals shall be evicted under the direction of a qualified biologist to ensure their protection and avoid unnecessary harm. If a maternity colony or overwintering colony is found in the control building or trees on the project site, then the qualified biologist shall establish a suitable construction-free buffer around the location. The construction-free buffer shall remain in place until the qualified biologist determines that the nursery is no longer active.		
MM BIO-2: Compensate for Impacts to Sensitive Vegetation Communities. Direct temporary impacts to 0.20 acres of redwood forest alliance would be mitigated through on-site rehabilitation to conditions similar to those that existed prior to grading and/or ground-disturbing activities. This would consist of re-contouring temporarily impacted areas to match pre-project grade and non-native species removal and monitoring over a 3-year period to inhibit non-native species encroachment. A one-time rehabilitation effort followed by monitoring and non-native weed removal for a minimum of 3 years shall compensate for temporary direct impacts to the redwood forest alliance vegetation community. Direct permanent impacts to 0.01 acres of redwood forest alliance vegetation community shall be mitigated through on-site enhancement activities at a 2:1 mitigation ratio. A conceptual Habitat Mitigation and Monitoring Plan shall be prepared and implemented that includes the enhancement activities, which may include non-native species removal and revegetation followed by monitoring, for all disturbed areas. The plan shall specify the criteria and standards by which the enhancement actions will compensate for impacts of the Proposed Project on the redwood forest vegetation community and shall at a minimum include discussion of the following:	City responsible for hiring qualified biologist to prepare plan and implement rehabilitation and monitoring.	Habitat Mitigation and Monitoring Plan preparation: During construction. Rehabilitation: After completion of construction activities. Monitoring/weed removal: At least 3 years following rehabilitation.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
• The enhancement objectives including the type and amount of revegetation to be implemented taking into account enhanced areas where non-native invasive vegetation is removed and replanting specifications that take into account natural regeneration of species. • The specific methods to be employed for revegetation. • Success criteria and monitoring requirements to ensure vegetation community restoration success. • Remedial measures to be implemented in the event that performance standards are not achieved.		
MM-BIO-3: Compensate for Impacts to Jurisdictional Non-Wetland Waters. Direct temporary and permanent impacts to jurisdictional non-wetland waters shall be mitigated on site. On-site measures shall include rehabilitation of areas temporarily impacted (approximately 0.13 acres) and permanently impacted (approximately 0.01 acres) within jurisdictional limits at a 1:1 mitigation ratio. Areas impacted shall be returned to conditions similar to those that existed prior to grading and/or ground-disturbing activities. The conceptual Habitat Mitigation and Monitoring Plan implemented as part of MM-BIO-2 shall include enhancement activities to address impacts to jurisdictional non-wetland waters, which may include non-native species removal and revegetation followed by monitoring, for all disturbed areas. The plan shall specify the criteria and standards by which the enhancement actions will compensate for impacts of the Proposed Project on jurisdictional non-wetland waters. Direct temporary and permanent impacts to jurisdictional non-wetlands waters shall be addressed through Section 401 and Section 404 of the Clean Water Act, the Porter-Cologne Water Quality Act, and Section 1602 of the California Fish and Game Code.	City responsible for hiring qualified biologist to prepare plan.	After completion of construction activities, as specified in the Habitat Mitigation and Monitoring Plan.
Cultural Resources and Tribal Cultural Resources		
MM CUL-2: Cultural Resources Awareness Training and Unanticipated Discovery of Archaeological Resources. Prior to site mobilization or construction activities on the project site, a qualified archaeologist with training and experience in California prehistory and historical period archaeology shall conduct a cultural resources awareness training for all project construction personnel. The training shall address the identification of buried cultural deposits, including Native American and historical period archaeological deposits and potential tribal cultural resources, and cover identification of typical prehistoric archaeological site components including midden soil, lithic debris, and dietary remains as well as typical historical period remains such as glass and ceramics. The training must also explain procedures for stopping work if suspected resources are encountered. Any personnel joining the work crew subsequent to the training shall also receive the same training before beginning work. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Proposed Project, all construction work occurring within 100 feet of the find shall immediately stop until a qualified archaeologist, meeting the Secretary of the Interior's Professional	City responsible for inclusion of measure in construction specifications and hiring a qualified archaeologist. Contractor responsible for implementation.	During construction.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
Qualification Standards, can evaluate the significance of the find and determine whether or not additional study is warranted. Depending upon the significance of the find under the California Environmental Quality Act (CEQA) (14 California Code of Regulations Section 15064.5[f]; Public Resources Code Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, additional treatment may be required.		
MM CUL-3: Unanticipated Discovery of Human Remains. In accordance with California Health and Safety Code Section 7050.5, if potential human remains are found, the lead agency staff and the County Coroner must be immediately notified of the discovery. The coroner would provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, can occur until a determination has been made. If the County Coroner determines that the remains are, or are believed to be, Native American, the coroner would notify the Native American Heritage Commission within 24 hours. In accordance with Public Resources Code Section 5097.98, the NAHC must immediately notify those persons it believes to be the Most Likely Descendant (MLD) from the deceased Native American. Within 48 hours of this notification, the MLD would recommend to the lead agency her/his preferred treatment of the remains and associated grave goods. Further, federal regulations require that Native American human remains, funerary objects, and object of cultural patrimony are handled consistent with the requirements of the Native American Graves Protection and Repatriation Act (NAGPRA) for all discovery situations in accordance with 43 Code of Federal Regulations Part 10.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	During construction.
Geology and Soils		
MM GEO-4: Paleontological Resources Impact Mitigation Program and Paleontological Monitoring. Prior to commencement of any grading activity on site, the applicant shall retain a qualified paleontologist per the Society of Vertebrate Paleontology (SVP) (2010) guidelines. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the Proposed Project. The PRIMP shall be consistent with the SVP (2010) guidelines and outline requirements for pre-construction meeting attendance and worker environmental awareness training, where paleontological monitoring is required within the project site based on construction plans and/or geotechnical reports, procedures for adequate paleontological monitoring and discoveries treatment, and paleontological methods (including sediment sampling for microinvertebrate and microvertebrate fossils), reporting, and collections management. The qualified paleontologist shall attend the pre-construction meeting and a qualified paleontological monitor shall be on site during all rough grading and other significant ground-disturbing activities (including augering) in previously undisturbed, Monterey Formation deposits, as defined by the PRIMP. In the event that paleontological resources (e.g., fossils) are unearthed during	City responsible for hiring qualified paleontologist to prepare the PRIMP and conduct worker training and monitoring.	PRIMP preparation and worker training: Prior to site grading or excavation. Monitoring: During grading and ground disturbance as specified in the PRIMP.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
grading, the paleontological monitor will temporarily halt and/or divert grading activity to allow recovery of paleontological resources. The area of discovery will be roped off with a 50-foot radius buffer. Once documentation and collection of the find is completed, the monitor will allow grading to recommence in the area of the find.		
Noise		
MM NOI-1: Construction Noise. The Proposed Project shall implement the following measures related to construction noise: • Restrict construction activities and use of equipment that have the potential to generate significant noise levels (e.g., use of concrete saw, mounted impact hammer, jackhammer, rock drill, etc.) to between the hours of 8:00 a.m. and 5:00 p.m. • Construction equipment and vehicles shall be fitted with efficient, well-maintained mufflers that reduce equipment noise emission levels at the project site. Internal-combustion-powered equipment shall be equipped with properly operating noise suppression devices (e.g., mufflers, silencers, wraps) that meet or exceed the manufacturer's specifications. Mufflers and noise suppressors shall be properly maintained and tuned to ensure proper fit, function, and minimization of noise. • Pumps that are not submerged and aboveground conveyor systems shall be located within acoustically treated enclosures, shrouded, or shielded to prevent the propagation of sound into the surrounding areas. • Portable and stationary site support equipment (e.g., generators, compressors, rock crushers, and cement mixers) shall be located as far as possible from nearby noise-sensitive receptors. • Impact tools shall have the working area/impact area shrouded or shielded whenever possible, with intake and exhaust ports on power equipment muffled or suppressed. This may necessitate the use of temporary or portable, application-specific noise shields or barriers. • Construction equipment shall not be idled for extended periods (i.e., 5 minutes or longer) of time in the immediate vicinity of noise-sensitive receptors.	Contractor.	During construction.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
MM NOI-2: Construction Vibration Effects on Historic Structures. Prior to the use of construction equipment in the vicinity of the dam, a vibration damage threshold will be established by a qualified engineer under the direction of the City. The vibration damage threshold will be developed through the evaluation of the condition of the dam structure, underlying soil conditions, and type of construction operation to be performed. At the City's direction, a construction vibration monitoring plan will be prepared and implemented prior to the use of construction equipment near the dam. The monitoring plan shall report on the vibration damage threshold and the methods used to develop the threshold. The plan shall also establish the methodology for characterizing the existing baseline vibration levels present on the site, operational construction vibration monitoring consistent with the established threshold, and reporting to be completed during project construction. Should the construction vibration analysis undertaken during the preparation of the monitoring plan reveal that the proposed construction methods would exceed the vibration threshold established for the dam, alternative construction methods will be explored to find a method that would allow project construction to move forward while avoiding potential vibration-related damage to the dam during construction.	City responsible for hiring a qualified engineer to develop threshold and prepare plan. Contractor to implement plan during construction.	Development of threshold and plan: Prior to initiation of construction activities. Implementation of plan: During construction.
Standard Construction Practices Included in the Proposed Project		
Erosion and Air Quality Control		
1. Implement erosion control best management practices for all construction activities occurring in or adjacent to jurisdictional aquatic resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, and/or California Fish and Game Code Section 1600). These measures may include, but are not limited to, (1) installation of silt fences, fiber or straw rolls, and/or bales along limits of work/construction areas and from the edge of the water course; (2) covering of stockpiled spoils; (3) revegetation and physical stabilization of disturbed graded and staging areas; and (4) sediment control including fencing, dams, barriers, berms, traps, and associated basins.	City responsible for inclusion of measure in construction specifications and periodic inspection. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
2. Provide stockpile containment and exposed soil stabilization structures (e.g., Visqueen plastic sheeting, fiber or straw rolls, gravel bags, and/or hydroseed).	City responsible for inclusion of measure in construction specifications and periodic inspection. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.
3. Provide runoff control devices (e.g., fiber or straw rolls, gravel bag barriers/chevrons) used during construction phases conducted during the rainy season. Following all rain events, runoff control devices shall be inspected for their performance and repaired immediately if they are found to be deficient.	City responsible for inclusion of measure in construction specifications, per-construction inspections, and periodic inspections. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.
4. Implement wind erosion (dust) controls, including the following: • Use a water truck; • Water active construction areas as necessary to control fugitive dust; • Hydro seed and/or apply non-toxic soil binders to exposed areas after cut and fill operations; • Cover inactive storage piles; • Cover all trucks hauling dirt, sand, or loose materials off site; and • Install appropriately effective track-out capture methods at the construction site for all exiting trucks.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
Water Quality Protection		
5. Locate and stabilize spoil disposal sites and other debris areas such as concrete wash sites. Sediment control measures shall be implemented so that sediment is not conveyed to waterways or jurisdictional resources (resources subject to permitting under Clean Water Act Section 404, Clean Water Act Section 401, and/or California Fish and Game Code Section 1600).	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.
6. Minimize potential for hazardous spills from heavy equipment by not storing equipment or fueling within a minimum of 65 feet of any active stream channel or water body unless approved by permitting agencies along with implementation of additional spill prevention methods such as secondary containment and inspection.	City responsible for inclusion of measure in construction specifications and pre-construction and periodic inspections. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.
7. Ensure that gas, oil, or any other substances that could be hazardous to aquatic life or pollute habitat are prevented from contaminating the soil or entering waters of the state or of the United States by storing these types of materials within an established containment area. Vehicles and equipment would have spill kits available, be checked daily for leaks, and would be properly maintained to prevent contamination of soil or water from external grease and oil or from leaking hydraulic fluid, fuel, oil, and grease. Any gas, oil, or other substance that could be considered hazardous shall be stored in water-tight containers with secondary containment. Emergency spill kits shall be on site at all times.	City responsible for inclusion of measure in construction specifications and pre-construction and periodic inspections. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
8. Prevent equipment fluid leaks through regular equipment inspections.	City responsible for inclusion of measure in construction specifications and periodic inspection. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Periodic inspection during construction to ensure no violations.
9. Implement proper waste/trash management.	City responsible for inclusion of measure in construction specifications and pre-construction and periodic inspection during implementation. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.
In-Channel Work and Fish Species Protection		
10. Avoid activities in the active (i.e., flowing) channel whenever possible.	City responsible for inclusion of measure in construction specifications and periodic inspection during implementation. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Periodic inspection during construction to ensure no violations.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
11. Isolate work areas as needed and bypass flowing water around work site (see dewatering measures below).	City responsible for inclusion of measure in construction specifications and periodic inspection during implementation. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.
12. Personnel shall use the appropriate equipment for the job that minimizes disturbance to the channel bed and banks. Appropriately tired vehicles, either tracked or wheeled, shall be used depending on the situation.	City responsible for inclusion of measure in construction specifications and periodic inspection during implementation. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Periodic inspection during construction to ensure no violations.
General Habitat Protection		
13. Avoid disturbance of retained riparian vegetation to the maximum extent feasible when working in or adjacent to an active stream channel.	City responsible for inclusion of measure in construction specifications and periodic inspection during implementation. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Periodic inspection during construction to ensure no violations.
14. Restore all temporarily disturbed natural communities/areas by replanting native vegetation using a vegetation mix appropriate for the site.	City responsible for replanting.	Upon completion of construction.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
15. Require decontamination of any used tools and equipment prior to entering water ways.	City responsible for inclusion of measure in construction specifications and periodic inspection during implementation. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction. Periodic inspection during construction to ensure no violations.
16. A qualified biologist shall conduct a training-educational session for project construction personnel prior to any mobilization-construction activities within the project sites to inform personnel about species that may be present on site. The training shall consist of basic identification of special-status species that may occur on or near the project site, their habitat, their basic habits, how they may be encountered in the work area, and procedures to follow when they are encountered. The training will include a description of the project boundaries; general provisions of the Migratory Bird Treaty Act, California Fish and Game Code, and federal and state Endangered Species Acts; the necessity for adhering to the provision of these regulations; and general measures for the protection of special-status species, including breeding birds and their nests. Any personnel joining the work crew later shall receive the same training before beginning work.	City responsible for hiring qualified biologist or trained designee to conduct monitoring.	Implement at the onset of mobilization-construction and when new construction personnel arrive at the site.
Dewatering		
17. Prior to the start of work or during the installation of temporary water diversion structures, capture native aquatic vertebrates in the work area and transfer them to another reach as determined by a qualified biologist. Capture and relocation of aquatic native vertebrates is not required at individual project sites when site conditions preclude reasonably effective operation of capture gear and equipment, or when the safety of the biologist conducting the capture may be compromised.	City responsible for hiring qualified biologist to be present during dewatering and to implement capture and relocation plan if needed.	Biologist to be present during installation of coffer dam and dewatering.
18. When work in a flowing stream is unavoidable, isolate the work area from the stream. This may be achieved by diverting the entire streamflow around the work area by a pipe or open channel. Coffer dams shall be installed upstream and downstream, if needed, of the work areas at locations determined suitable based on site-specific conditions, including proximity to the construction zone and type of construction activities being conducted. Cofferdam construction shall be adequate to prevent seepage to the maximum extent feasible into or from the work area. Where feasible, water diversion techniques shall allow streamflows to flow by gravity around or through the work site. If gravity flow is not feasible, streamflows may be pumped around the work site using pumps and screened intake	City responsible for inclusion of measure in construction specifications and periodic inspection during implementation. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction when work in flowing stream is unavoidable.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
hoses. Sumps or basins may also be used to collect water, where appropriate (e.g., in channels with low flows). The work area will remain isolated from flowing water until any necessary erosion protection is in place. All water shall be discharged in a non-erosive manner (e.g., gravel or vegetated bars, on hay bales, on plastic, on concrete, or in storm drains when equipped with filtering devices).		Pre-construction inspection to confirm measures are in place. Periodic inspection during construction to ensure no violations.
19. If a bypass will be of open channel design, the berm confining the channel may be constructed of material from the channel.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation, if needed.	Include measure in construction specifications. Implement during construction if needed.
20. Diversions shall maintain ambient flows below the diversion, and waters discharged below the project site shall not be diminished or degraded by the diversion. All imported materials placed in the channel to dewater the channel shall be removed when the work is completed. Dirt, dust, or other potential discharge material in the work area will be contained and prevented from entering the flowing channel. Normal flows shall be restored to the affected stream as soon as is feasible and safe after completion of work at that location.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation. City is responsible for periodic and post-construction inspection to ensure all imported materials are removed.	Include measure in construction specifications. Implement during construction. Periodic inspection to confirm compliance with the measure. Post-construction inspection.
21. To the extent that streambed design changes are not part of the Proposed Project, return the streambed, including the low-flow channel, to as close to pre-project condition as possible unless the pre-existing condition was detrimental to channel condition as determined by a qualified biologist or hydrologist.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation. City is responsible for post-construction inspection.	Include measure in construction specifications. Implement during construction. Post-construction inspection.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
22. Remove all temporary diversion structures and the supportive material as soon as reasonably possible, but no more than 72 hours after work is completed.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation. City is responsible for post-construction inspection to ensure all imported materials are removed.	Include measure in construction specifications. Implement during construction. Post-construction inspection.
23. Completely remove temporary fills, such as for access ramps, diversion structures, or coffer dams upon finishing the work.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation. City is responsible for post-construction inspection to ensure all imported materials are removed.	Include measure in construction specifications. Implement during construction. Post-construction inspection.
Other Practices		
24. In the event that archaeological resources (sites, features, or artifacts) are exposed during construction activities for the Proposed Project, immediately stop all construction work occurring within 100 feet of the find until a qualified archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards, can evaluate the significance of the find. The archaeologist will determine whether additional study is warranted. Should it be required, the archaeologist may install temporary flagging around a resource to avoid any disturbances from construction equipment. Depending upon the significance of the find under CEQA (14 CCR 15064.5[f]; California Public Resources Code, Section 21082), the archaeologist may record the find to appropriate standards (thereby addressing any data potential) and allow work to continue. If the archaeologist observes the discovery to be potentially significant under CEQA, preservation in place or additional treatment may be required.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
25. In accordance with Section 7050.5 of the California Health and Safety Code, if potential human remains are found, immediately notify the lead agency staff and the County Coroner of the discovery. The coroner would provide a determination within 48 hours of notification. No further excavation or disturbance of the identified material, or any area reasonably suspected to overlie additional remains, can occur until a determination has been made. If the County Coroner determines that the remains are, or are believed to be, Native American, the coroner would notify the Native American Heritage Commission within 24 hours. In accordance with California Public Resources Code, Section 5097.98, the Native American Heritage Commission must immediately notify those persons it believes to be the Most Likely Descendant from the deceased Native American. Within 48 hours of this notification, the Most Likely Descendant would recommend to the lead agency her/his preferred treatment of the remains and associated grave goods.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.
26. Notify adjacent property owners of nighttime construction schedules. A Construction Noise Coordinator will be identified. The contact number for the Construction Noise Coordinator will be included on notices distributed to neighbors regarding planned nighttime construction activities. The Construction Noise Coordinator will be responsible for responding to any local complaints about construction noise. When a complaint is received, the Construction Noise Coordinator shall notify the City within 48 hours of the complaint, determine the cause of the noise complaint, and implement as possible reasonable measures to resolve the complaint, as deemed acceptable by the City.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.
Project-Specific Practices for Biological Resources		
27. To protect fish, the following shall be implemented: • Relocate fish to suitable habitat during dewatering activities. • Maintain adequate water depth within downstream plunge pool. A depth of 3 to 4 feet is preferred to conform to the existing pool depth and minimize potential for degrading the suitability of the pool for trout habitat. Greater depth also reduces the potential for harm to fish passing over the Coanda screen and entering the plunge pool below. • Maintain soft bank stabilization features identified during project design that provides potential habitat for trout. • Maintain native riparian shrubs and small trees in (as appropriate) and around riprap to provide overhead cover and shading when the plants have matured.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
28. To protect trees that are retained on site, the following will be implemented: • Implement measures to minimize the potential for pathogen spread. Sanitize tools and equipment used in vegetation clearing including tree removal operations. If soil is collected on equipment, rinse equipment on site with a portable water tank or water truck, or at a designated rinsing station, to remove soil-borne pathogens and prevent transport to new sites. Alternatively, debris can be cleaned from tools/equipment via brushing, sweeping, or blowing with compressed air. • Implement additional prevention methods for sudden oak death and pitch canker. A qualified biologist, arborist, or forester should inspect loads of logs and equipment leaving the site to ensure that no host material is being transported without a permit if material is being transported to outside locations. If importing vegetative material for restoration purposes, ensure that material that has been produced in conformance with the latest horticultural standards in pest and disease avoidance and sanitation. • Implement recommendations from the Tree Inventory, Impact Assessment, and Protection Plan (Fouts 2020) prepared for the Proposed Project.	City responsible for inclusion of measure in construction specifications and hiring a qualified biologist. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.
29. To prevent inadvertent entrapment of wildlife during construction activities, all excavated, steep-walled holes or trenches more than 2 feet deep and/or all open pipeline segments will be covered at the close of each working day with plywood or similar materials, to the extent feasible. These areas will be inspected for trapped wildlife before and after placement of exclusionary materials.	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.
Project-Specific Practices for Cultural Resources		
30. To protect the dam during construction, the following will be implemented: • Notching crest of dam. The notch in the crest of the dam shall be sawcut to score neat lines for stone masonry removal. The use of a wire saw would avoid excess material removal and would prevent unraveling of stone masonry beyond the limits of the new intake structure. Given the strength and hardness of the dam, the cuts may first be initiated using chisel hammers to remove materials as necessary. • Water-pressure washing of dam to remove debris. To remove loose material and organics such as dirt and moss water-blasting of the downstream face of the dam may be required. Prior to completing any water-blasting work, and at the direction of the City and under supervision of the Project inspector, the contractor shall test washing methods and develop the least impactful method of dam cleaning. The pressure washing methods shall avoid eroding the mortar. The contractor shall start with a low-pressure water wash, and if unsuccessful, use water of slightly higher pressure. As	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.

Table 9-1. Mitigation Monitoring and Reporting Program

Mitigation Measure	Party Responsible for Implementation	Implementation Timing
feasible, the test shall be conducted in an inconspicuous location. Pressure washing shall be limited to the area where the new intake structure will be cast, with approximately 1-foot buffer. A bonding agent such as a high-solids, water-based emulsion admixture suitable for modifying Portland cement compositions, shall be spray applied to the dam face within the limits of the new concrete formwork for the new intake structure.		
31. Documentation of the historical resource. The City will work with a qualified architectural historian to develop interpretative text and content for a dedicated webpage on the City's public website that explains the history of the site and its importance within the water management system. This text and supporting content (historic era images) will be utilized to develop a brochure with a one-time limited pressing for distribution to local libraries and museums. In addition, the City will include a brief history of the project site as an entry in its Santa Cruz Municipal Utilities Review, a quarterly newsletter that is sent to all customers in the Water Service Area.	City responsible for hiring a qualified architectural historian.	Distribution of materials and newsletter prior to construction.
Project-Specific Practices for Wildfire Hazards		
32. Internal combustion engine equipment shall include spark arrestors, fire suppression equipment (e.g., fire extinguishers and shovels) must be stored on site during use of such mechanical equipment, and construction activities may not be conducted during red flag warnings issued by the California Department of Forestry and Fire Protection (CAL FIRE). Red flag warnings and fire weather watches are issued by CAL FIRE based on weather patterns (low humidity, strong winds, dry fuels, etc.) and listed on their website (https://www.fire.ca.gov/programs/communications/red-flag-warnings-fire-weather-watches/).	City responsible for inclusion of measure in construction specifications. Contractor responsible for implementation.	Include measure in construction specifications. Implement during construction.