CITY OF SANTA CRUZ

Negative (or Mitigated Negative) Declaration

The Administrator of Environmental Quality of the City of Santa Cruz has prepared this Negative Declaration for the following described project:

Project: North Coast System Rehabilitation Project – Phase 3 Coast Segment

Project Location: The project site extends approximately 3.3 miles along Highway 1 generally from Scaroni Road to 300 feet west of the main entrance to Wilder Ranch State Park in Santa Cruz County (see attached map)

Project Description: The proposed project involves replacement of approximately 18,500 linear feet of 16- to 22-inch diameter raw water main that runs along Highway 1 from Scaroni Road to west of the entrance to Wilder Ranch State Park. The proposed project is Phase 3 (Coast Segment) of the North Coast System (NCS) Rehabilitation Project. The Phase 3 segment is 19,800 feet in total length. The overall project will: 1) install/replace 18,500 feet of new 16- to 22-inch pipeline; 2) use/retain 1,300 feet of existing pipeline; and 3) remove 800 feet of old, above ground pipeline. In most locations, the proposed pipeline would be located within 20 feet of the existing pipeline, which would be abandoned in place (below ground sections) or removed (above ground sections). In one area, an alternate alignment is proposed to avoid difficult construction areas and sensitive resources. The majority of the proposed pipeline would be constructed employing standard open trench techniques. The remainder would be built using a trenchless construction method such as horizontal directional drilling and jack and bore. These methods would be used at proposed crossings of Highway 1, Lombardi Gulch creek and riparian corridor and the Santa Cruz Branch rail line where open trench construction methods are impractical or would result in greater environmental impact.

Applicant: City of Santa Cruz Water Department

Applicant Address: 212 Locust Street, Suite C
Santa Cruz, CA 95060

The City of Santa Cruz Water Department has reviewed the proposed project and has determined that the project, based on the Initial Study attached hereto, will not have a significant effect on the environment. An Environmental Impact Report is not required pursuant to the California Environmental Quality Act of 1970. This environmental review process and (Mitigated) Negative Declaration is done in accordance with the State CEQA Guidelines and the local City of Santa Cruz CEQA Guidelines and Procedures.

The following mitigation measures will be incorporated into the project design or as conditions of approval, to ensure that any potential environmental impacts will not be significant.

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Biological Resources – Special-Status Plants. No special-status plants were observed within the project alignment, however if construction is initiated after August 2015, there is potential for significant impacts on special-status plant species if they colonize the project area after that date.	**Mitigation Measure RP-1**: Preconstruction surveys for special-status plants shall be conducted if construction is initiated after August 2015. The surveys shall follow standard survey protocols and shall be timed to occur when target species are present and identifiable. If special-status plant species are identified, the following Mitigation Measures RP-2 through RP-5 shall be implemented. **Mitigation Measure RP-2**: Prior to the initiation of construction activities, population boundaries for special-status plant species shall be clearly delineated with visible flagging or fencing, which shall remain in place for the duration of construction activities. Flagged areas shall be avoided during construction activities in that area. Warning signs shall be posted on the temporary fencing to alert excavators and other workers not to proceed beyond the fence. All protective fencing shall remain in place until all repairs have been completed. Signs shall include the following language: "NOTICE: SENSITIVE HABITAT AREA. DO NOT ENTER." If the area cannot be avoided and it is determined that the activity will adversely affect the special-status plant species, the activity shall be conducted outside of the bloom period for that species to the extent practicable. In the appropriate season prior to construction, seed from the special-status plant species shall be collected from plants within the impact area and stored. Soil excavation activities in areas where special-status plant species are known to occur shall ensure that the topsoil will be segregated to preserve the viability of the seed bank. To adequately capture the seed bank, the top few inches of soil shall be removed and appropriately stored. Upon completion of the project, the soil shall be replaced in the area affected and seed collected from plants within the impact area shall be hand broadcast onto the revegetated area. Success of the

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	revegetation efforts shall be monitored for a minimum of five years, wherein the number of plant species growing within the area shall be inventoried. The revegetation shall be deemed successful if the alignment attains 50 percent of the pre-disturbed number of plants. If no special-status plant species are detected in Year 1 of monitoring, the City shall develop and implement remedial measures, which may include additional management and revegetation, upon concurrence from the USFWS. Occurrences of problematic invasive, non-native plant species shall be removed from the revegetated area for a minimum of five years. **Mitigation Measure RP-3**: Appropriate dust control measures, such as periodically wetting down the work areas, shall be used as necessary for any project-related construction activities that generate dust. **Mitigation Measure RP-4**: The spread or introduction of problematic invasive exotic plant species shall be avoided to the extent practicable. All heavy equipment shall be thoroughly inspected and cleaned of invasive plants prior to entrance to the work site. When practicable, noxious and invasive plants in the project areas shall be removed. **Mitigation Measure RP-5**: Prior to any on-site work in areas where special-status plant species may occur, an agency-approved biologist shall conduct a tailgate training session in which all construction personnel shall receive training regarding measures that are to be implemented to avoid environmental impacts. This training shall include a presentation of the potential for sensitive species to occur at the alignment and measures to protect habitat, including aquatic habitat, and avoid impacts to the species. All personnel working on the alignment shall receive this training, and shall sign a sign-in sheet showing they received the training.
Biological Resources – Special-Status Insect. Ohlone tiger beetle is assumed absent based on prior surveys and would not likely be impacted by the proposed project, unless conditions change over time.	**Mitigation Measure OTB-1**: Preconstruction Survey: A preconstruction survey for the Ohlone tiger beetle shall be conducted by a qualified entomologist within suitable grassland habitat during its active flight period (January 15 to May 30). If individual beetles are identified during the survey, mitigation measures shall be implemented according to OTB-2 through OTB-9 below. If individual beetles are not identified during the survey, no additional mitigation measures will need to be implemented. **Mitigation Measure OTB-2**: Locate Project Within Previously Disturbed Areas: To the extent practical, new habitat disturbance shall be minimized by locating components of this project either within the footprint of or adjacent to previously disturbed areas (such as the existing pipeline alignment or roads) or paved areas. Micro-siting of the new pipeline within the project alignment shall be utilized to the extent practical to avoid impacts to active Ohlone tiger beetle larval burrows that are encountered. Alternatively, the City may explore new technologies that would minimize or avoid new ground disturbance. **Mitigation Measure OTB-3**: Educational Awareness Training Session for All Construction Workers: Prior to the start of any construction-related activities, a USFWS-approved entomologist shall conduct a training session for all construction personnel. This training shall include a description of the Ohlone tiger beetle life stages that might be encountered by workers, information about its natural history and habitat, and measures to be implemented to avoid and minimize impacts to the beetle and its habitat during all work activities. The training shall also include a discussion of why sensitive habitat areas are fenced and procedures workers will follow if any Ohlone tiger beetle life stages are encountered. **Mitigation Measure OTB-4**: Delineate Boundaries of the Impact Area: In portions of the project located on Watsonville loams occupied by the Ohlone tiger beetle, temporary fencing and signs shall be erected before any vegetation clearing or ground disturbing (i.e., excavation, trenching, grading, etc.) activities occur to clearly delineate the boundaries of the project's impact area. Warning signs shall be posted on the temporary fencing to alert equipment operators and other construction workers not to proceed beyond the fence. Protective fencing shall remain in place until all construction and revegetation activities have been completed. Signs shall include the following language: "NOTICE: SENSITIVE HABITAT AREA. DO NOT ENTER." **Mitigation Measure OTB-5**: Identify Locations for Refueling, Worker Parking, and Staging Areas Outside of Sensitive Habitat: Whenever possible, locations for refueling, maintenance, and staging of equipment and vehicles shall be situated outside of sensitive habitat areas. Similarly, worker's vehicles shall be parked in designated areas outside of sensitive habitat areas. The City shall ensure that contamination of sensitive habitat does not occur during such operations, including accidental spills. All workers shall be informed of the appropriate procedures to prevent spills and response measures should an accidental spill occur. **Mitigation Measure OTB-6**: Relocate Observed Life Stages of Ohlone Tiger Beetles: To avoid the need to relocate adult Ohlone tiger beetles, pipeline construction activities in areas occupied by the species shall not occur during the flight season (January 15 to May 30), unless monitoring surveys indicate that adults are no longer active. If avoidance during the flight season is not practicable, a pre-construction survey shall be performed by a USFWS-approved entomologist to salvage and relocate any larvae and other life stages of the Ohlone tiger beetle. The approved monitor shall remain onsite during construction activities in occupied habitat to salvage and relocate any Ohlone tiger beetle encountered during construction. If a larva is found in an earthen tunnel, a new tunnel of the same depth shall be created outside of the impact area and the larva placed in it. If suitable habitat is not present adjacent to the impact area, salvaged tiger beetles

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	shall be relocated, subject to USFWS approval, to Pogonip Park in an attempt to reestablish the beetle at this formerly occupied location. The salvaging and relocating of Ohlone tiger beetles will be authorized under Section 7 of the federal Endangered Species Act, which is expected to be authorized under the Biological Opinion issued through the Section 404 permit from the Corps. **Mitigation Measure OTB-7:** Dust Control: Dust can clog the spiracles of adult beetles and larvae, the latter which are active throughout much of the year. Appropriate dust control measures, such as periodically wetting down the work areas, shall be used as necessary for any project-related activities that generate dust. Care will need to be exercised to avoid saturating areas supporting life stages of the Ohlone tiger beetle. **Mitigation Measure OTB-8:** Revegetation of Coastal Terrace Prairie Habitat: Ohlone tiger beetle adults and larvae prefer patches of bare to sparsely vegetated soil in this grassland habitat. Revegetation of disturbed portions of the project area at locations known to support the Ohlone tiger beetle shall use only grasses and forbs indigenous to the coastal terrace prairie habitat. Also, weed control shall be part of the revegetation activities. Dense ground covers, weed matting, aggregate, and mulch can degrade habitat conditions and shall not be used. **Mitigation Measure OTB-9:** Trench Backfilling: All excavated soil shall be retained and used to refill the trench after installation of the new pipeline. To maintain the pre-construction soil profile, soil from the bottom of the trench shall be returned to the trench's bottom. Similarly, top soil shall be redeposited as top soil. No off-site soils or other materials shall be utilized to refill the trench.
Biological Resources – Special-status Fish: The proposed project could potentially impact steelhead, coho salmon, and tidewater goby during construction activities.	**Mitigation Measure FISH-1**: All refueling, maintenance, and staging of equipment and vehicles shall occur at least 65 feet from any riparian habitat or water body. The City shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the City shall ensure that the contractor has prepared a plan to allow a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur. **Mitigation Measure FISH-2**: The City shall submit the name(s) and credentials of biologists who would conduct activities specified in the following measures at least 30 days prior to construction to the USFWS, NMFS, and CDFW. No project activities shall begin until the City receives approval from the agencies that the biologist(s) is qualified to conduct the work. **Mitigation Measure FISH-3**: Prior to any on-site work where special-status fish species may occur, an agency-approved biologist shall conduct a tailgate training session in which all construction personnel shall receive training regarding measures that are to be implemented to avoid impacts to special-status fish and associated aquatic habitats. This training shall include a presentation of the potential for the designated species to occur at the alignment and measures to protect habitat, including aquatic habitat, and to avoid impacts to the species. All personnel working on the alignment shall receive this training, and shall sign a sign-in sheet showing they received the training. **Mitigation Measure FISH-4**: Each morning before work begins at Majors Creek and Baldwin Creek, an agency-approved biologist shall survey the work site and habitat immediately surrounding the work site for conditions that could impact steelhead, coho salmon, or tidewater goby and shall remain on-site whenever work is occurring in these locations. No work shall be allowed to begin each morning until the monitor has inspected the work site in these locations. **Mitigation Measure FISH-5**: To protect water quality, water pumped from construction areas shall be discharged into a basin created out of straw bales lined with filter fabric. **Mitigation Measure FISH-6**: To reduce the potential for erosion after work is completed, disturbed areas within the alignment shall be decompacted and revegetated with an appropriate assemblage of native riparian, wetland, and upland vegetation suitable for the area. Planted material shall include native seed mixes, pole cuttings, or container stock as appropriate. All seed and plant sources shall be approved by the California Department of Parks and Recreation Senior Environmental Scientist. **Mitigation Measure FISH-7:** Stream contours shall be returned to the original condition at the end of project activities, unless consultation with the USFWS, NMFS, and CDFW has determined that it is not beneficial to the species or feasible. **Mitigation Measure FISH-8:** To control erosion during and after project implementation, the applicant shall implement best management practices, including: • Install straw wattles/silt fencing to break up and filter surface runoff. • Install rice straw, jute netting, or native duff to cover bare soil after work is completed except in Ohlone tiger beetle (coastal terrace prairie) habitat. Avoid use of plastic mesh netting at all sites, as this can entrap native animals such as snakes. • Install exclusion fencing to prevent heavy equipment from entering muddy/unstable areas. • Install rolling dips and revegetation on accessways utilized for repairs. • Install energy dissipators on pump/dewatering equipment outlets. • Revegetate with site-specific native materials, where appropriate. • Conduct activities outside of the channel whenever feasible by timing work to the low flow season or by utilizing equipment or methods that do not require access in the channel. • Conduct instream activities in Majors and Baldwin creeks (if necessary) during the low flow

season (June 15 through October 15 depending on the weather conditions) unless that conflicts with seasonal restrictions in other species-specific measures presented elsewhere in this report.

- Conduct instream activities in Little Baldwin Creek, Old Dairy Gulch, Lombardi Gulch, and un-named streams during the low flow season between April 1 and November 1 (depending on the weather conditions) unless these dates conflict with seasonal restrictions in other species-specific measures presented elsewhere in this report.
- Avoid disturbance of retained riparian/wetland vegetation where practicable.
- Utilize "floating" platforms for mobilization of heavy equipment in saturated soil conditions, as appropriate.
- Repair by high-lining high-density polyethylene pipeline to ensure longevity of pipeline repairs and to avoid site disturbance/unnecessary excavation and subsequent erosion impacts. Where placing pipeline in trench is not feasible because of topographic features, the pipeline shall be elevated on piers above ground, as opposed to placement directly on the ground, to avoid potential for creating a barrier to movement/habitat use by species.
- Limit removal of riparian vegetation to pruning/trimming where practicable.
- Minimize excavation in the active stream channel to that which was historically permitted.
- Isolate channels from flowing water through temporary bypass before beginning work (i.e. aquadam, coffer dam, etc.).
- Store construction and erosion control materials outside of the stream channel and cover loose soils/excavations during non-work hours and wet periods.

Mitigation Measure FISH-9: An agency-approved biologist or biological monitor shall remove from within the proposed project alignment in or near creeks and drainages, any individuals of exotic species that are encountered, such as bullfrogs, crayfish, and centrarchid fishes to the extent practicable.

Mitigation Measure FISH-10: Upon locating individuals of federally listed special-status animal species that are dead or injured as a direct result of activities conducted by the City, initial notification shall be made within three working days of its finding to the appropriate responsible agency for the species: Ventura Fish and Wildlife Office at (805) 644-1766; NMFS Southwest Region at (582) 980-4000; and CDFW Bay-Delta Region at (707) 944-5500 if the species is also State-listed. Written notification shall be made within five calendar days and shall include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information. If necessary, the City shall work with the applicable agencies to locate contacts for the deposition of dead insects and other species.

Mitigation Measure FISH-11: Prior to any instream work in the bed and banks of creeks that requires the construction of cofferdams or dewatering of the creek bed, a stream diversion plan shall be prepared by a qualified biologist after consultation with NMFS and CDFW, and per an approved LSAA. The stream diversion plan shall require that: (1) a qualified fisheries biologist be present during the closing and dewatering of all cofferdams; (2) a qualified fisheries biologists collect, handle, and relocate fish in dewatered areas; and (3) all pump intakes are screened according to CDFW and NMFS criteria. Construction specifications shall incorporate the terms of the stream diversion plan. Diversion and routing of the stream channel to a temporary diversion channel to allow construction work in the existing channel shall be supervised by the qualified fisheries biologist after consultation with NMFS and CDFW, consistent with any terms imposed by those two agencies pursuant to their regulatory authorities under the FESA and/or Section 1602 of the California Fish and Game Code. The diversion and routing shall not disrupt the connectivity of the upstream reaches with the lower reaches of the creek. The existing channel shall remain untouched until the temporary diversions are constructed and the erosion control measures are in place. Diversion channels shall be opened from the downstream end first; and only clean washed material shall be used to close existing channels to divert water to temporary diversion channels. The temporary diversion channel shall be designed to accommodate the flow of expected storm events, and have gradient controls to ensure that diversion channel slopes correspond to the existing channel gradients.

Mitigation Measure FISH-12: This mitigation measure applies to Lombardi Gulch where directional drilling is proposed in order to reduce potential construction impacts in the creek and riparian corridor. Prior to construction, a drilling-fluids management and response plan shall be prepared to address the potential for fluid releases. The plan shall include but not be limited to the following measures:

- Conducting a pre-construction geologic study to examine the work area to determine soil types, ground conditions, and appropriate construction procedures;
- Isolating the work area with siltation fencing so that any fluid leaks are contained within a controlled area;
- Maintaining materials and equipment on site to allow for the cleanup of any leak that may occur;
- Constantly monitoring the work site by having inspector(s) maintain constant radio contact with equipment operators;
- If a fluid leak does occur, the contractor shall stop work immediately and assess the nature of the leak. Remedial actions shall be implemented and may include spot cleanup with

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	adsorbent materials, or sub-containment of a localized area for the duration of the work. • Once construction is complete, the site shall be restored to existing conditions. The City shall include the requirement for a drilling fluids management and response plan in construction specifications and bid document for the construction contractor, and shall ensure its implementation during construction. **Mitigation Measure FISH-13**: Required clean-up and remediation materials shall be stored and available at each drilling site for immediate containment and clean-up response.
Biological Resources – Special-status Amphibian: The proposed project could potentially impact California red-legged frogs during construction activities.	**Mitigation Measure CRLF-1**: The City shall submit the name(s) and credentials of biologists who would conduct activities specified in the following measures at least 30 days prior to construction to the USFWS and CDFW. No project activities shall begin until the City receives approval from the agencies that the biologist(s) is qualified to conduct the work. **Mitigation Measure CRLF-2**: An agency-approved biologist shall conduct a pre-construction California red-legged frog survey of each work area of the alignment within 48 hours prior to the onset of activities. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist shall determine the closest appropriate relocation site. The approved biologist shall be allowed sufficient time to move them from the alignment before work activities begin. Only agency-approved biologists shall participate in activities associated with the capture, handling, and moving of California red-legged frogs. The handling of California red-legged frogs will be authorized under Section 7 of the federal Endangered Species Act, which is expected to be authorized under the Biological Opinion issued through the Section 404 permit from the Corps. **Mitigation Measure CRLF-3:** Before any activities begin on a project, an agency-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, general measures that are being implemented to protect the California red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions. **Mitigation Measure CRLF-4**: An agency-approved biologist shall be present at the proposed project alignment until such time as all removal of California red-legged frogs, instruction of workers, and disturbance of core aquatic and riparian habitat areas and establishment of a 100-foot buffer has been completed. After this time and in agricultural and upland areas more than 100 feet from of core habitat areas, the contractor or City shall designate a person to monitor on-site compliance with all mitigation measures and any future staff training. The agency-approved biologist shall ensure that this individual receives training outlined in measure CRLF-3 above and in the identification of California red-legged frogs. The monitor and the agency-approved biologist shall have the authority to stop work if California red-legged frogs are in harm's way. **Mitigation Measure CRLF-5**: The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated, and these areas shall be outside of riparian and wetland areas to the extent practicable. Where impacts occur in these staging areas and access routes, restoration shall occur as identified in the general BMP measures above. **Mitigation Measure CRLF-6**: In core riparian and aquatic habitats, work activities shall be completed between April 1 and November 1. The City shall coordinate with the USFWS on a case-by-case basis prior to conducting such activities, outside of this time period. In uplands, ground-disturbance, mechanical clearing of vegetation, and associated work activities shall be conducted between June 1 and November 1 or until the first fall rain that produces 0.25 inch of rainfall, unless preconstruction surveys have been conducted and California red-legged frogs are shown to be absent from the site and the site boundary is fenced to preclude California red-legged frogs from moving onto the site. Alternatively, an agency-approved biological monitor shall be present during all active construction activities to survey and clear the construction site continuously as pipeline construction progresses during the wet season. **Mitigation Measure CRLF-7**: If the alignment is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 5 millimeters to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate. **Mitigation Measure CRLF-8:** The Declining Amphibian Populations Task Force's Fieldwork Code of Practice shall be followed to minimize the possible spread of chytrid fungus or other amphibian pathogens and parasites. This measure is applicable to any construction personnel and equipment as well as biological monitors and shall require equipment and personal gear such as work boots that come in contact with water in any waterway be disinfected prior to use in another waterway. Compliance with this measure shall require establishing decontamination procedures and stations at each creek area. **Mitigation Measure CRLF-9**: During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following

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	construction, all trash and construction debris shall be removed from work areas. **Mitigation Measure CRLF-10**: Prior to the commencement of work, the limits of the work area shall be clearly marked with orange construction fencing to prevent workers from impacting habitat outside the work area. No work shall occur outside the designated marked work area. **Mitigation Measure CRLF-11**: Each morning before work begins, a qualified monitor, as defined in CRLF-4 above, shall survey the work site and habitat immediately surrounding the work site for conditions that could impact red-legged frogs and other special-status species, and shall remain on-site whenever work is occurring. No work shall be allowed to begin each morning until the monitor has inspected the work site. **Mitigation Measure CRLF-12**: Upon locating individuals of California red-legged frogs (or other special-status species) that are dead or injured as a direct result of activities conducted by the City, initial notification shall be made to the Ventura Fish and Wildlife Office at (805) 644-1766 within three working days of its finding. Written notification shall be made within five calendar days and shall include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information. Written notification shall be sent to the Ventura Fish and Wildlife Office at 2493 Portola Road Suite B, Ventura, California 93003. Dead California red-legged frogs may be placed with the California Academy of Sciences. If necessary, the City shall work with the USFWS to locate contacts for the deposition of dead insects and other species. In addition to the above measures, the stream and riparian habitat protection measures FISH-1 and FISH-5 through FISH-8 as described above for steelhead, coho salmon, and tidewater goby, and WET-1 through WET-3 as described below for wetlands, are also applicable to minimize impacts to California red-legged frogs at the described locations.
Biological Resources – Special-status Reptile: The proposed project could potentially impact Western pond turtles during construction activities.	**Mitigation Measure WPT-1**: The City shall submit at least 30 days prior to construction the name(s) and credentials of biologists who would conduct activities specified in the following measures to the CDFW for approval. No project activities shall begin until the City has received approval from the CDFW that the biologist(s) is qualified to conduct the work. **Mitigation Measure WPT-2**: An agency-approved biologist shall survey the alignment 48 hours prior to the onset of activities. If western pond turtle adults, juveniles, or eggs are found, the approved biologist shall determine the closest appropriate relocation site. The approved biologist shall be allowed sufficient time to move them from the alignment before work activities begin. Only agency-approved biologists shall participate in activities associated with the capture, handling, and moving of western pond turtles. **Mitigation Measure WPT-3**: Before any activities begin on a project, an agency-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the western pond turtle and its habitat, the importance of the western pond turtle and its habitat, general measures that are being implemented to conserve the western pond turtle as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions. **Mitigation Measure WPT-4**: An agency-approved biologist shall be present at the alignment until such time as all removal of western pond turtles, instruction of workers, and disturbance of habitat have been completed. After this time, the contractor or City shall designate a person to monitor on-site compliance with all mitigation measures. The agency-approved biologist shall ensure that this individual receives training outlined in measure WPT-3 and in the identification of the western pond turtle. The monitor and the agency-approved biologist shall have the authority to stop work if western pond turtles are observed in harm's way. **Mitigation Measure WPT-5**: The number of access routes, number, and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated, and these areas shall be outside of riparian and wetland areas to the extent practicable. Where impacts occur in these staging areas and access routes, restoration shall occur as identified in measures FISH-6 and FISH-8. **Mitigation Measure WPT-6:** Work activities within or adjacent to creek channels, ponds, and riparian areas shall be completed between April 1 and November 1 to the extent practicable. Should the City need to conduct activities outside this period, the City shall conduct such activities after providing notification to the CDFW.
Biological Resources – Special-status Bird: The proposed project could potentially impact burrowing owls if occupied burrows are present within or adjacent to the project alignment.	**Mitigation Measure BO-1**: The City shall submit the name(s) and credentials of biologists who would conduct activities specified in the following measures at least 30 days prior to construction to the CDFW for approval. No project activities shall begin until the City has received approval from CDFW that the biologist(s) is qualified to conduct the work. **Mitigation Measure BO-2**: No more than 14 days prior to any ground disturbing activities, a qualified biologist shall conduct a protocol-level survey for burrowing owls. If no owls are found during this first survey, a final survey shall be conducted within 24 hours prior to ground disturbance to confirm that burrowing owls are still absent. If ground disturbing activities are delayed or suspended for more than 14 days after the initial survey, the alignment shall be

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	resurveyed (including the final survey within 24 hours of disturbance). All surveys shall be conducted in accordance with CDFW guidelines (CDFG 2012). **Mitigation Measure BO-3**: If burrowing owls are found within the alignment during the surveys, 250-foot wide breeding season buffers and 160-foot wide non-breeding season buffers shall be established. If the surveys identify breeding activity, no construction-related activity (e.g., site grading, staking, surveying, any use of construction equipment) shall occur in the exclusion zone during the breeding season or until the young have fledged. Standard construction buffer widths may be reduced in accordance with the following requirements: • A site-specific analysis prepared by an Approved Biologist indicates that the nesting pair(s) or wintering owl(s) would not be adversely affected by construction activities. The County and CDFW must approve this analysis in writing before construction can proceed. • Monitoring by an Approved Biologist is conducted for a sufficient time (during all construction activities for a minimum of 10 consecutive days following the initiation of construction), the nesting pair does not exhibit adverse reactions to construction activities (e.g., changes in behavioral patterns, reactions to noise), and the burrows are not in danger of collapse due to equipment traffic. • Monitoring is continued at least once a week through the nesting/wintering cycle at that site, and no change in behavior by the owls is observed. This longer-term monitoring may be reduced to a minimum of 2 hours in the morning and 2 hours in the afternoon during construction activities; however, additional and more frequent monitoring shall be required if any adverse reactions are noted. Where avoidance is not feasible during the non-breeding season, a site-specific exclusion plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) may be implemented to encourage owls to move away from the work area prior to construction and to minimize the potential to affect the reproductive success of the owls. The exclusion plan shall be subject to CDFW approval and monitoring requirements.
Biological Resources – Nesting Birds: The proposed project could impact special-status nesting birds or other nesting birds protected by MBTA or CFG Code, if present during construction.	**Mitigation Measure NB-1**: The project shall avoid vegetation removal during the bird nesting season (February 1 through August 31), to the extent feasible. For construction activities during the nesting season, a qualified biologist shall conduct a preconstruction survey of the alignment within 14 days of the start of construction activities. All trees, shrubs, or other suitable nesting habitat within 250 feet of the project alignment shall be searched for nests during the preconstruction survey. If the survey indicates the presence of nesting birds, protective buffer zones shall be established around the nests as follows: for raptor nests, the size of the buffer zone should be a 250-foot radius centered on the nest; for other birds, the size of the buffer zone should be a 50-foot radius centered on the nest. In some cases, these buffers may be increased or decreased depending on the bird species and the level of disturbance that will occur near the nest. Changes to the buffer shall be made by the project biologist in consultation with CDFW.
Biological Resources – Riparian Habitat. Riparian forest and scrub habitat could be temporarily impacted during project construction.	**Mitigation Measure RIP-1**: Above ground construction activities in riparian areas shall be limited to April 15 to October 15 except where work windows are more restricted based on special-status species considerations. **Mitigation Measure RIP-2**: The City shall prepare and implement a plan to re-establish riparian habitat within the 800 linear feet abandoned pipeline segments where above-grade pipe is removed and work areas within the proposed project alignment that extend beyond required maintenance access areas. All native, woody vegetation greater than 1 inch in diameter that is removed as a result of the above activities shall be replaced by establishing native woody vegetation at a 3:1 ratio. This ratio represents the number of native trees and shrubs that shall become established in the riparian mitigation area through direct planting and/or natural recruitment by monitoring year 5. The riparian habitat restoration plan shall be approved by the California Department of Parks and Recreation Senior Environmental Scientist prior to implementation.
Biological Resources – Coastal Scrub/Coastal Terrace Prairie Habitat. Coastal Scrub/Coastal Terrace Prairie Habitat could be temporarily impacted during project construction.	**Mitigation Measure S/TP-1**: Identify locations for refueling, worker parking, and staging areas in designated areas outside of sensitive habitat whenever possible. The City shall ensure that contamination of sensitive habitat does not occur during such operations, including accidental spills. All workers shall be informed of the appropriate procedures to prevent spills and response measures should an accidental spill occur. **Mitigation Measure S/TP-2**: Revegetation of coastal scrub and coastal terrace prairie habitat: revegetation of disturbed portions of the project alignment within these habitat areas shall use only grasses and forbs indigenous to these habitats. Also, weed control shall be part of the revegetation activities. Dense ground covers, weed matting, aggregate, and mulch can degrade habitat conditions and shall not be used. The California Department of Parks and Recreation Senior Environmental Scientist shall approve the revegetation plan and material list prior to implementation. **Mitigation Measure S/TP-3**: All excavated top soil shall be retained and used to cover the trench after installation of the new pipeline.

Impact	Mitigation
Biological Resources – Protected Wetland Habitat. Less than one acre of protected wetland habitat would be temporarily impacted during project construction.	**Mitigation Measure WET-1**: In perennial streams, construct stream crossings or remove old pipes during the low flow season (approximately June 15 through October 15 depending on the weather conditions). This measure applies to the following waterways: • Little Baldwin Creek, Station 82+00 (Figure 4, Appendix B); • Lombardi Creek, Station 151+00 for pipe removal (Figure 10, Appendix B); and • Old Dairy Creek, Station 212+50, only if the pipeline is replaced through open-trench construction, which is not the preferred option (Figure 15, Appendix B). In ephemeral streams, construct stream crossings when there is no flow. Impacts to some of these streams shall be avoided during construction through reduced-width trenching, if possible, but may occur if avoidance is not possible. The intent of this measure is for it to apply to streams or other regulated tributaries with ephemeral to intermittent flows at the following locations: • Drainage, Stations 60+50 (Figure 2, Appendix B); • Drainages, Stations 61+00 to 81+00 (Figures 3-4, Appendix B); • Drainage, north of Stations 34+50 to 38+00 of the railroad alignment (Figure 9, Appendix B); and • Drainage, Stations 153+00 to 166+00 (Figure 11, Appendix B). **Mitigation Measure WET-2**: All disturbed work areas in wetlands shall be returned to its approximate pre-construction profile to ensure that flow patterns are unaltered. The upland areas in the right-of-way shall also be recontoured to restore original grades, elevations, and flow patterns into wetlands. **Mitigation Measure WET-3:** The City shall prepare and implement a plan to re-establish wetlands or waters that are temporarily impacted during construction. The plan at a minimum shall include provisions for: • Salvage, stockpiling and replacement of the top 6 to 10 inches of soil (or the depth 50 percent of more roots for the dominant native wetland species) and reseeding of the disturbed soils with appropriate native grasses and forbs; • Periodic maintenance to remove/control establishment of highly invasive exotic plant species as classified by California Invasive Plant Council (Cal-IPC; http://www.cal-ipc.org/) for a minimum of three years; • A description of performance criteria which shall include at a minimum standards for no net loss of wetland acreage and percent cover for native species and total wetland species based on achieving equal to or greater cover than pre-project conditions; and • A minimum three-year monitoring program to document progress toward achieving appropriate performance criteria. At a minimum, there shall be no loss of wetland acreage. Measures FISH-1, FISH-5, FISH-6, FISH-7, and FISH-8 are also applicable to these wetland habitats.
Biological Resources – Wildlife Movement. During construction, open trenches could impede or block normal wildlife movement.	**Mitigation Measure MOV-1**: Open trenches shall be limited to the maximum necessary for efficient construction. **Mitigation Measure MOV-2**: A qualified, agency-approved biologist shall inspect any trench segments left open overnight and remove any stranded animals to safe locations away for the proposed project alignment.
Biological Resources – Conflicts with Local Policy. The proposed project could potentially conflict with the County's Riparian Corridor and Wetland Protection Ordinance during construction.	Implementation of Mitigation Measures RIP-1 and RIP-2 (see above) would reduce potentially significant impacts to riparian forest and scrub habitat to less than significant. With the approval of a riparian exception from the County, the proposed project would not conflict with the County's Riparian Corridor and Wetland Protection ordinance.
Biological Resources – Conflicts with Local Policy. The proposed project could potentially conflict with the County's Significant Tree Ordinance during construction.	**Mitigation Measure TREE-1:** The City shall inventory trees for removal and retention within the project work area to document trees which qualify as significant trees under the County's regulations. This information shall be documented in an arborist report. The City shall implement measures from the arborist report to protect trees to be retained in order to minimize inadvertent damage to protected trees and their root zones during construction. Measures shall include, but are not limited to, the following: installation of temporary construction fencing around the dripline of the trees; prohibition of storage or dumping of any kind inside the fenced area; protection of the trees and root zones as specified; and pruning as may be specified in the report. Require that the project arborist be retained throughout the duration of the project to inspect and monitor tree protection zones at regular intervals and to ensure that all arborist recommendations are implemented. Tree removal in sensitive riparian habitat shall be compensated for at a 3:1 ratio through the implementation of Mitigation Measure RIP-2. The City shall otherwise comply with the County's Significant Trees Ordinance as part of the County's coastal development permit process.

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Cultural Resources – Historic Resources/Unique Archaeological Resources. The project could have a potentially significant impact on prehistoric archaeological deposits at CA-SCR-10 that may qualify as historical resources.	**Mitigation Measure CULT-1**. Prior to construction of the pipeline within the access road that traverses CA-SCR-10, temporary construction fencing shall be erected at the location of the sparse shell deposit identified during the archaeological survey conducted for the project. The fencing shall be erected to restrict construction personnel and equipment, and no project staging or equipment storage shall be permitted within the temporary fencing. Furthermore, all construction activities shall be restricted to the existing access road. A qualified archaeologist shall oversee installation of the fencing. The City shall be responsible for ensuring (1) the integrity of the fencing for the duration of construction at this location, and (2) that construction-related activities are restricted to the access road within CA-SCR-10. **Mitigation Measure CULT-2**. A qualified archaeological monitor shall be present for construction-related ground disturbance in archaeologically sensitive areas below soil that is demonstrated to be fill. For purposes of the project, these sensitive areas consist of stream terraces for a distance of 300 feet from drainage center lines. Archaeological monitoring may occur outside of these areas, however, if archaeological deposits are unearthed during construction. Archaeological monitoring is not required at areas that are too disturbed to contain intact archaeological deposits. Monitoring shall be guided by an Archaeological Monitoring Plan (AMEP). The AMEP shall include the following elements/protocol: pre-construction assessment; construction worker training; construction monitoring; site recording and evaluation; mitigation planning (e.g., data recovery protocol); curation; guidelines for tribal coordination; and report of findings. If archaeological resources are identified during construction, all construction activities shall be halted in the vicinity, in full compliance with Santa Cruz County Code 16.40.040. Specific discovery procedures under Recommended Mitigation Measure CULT-3 shall be implemented. **Mitigation Measure CULT-3**. Standard inadvertent discovery procedures, in accordance with County Code 16.40.040, as relevant, shall be implemented as part of all construction contracts. The following steps, which summarize the relevant procedures from the regulations above, shall be taken in the event of any unanticipated discoveries of any artifact or any other object which reasonably appears to be evidence of an archaeological/cultural resource: • Immediately cease all further excavation, ground disturbance, and work on the project site; • Place visible stakes completely around the area of discovery not more than ten feet apart forming a circle having a radius of not less than one hundred feet from the point of discovery; provided, that such staking need not take place on adjoining property unless the owner of the adjoining property authorizes such staking; • Notify the County of Santa Cruz planning director; • If any artifacts or remains are discovered, the planning director shall arrange an on-site inspection of the property to be made. The purpose of the inspection shall be to determine whether the discovery is a historical resource or a unique archaeological resource; • Upon determining that the discovery is a historical resource or a unique archaeological resource, no further excavation or development shall take place until a mitigation plan has been prepared and approved, as applicable, and an archaeological site development approval and excavation approval have been obtained, as per relevant per County requirements. The mitigation plan is further described below. If the find is determined to be either an historical resource or a unique archaeological resource, the feasibility of avoiding the resource shall be evaluated. If avoidance is determined to be infeasible, a qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan (mitigation plan) for the resource for approval, as per appropriate County Code. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (NWIC), and provide for the permanent curation of the recovered materials.
Cultural Resources – Paleontological Resources. The project could have a potentially significant impact on paleontological resources, if such resources are discovered during construction.	**Mitigation Measure CULT-4:** If paleontological deposits (fossils) are encountered during project subsurface construction, the stipulations outlined in the Santa Cruz County Code Section 16.44.070 (Resources Discovered during Development) shall be implemented, as appropriate. In addition, a qualified paleontologist shall give a preconstruction meeting to appropriate project personnel to discuss procedures to be followed if fossils are identified during the project. Should paleontological resources be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. The City shall notify the County Planning Director to arrange for an inspection of the paleontological deposit and make recommendations for additional study in consultation with a qualified paleontologist. The Planning Director shall also make a determination if the existing permit conditions for the project will need to be amended to mitigate impacts to paleontological resources. If effects to paleontological resources are found to be significant, and project activities cannot avoid the resources, adverse effects to paleontological resources shall be mitigated. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, and a final report. Educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City and County Planning Director for

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	review, and (if paleontological materials are recovered) a paleontological repository shall be identified, such as the University of California Museum of Paleontology
Cultural Resources – Human Remains. The project could have a potentially significant impact in the event of accidental discovery of human remains.	**Mitigation Measure CULT-5:** In the event of accidental discovery of human remains, the specific protocol and channels of communication outlined by CEQA Guidelines, Section 15064.5(e)(1), and in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the PRC (Chapter 1492, Statutes of 1982, Senate Bill 297), Senate Bill 447 (Chapter 44, Statutes of 1987), and County Code 16.40.040, as relevant, would be followed. Section 7050.5 (c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the County Coroner. Per County Code 16.40.040 the County Planning Director would also be notified about the find upon its discovery and by the Coroner after his or her determination. If the Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she will contact the NAHC by telephone within 24 hours. The NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC, Section 5097.98. Such recommendations will be made as part of the mitigation plan prepared under Mitigation Measure CULT-3, in accordance with County Code 16.40.040.
Geology and Soils – Erosion. The project could result in soil erosion during construction.	**Mitigation Measure GEO-1:** Consistent with the Santa Cruz County Erosion Control Ordinance (Section 16.22), Best Management Practices shall be implemented to reduce soil erosion and shall be detailed in the Erosion Control Plan that will be prepared as part of the project design process. The Erosion Control Plan shall include, at a minimum the measures required under Santa Cruz County Code Sections 16.22.070, 16.22.080, 16.22.090, and 16.22.100, as applicable. Such measures include: • Retain and disperse runoff over vegetated surfaces so that the runoff rate does not exceed the predevelopment level. • Discharge concentrated runoff to non-erodible channels or conduits to the nearest drainage course designated for such purpose. • Detain and filter runoff from disturbed areas via berms, vegetated filter strips, catch basins, or other means to prevent the escape of sediment from the disturbed area. • Prohibit placement of earth or organic materials where it may be directly carried into a stream or other water body. • Minimize land clearing to the amount necessary for access and construction. • Prepare and maintain disturbed surfaces to control erosion and to establish native or naturalized vegetative growth such as: o Effective temporary planting such as rye grass, barley, or some other fast-germinating seed, and mulching with straw and/or other slope stabilization material; o Permanent planting of native or naturalized drought resistant species of shrubs, trees, etc., pursuant to the County's landscape criteria, when the project is completed; o Mulching, fertilizing, watering or other methods may be required to establish new vegetation. On slopes less than 20 percent, topsoil shall be stockpiled and reapplied. • No land clearing shall take place prior to approval of the Erosion Control Plan. Vegetation removal between October 15th and April 15 shall not precede subsequent grading or construction activities by more than 15 days. During this period, erosion and sediment control measures shall be in place. • Land clearing of more than one-quarter acre that is not part of a permitted activity shall not take place on slopes greater than 30 percent. • No land clearing operations greater than one acre per year per site or greater than 100 cubic yards may take place between October 15th and April 15th unless authorized by the Planning Director. • When winter operations are permitted, the following measures will be taken: o Between October 15th and April 15th, disturbed surface shall be protected by mulching or other effective means of soil protection. o All roads and driveways shall have drainage facilities sufficient to prevent erosion. o Runoff shall be detained and filtered by berms, vegetated filter strips, and/or catch basins. o Erosion control measures shall be in place at the end of each day's work.
Hazards and Hazardous Materials. The project would result in the routine transport, use, and disposal of typical construction materials and soils, which could cause a hazard to the environment, if	**Mitigation Measure HAZ-1:** The City shall prepare a Notice of Intent (NOI) to be submitted to the Central Coast RWQCB, which indicates the intent to comply with the Statewide NPDES General Construction Permit (Order No. 2009-0009-DWQ) prior to construction being initiated. Prior to submittal of the NOI, the City shall prepare a Stormwater Pollution Prevention Plan (SWPPP) to comply with the Statewide NPDES General Construction Permit. The SWPPP shall identify Best Management Practices (BMPs) to prevent or reduce pollution into surface waters. BMPs shall include—but shall not be limited to—construction or installation of

Impact	Mitigation
not properly controlled.	sediment retention or erosion control structures such as hay bales, coconut fiber rolls, geofabric, sand bags, and water filters over storm drains; reseeding of exposed soils; stockpiling of topsoil removed during construction; wetting of dry and dusty surfaces to prevent fugitive dust emissions; and clear water diversions to protect channels during trenching/pipeline installation. The SWPPP shall also establish good housekeeping measures such as construction vehicle storage and maintenance, suitable re-fueling locations, handling procedures for hazardous materials, and waste management BMPs, which would minimize the potential for spills. Additional required components of the SWPPP shall include run-on and runoff control measures; inspection, maintenance, and repair of BMPs; and periodic reporting to show compliance with the NPDES Construction General Permit. Depending on the Risk Level assessed to the project discharges, the City shall ensure that project construction complies with Numeric Action Levels for pH and turbidity, which is required for Risk Level 2 and 3 projects. Risk Level 2 and 3 projects also require development of Rain Event Action Plans by qualified individuals, and water quality sampling of non-stormwater discharges and stormwater runoff during qualifying rain events. Exceedance of the Numeric Action Levels shall require mandatory follow-up, including additional evaluation, BMPs, and/or corrective action. Corrective actions will be implemented to bring the discharge to within the Numeric Action Levels. The City shall ensure that a copy of the SWPPP is available at the construction site at all times and that it shall be implemented and amended as necessary to ensure compliance with the NPDES Construction General Permit. Additionally, as required by OSHA, construction personnel handling hazardous materials would be trained to understand the hazards associated with these materials and would be instructed in the proper methods for storing, handling, and using these hazardous materials. **Mitigation Measure HAZ-2:** The City shall ensure that construction bid documents and construction contracts require the contractor to test soils to be excavated and disposed of to ensure compliance with the disposal requirements of the City's landfill and compliance with state and federal worker safety regulations. The shallow soil quality within the proposed project's area of potential impact shall be investigated by the contractor prior to transporting and disposing of the soil. Potential sources of contamination include: potential lead contamination of shallow soils along the alignment within 30 feet from the edge of the pavement of Highway 1, and potential pesticide contamination of shallow soils located in areas historically or currently used for agriculture. The soil sampling plan shall be submitted to the City of Santa Cruz for review and approval prior to implementation. Upon completion of sampling, a report summarizing the results of the investigation shall be prepared by the qualified environmental professional and shall be submitted to the City of Santa Cruz for review. If contamination is identified by the contractor, construction activities shall be conducted under a project-specific Construction Risk Management Plan (CRMP) to protect construction workers, the general public, and the environment from subsurface hazardous materials. The CRMP shall characterize the soil, delineate areas of known soil contamination, and identify soil (and groundwater, if encountered) management options for excavated soil and dewatered groundwater (if applicable), in compliance with local, state, and federal statutes and regulations. The CRMP shall: 1) provide procedures for evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation activities; 2) require the preparation of a project-specific Health and Safety Plan that identifies hazardous materials present, if any, describes required health and safety provisions and training for all workers potentially exposed to hazardous materials in accordance with state and federal worker safety regulations, and designates the personnel responsible for Health and Safety Plan implementation. The CRMP shall be submitted to the City of Santa Cruz for review and approval prior to construction activities. Once approved the CRMP shall be implemented during construction of the proposed project.
Hazards and Hazardous Materials. The project could result in an increased risk of wildland fire during construction due to construction equipment.	**Mitigation Measure HAZ-3:** The City shall ensure that appropriate measures be taken to minimize the risk of fire during construction activities. Specifically, the City shall require that all fire safety regulations cited in the California Public Resources Code be incorporated into construction bid documents and contracts for the project, including regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. Additionally, special precautions shall be identified and taken to minimize the potential for fires resulting from the welding and fusing processes necessary for linking sections of pipeline together. BMPs shall be implemented during construction to reduce the potential for accidental spills or fires involving the use of hazardous materials.
Hydrology and Water Quality. The proposed project could result in water quality degradation during construction due to typical construction activities and	**Mitigation Measure HYDRO-1:** The City shall ensure that measures be implemented to minimize the potential for bentonite seeps (frac-outs), including: requiring boring crews to strictly monitor drilling fluid pressures, retaining containment equipment on-site, monitoring waters downstream of the crossing sites to quickly identify any seep, immediately stopping work if a seep into a steam is detected, immediately implementing containment measures, which would be specified in the SWPPP, and adhering to agency reporting requirements. Containment

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trenchless methods.	construction	equipment should include staked and floating silt barriers to isolate frac-out locations from flowing water. Mitigation Measure HAZ-1 would also reduce the potential for water quality degradation during construction.

Rosemary Menard
Administrator of Environmental Quality
City of Santa Cruz, California

Rosemary Menard

6/30/2014
Date

City of Santa Cruz Water Department
212 Locust Street, Suite C
Santa Cruz, CA 95060

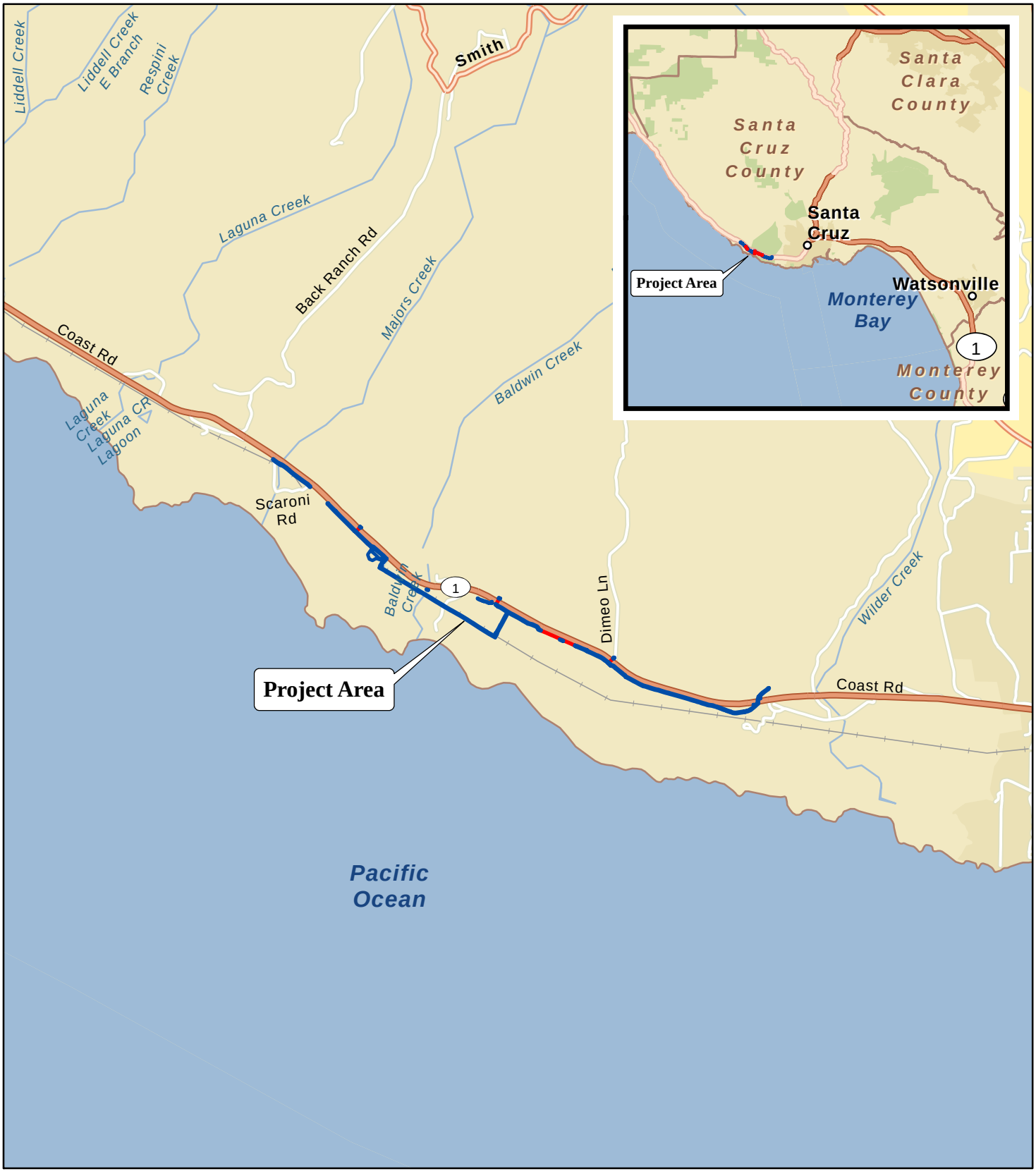

FIGURE 1

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SOURCE: ESRI StreetMap North America (2012).

City of Santa Cruz Water Department
North Coast System Rehabilitation Project - Coast Segment

Regional Location and Project Area

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City of Santa Cruz

Environmental Checklist Form/Initial Study

I. Background

1. **Project Title:** North Coast System Rehabilitation Project – Phase 3 Coast Segment

2. **Lead Agency Name and Address:**
   City of Santa Cruz Water Department
   212 Locust Street, Suite C
   Santa Cruz, CA 95060

3. **Contact Person and Phone Number:**
   Kevin Crossley P.E., Associate Civil Engineer
   831-420-5356

4. **Project Location:** The project site extends approximately 3.3 miles along Highway 1 generally from Scaroni Road on the eastern end of the alignment to 300 feet west of the main entrance to Wilder Ranch State Park in Santa Cruz County, California (Figures 1 and 2).

5. **Project Applicant's/Sponsor's Name and Address:**
   City of Santa Cruz
   Water Department
   212 Locust Street, Suite C
   Santa Cruz, CA 95060

   Kevin Crossley P.E., Associate Civil Engineer
   831-420-5356

6. **General Plan Designation (Santa Cruz County):**
   O-R (Parks, Recreation and Open Space)
   AG (Agriculture)
   R-M (Mountain Residential)

7. **Zoning (Santa Cruz County):**
   PR (Parks and Recreation)
   CA (Commercial Agriculture)
   PF (Public Facility)
   SU (Special Use)

8. **Description of the Project:** The City of Santa Cruz Water Department (SCWD) proposes to replace approximately 18,500 linear feet of 16- to 22-inch diameter raw water main that runs along Highway 1 in Santa Cruz, California. The proposed project is Phase 3 (Coast Segment) of the North Coast System (NCS) Rehabilitation

Project, a multi-phase program to replace or repair the piping and stream diversion infrastructure. The Phase 3 segment is 19,800 feet in total length. The overall project will:

- Install/replace 18,500 feet of new 16- to 22-inch pipeline;
- Use/retain 1,300 feet of existing pipeline; and
- Remove 800 feet of old, above ground pipeline.

The following sections provide an overview of the proposed project including project background, proposed improvements and construction.

Project Background. The NCS consists of an 18-mile long network of pipes and stream diversion structures. The NCS was originally constructed in the 1880s and is currently operated and maintained by the SCWD. Diversion structures direct flows from Liddell, Reggiardo, Laguna and Majors creeks into a pipe system, which conveys water, by gravity, to the Coast Pump Station adjacent to the City's San Lorenzo River intake. The Coast Pump station lifts water up to the Graham Hill Water Treatment Plant; it is then treated and delivered to SCWD customers. The NCS relies entirely on rainfall runoff and emergent groundwater to furnish approximately 30 percent of Santa Cruz's overall water production (IWP 2003).

A significant portion of the 18-miles of transmission pipeline is approaching, or has exceeded its design life, and must be replaced. Over the past decade, SCWD has made emergency repairs on many sections of the pipeline. The diversion and pipeline facilities have historically provided adequate service for the SCWD, however the aging facilities are increasingly prone to leakage and failure, and now require increased routine maintenance and emergency repairs.

In 2005, a Preliminary Engineering Report (Carollo 2005) was prepared to assess the NCS, identify potential constraints, provide rehabilitation recommendations, and perform hydraulic modeling. Key findings and recommendations of the Preliminary Engineering Report include:

- A majority of the piping system needs to be replaced or rehabilitated in the next 15 to 20 years.
- In select locations, the existing pipeline alignment encroaches on environmentally and culturally sensitive areas.
- Certain segments could be replaced in alternate alignments; however easement/access issues and environmental impacts may limit the viability of the alternate alignments.
- In difficult to access, environmentally sensitive, and geologically active areas, piping may be installed above ground.

- In most locations, existing piping should be replaced with a similar pipe size. In some locations, pipes may need to be resized to preserve system capacity.
- System pressure and capacity requirements will reduce the number of choices for pipe material, and the feasibility of trenchless rehabilitation methods for the existing pipe such as pipe-bursting, sleeving, and lining.

In June 2004, the SCWD initiated the preparation of a programmatic Environmental Impact Report (PEIR, ENTRIX 2005) for the North Coast System Rehabilitation Project. The PEIR addressed the potential impacts and mitigation measures for the overall system repair, including diversion structures, and piping improvements. The PEIR analyzed replacement of the pipeline along the existing alignment, as well as alternative alignments identified in the Preliminary Engineering Report. The segment of pipeline to be replaced in Phase 3 – Coast Segment (the proposed project) would generally follow the existing pipeline alignment, which the PEIR determined to be the environmentally superior and preferred alignment. However, some modifications to that alignment have been incorporated into the proposed project to avoid sensitive environmental resources identified during project-level surveys conducted during the preparation of this Initial Study. The PEIR was certified by City Council at a Public Hearing held on November 8, 2005.

Proposed Alignment. The section of system to be replaced consists primarily of 16- to 22-inch welded steel pipe that runs along Highway 1 from Scaroni Road to west of the entrance of Wilder Ranch State Park. The proposed alignment would generally follow the alignment of the existing water main. In most locations, the proposed pipeline (main alignment) would be located within 20 feet of the existing pipeline, which would be abandoned in place (below ground sections) or removed (aboveground sections). In one area, an alternate alignment (railroad alignment) is proposed to avoid difficult construction areas and sensitive archaeological and biological resources. The overall new alignment would be approximately 19,800 linear feet long with 18,500 feet of replaced pipeline. As described further below, approximately 90 percent of the proposed pipeline would be constructed employing standard open trench construction techniques. The remainder of the proposed pipeline would be built using a trenchless construction method such as horizontal directional drilling and jack and bore. These methods would be used at proposed crossings of Highway 1, Lombardi Gulch creek and riparian corridor, and the Santa Cruz Branch rail line where other open trench construction methods are impractical or would result in greater environmental impact.

The proposed pipeline alignment is described below.

Scaroni Road to Little Baldwin Creek. The proposed replacement pipeline would begin just east of the intersection of Scaroni Road with Highway 1 (Station 51+00). At the western end, the proposed replacement pipeline (16-inch PVC) would connect to an existing 16-inch PVC raw water main at Station 61+50 that would be reused. This existing pipe extends east and runs parallel to Highway 1 on the south side within Caltrans right-of-way for approximately 750

feet to Station 69+00. At Station 69+00, the proposed pipeline would begin again, connecting to and replacing the existing pipeline, and extending east within Wilder Ranch State Park to Little Baldwin Creek (Station 80+00).

Little Baldwin Creek to the Railroad Alignment (Station 92+80). At the creek, open trench construction would be used to install the pipe beneath the creek and the new pipeline would continue east from Little Baldwin Creek within State Park land and Caltrans right-of-way for approximately 880 feet to Station 92+80. Along this segment of the main alignment, approximately 150 feet of above ground 22-inch welded steel raw water main would be abandoned and removed (between Stations 90+00 and 91+50).

At Station 80+00, directional drilling would be used to place a section (approximately 190 feet long) of replacement line beneath Highway 1. The proposed pipeline would connect to an existing 14-inch welded steel raw water main on the north side of Highway 1. The existing water main would be cut, capped and abandoned in place.

Railroad Alignment. At Station 92+80, the proposed pipeline would turn south/southeast to follow an existing access road within Wilder Ranch State Park (Station 00+00 to Station 02+50). It would then cross under the Santa Cruz Branch line railroad tracks via jack and bore (Station 02+50 to Station 03+50) and turn east extending approximately 3,900 feet within Santa Cruz County Regional Transportation Commission (SCCRTC) right-of-way (Station 03+50 to Station 42+00). Near Baldwin Creek (between Stations 18+00 and 19+00), approximately 50 feet of above ground 22-inch welded steel raw water main would be abandoned and removed. At approximately Station 42+50, the proposed pipeline would turn north, cross under the railroad tracks via jack and bore and continue north within State Parks land for approximately 750 feet to connect to the main alignment along the south side of Highway 1 (Station 50+94/133+50).

At the connection between the railroad alignment and the main alignment (Station 133+50 of the main alignment), a section of replacement line would extend west along the south side of Highway 1, then turn north and cross under Highway 1 (via jack and bore) to connect to an existing PVC water main. The existing 6-inch welded steel main that extends beneath Highway 1 would be cut and capped prior to the existing water meter and abandoned in place. At the eastern tributary to Baldwin Creek (between Stations 32+50 and 36+50), approximately 300 feet of existing above ground raw water main would be abandoned and removed.

Railroad Alignment to Lombardi Gulch. From Station 133+50, the proposed pipeline would extend east within State Park and Caltrans right-of-way for approximately 1,100 feet to Lombardi Gulch (Station 145+00). At the creek, directional drilling would be used to install approximately 1,000 feet of pipe

beneath the creek and associated riparian area (Station 156+00). Within the creek corridor (between Stations 151+00 and 152+00), approximately 100 feet of existing, above ground raw water main would be abandoned and removed.

At Station 167+00, approximately 160 feet of replacement line would be constructed under Highway 1 (via directional drilling) to connect to an existing 6-inch water main within the access road to the City of Santa Cruz sanitary landfill (Dimeo Lane).

Lombardi Gulch to Old Dairy Gulch. From Lombardi Gulch, the proposed pipeline would extend another 1,100 feet east within State Parks land (Station 156+00 to 167+00). The main alignment would then continue east through Caltrans, State Parks, and Graniterock lands for approximately 4,275 feet (Station 167+00 to Station 210+50) to Old Dairy Gulch.

Old Dairy Gulch to Santa Cruz Sand Plant[1]*.* At Old Dairy Gulch, an approximately 400 foot, existing above ground 24-inch high-density polyethylene (HDPE) line installed as part of an emergency repair, spans Old Dairy Gulch (Station 210+50 to Station 214+50). Where it crosses the creek, the line sits on a steel I-Beam that spans the creek. In this area two different construction options are under consideration. The preferred option is that the existing aboveground pipeline would be retained and no new construction would occur in this area except tying into the two ends of the existing pipeline located at Stations 211+00 and 215+00. The second option is that the existing aboveground pipeline would be removed and replaced with a pipeline installed underground via open trench construction. The City studied this as an area for potential directional drilling, but found that given the configuration, location of riparian areas, and geology of the site directional drilling was not practicable and would not reduce construction disturbance. For the purposes of the analysis in this document it is assumed that either method could be used. The impact analysis considers the worst case impacts (construction and operation) of both scenarios.

The replacement pipeline would continue east/northeast under Highway 1 within an existing reinforced concrete pipe casing located underneath an unused sand plant conveyor system tunnel (Station 214+50 to 216+00). It would then continue north/northeast within the sand plant property, beneath the access road to tie into the existing system (Station 221+00). Within this area (at Station 214+00 and Station 217+00), two short lateral pipelines would be installed via open trench construction.

Construction. Ductile Iron Pipe (DIP-C151) or Poly Vinyl Chloride (PVC C905) pipe would be installed by open trench, horizontal drilling, or jack and bore, depending on the size of pipe and location, as described further below:

[1] The Santa Cruz Sand Plant is also known as Wilder Quarry. The Santa Cruz Sand Plant is owned and operated by Graniterock.

- *Trenching.* Most of the replacement pipeline would be placed in trenches with trench depths varying depending on the diameter of the pipe installed and ground conditions. Under the proposed project, trench depths would range between 3 to 6 feet. Trench widths would range between 3 and 5 feet. The trenching operation would be carried out with a chain trencher, a tracked or wheeled excavator, or backhoe.
- *Directional Drilling.* Directional drilling would be used in areas where trenching would need to be avoided (i.e., across wetlands and flowing watercourses). Through the control of a directional drill head, a boring can be made horizontally, or in an arc, to install the water pipe. Once a boring is completed, it is reamed to a desired diameter, and then the assembled piping system is pulled through the boring. Directional drills can operate over distances ranging from 100 to 5,000 feet, depending on size. Directional drilling requires installation of sending and receiving pits to allow the drilling fluid to be collected and reclaimed. For this project, drill pits would be located at both ends of the drilled segment and would range in width from approximately 34 to 55 feet.
- *Jack and Bore Construction.* Jack and bore would be used to complete relatively short (100 to 200 feet), trenchless crossings of the railway and Highway 1. Access pits would be excavated on either side of the feature to be crossed, and then an augur would be used to bore underneath the rail line. As the augur advances, a casing or carrier pipe would be pushed (jacked) behind the augur head. Jack and bore drill pits would be approximately 67 feet wide.

Access for construction and staging would occur via Highway 1. Construction equipment and materials would be staged in a disturbed area near Station 89+00 used for staging farm equipment and other agriculturally-related materials. This staging area would not be located on the undeveloped marine terraces. Construction is expected to take approximately eight months and would take place from approximately April through November.

Anticipated equipment for the proposed project would consist of tracked excavators, soil compactors, ½-ton and ¾-ton trucks, a directional drill rig for the directional drilling and an augur for the jack and bore construction that will occur at the railroad crossings. Diesel fuel is required for machinery and heavy equipment; refueling such equipment would be limited to designated areas so as not to expose sensitive habitats to the possibility of a fuel spill.

Proposed Work Areas. The standard construction corridor would be 40 feet wide to accommodate installation of the proposed pipeline. This work area generally consists of an approximately 3- to 5-foot wide trench, a 10-foot wide zone for excavated material storage adjacent to the trench, and a 15-foot wide travel way for construction access. In several areas the width of the proposed work area would be reduced to avoid sensitive resource(s), including riparian vegetation, wetlands, drainage areas, and other sensitive areas. In these locations, the construction

footprint would be limited to 10 to 20 feet in order to minimize impacts to these resources. The reduced width construction area will be accomplished by using a combination of techniques applicable to the specific location such as having the travel way straddle the trench and/or transporting excavated material away from sensitive areas. The locations of the reduced width work areas are provided in Table A below and shown on the project figures in Appendix B. For the purposes of a worst case impact analysis, it is assumed at this time that the construction footprint for the reduced width construction area would be 20 feet wide.

Table A: Locations of Reduced Width Work Areas

Area	Beginning Station	Ending Station	Alignment
1	56+00	58+50	Main Alignment
2	60+00	61+00	Main Alignment
3	61+00	81+00	Main Alignment
4	81+50	82+50	Main Alignment
5	03+00	42+50	Railroad Alignment
6	155+50	158+50	Main Alignment
7	210+50	214+50	Main Alignment

Abandonment of Existing Pipeline. Following completion of the proposed pipeline, aboveground sections of the existing pipeline would be removed and capped; below ground sections of the existing pipeline would be abandoned in place. At the Lombardi Gulch, Little Baldwin Creek, Baldwin Creek, and the eastern tributary to Baldwin Creek locations, the existing pipeline is located above ground to cross over a natural creek channel or highway drainage feature. At the eastern tributary of Baldwin Creek, approximately 360 feet of HDPE piping was installed above ground as a temporary repair. As described above, five segments of existing, above ground pipeline would be abandoned and removed. The length and location of these segments are shown in Table B below.

Table B: Approximate Locations of Abandoned and Removed Segments

Area	Beginning Station	Ending Station	Approximate Length
1	90+00	91+50	150 feet
2	18+00	19+00	100 feet
3	32+50	36+50	400 feet
4	37+00	37+50	50 feet
5	151+00	152+00	100 feet

Using hand tools such as a concrete saw, the existing pipeline would be cut 6-12 inches below grade and removed with a small excavator or boom crane. Substantial concrete thrust blocks were installed where the pipe transitions from below to above grade, therefore complete removal of all facilities beyond 6-12 inches would be infeasible. The remaining pipe would be plugged or filled with a grout mixture, and the disturbed area would be restored. The pipe to be abandoned in place would also be severed and plugged at regular intervals (i.e. every 500-1000 feet) to prevent the piping of groundwater.

Access Agreements and Easements. Although the project is located in a relatively undeveloped setting, the project alignment is defined and constrained by easement and encroachment requirements, as well as existing land uses (agricultural, transportation), and environmental considerations (species habitat, riparian areas). The proposed alignment stays within 20 feet of the existing pipe except for the Railroad Alignment between Stations 92+00 and 133+00. The project bisects multiple parcels with different landowners, as shown in Table C.

Table C: Landowners along the Proposed Alignment

Beginning Station	End Station	Landowner	Alignment
45+00	61+33	Caltrans	Main Alignment
61+33	87+52	State Parks	Main Alignment
87+52	92+80	Caltrans	Main Alignment
0+00	0+25	Caltrans	Railroad Alignment
0+25	2+01	State Parks	Railroad Alignment
2+01	43+49	SCCRTC	Railroad Alignment
43+49	50+94	State Parks	Railroad Alignment
50+94	140+65	State Parks	Main Alignment
140+65	143+56	Caltrans	Main Alignment
143+56	147+44	State Parks	Main Alignment
147+44	152+75	Caltrans	Main Alignment
152+75	168+13	State Parks	Main Alignment
168+13	173+12	Caltrans	Main Alignment
173+12	214+27	Graniterock/State Parks	Main Alignment
214+27	217+20	Caltrans	Main Alignment
217+20	221+03	Graniterock	Main Alignment

Ten-foot wide easements currently exist along the entire route of the existing pipeline. The existing pipeline utilizes the entire ten foot easement, making it impossible to construct a new line parallel to the existing line, and remain within the ten-foot corridor. In addition, the existing line would need to stay in service as long as possible while the new pipeline is being installed. For this reason and other construction-related issues, the entire pipeline cannot be removed and replaced in the same location and, instead, would be located next to the existing pipeline. For construction of the pipeline, new easements or access agreements would be required. Access agreements would also be needed for staging areas. Permanent agreements or easements would be necessary to provide ongoing access for inspection, and maintenance of the pipeline and the right-of-way, pipeline repairs, and other activities. Following abandonment of the existing pipeline, existing easements that are no longer needed would be transferred to the underlying landowner.

Operation and Maintenance Activities. Currently, the SCWD conducts various operation and maintenance activities on the NCS, including vegetation maintenance (e.g., clearing an 8-foot wide access above the pipeline right-of-way using hand tools), pipeline monitoring by SCWD staff either on foot or by vehicle, and emergency response activities and repairs. Operation and maintenance activities associated with the proposed project would be the same as currently occur for the

NCS.

9. Other public agencies whose approval is required:

- Santa Cruz County
- Santa Cruz County Regional Transportation Commission (SCCRTC)
- U.S Army Corps of Engineers (USACE)
- Regional Water Quality Control Board (RWQCB)
- California Department of Fish and Wildlife (CDFW)
- California Department of Parks and Recreation (State Parks)
- California Department of Transportation (Caltrans)
- NOAA Fisheries (National Marine Fisheries Service) (NMFS)
- United States Fish and Wildlife Service (USFWS)

II. Environmental Setting and Surrounding Land Uses

The existing pipeline alignment is located primarily within a SCWD easement within Wilder Ranch State Park, which is owned and managed by California Department of Parks and Recreation (State Parks). Wilder Ranch State Park encompasses approximately 5,000 acres of coastal habitat and recreational area with 900 acres in agriculture, some cattle grazing and a cultural preserve. The Park includes 39.4 miles of trails predominantly in the upland portions of the Park. The trails are open to use by hikers, mountain bikers, and horseback riders. Five trails are located in the vicinity of the proposed project. Inholdings within park boundaries that would be located on or adjacent to the proposed project area include the City of Santa Cruz sanitary landfill, located off of Dimeo Lane, and the sand and gravel quarry property adjacent to Highway 1. The proposed pipeline route generally follows existing access roads adjacent to agricultural fields located within Wilder Ranch State Park.

The proposed project is located entirely within the County of Santa Cruz and within the Coastal Zone. Additionally, the project alignment would cross several creeks and drainages, as well as Caltrans and SCCRTC right-of-way.

III. Environmental Checklist

Environmental Factors Potentially Affected by the Project: The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

X	Aesthetics		Agriculture & Forest Resources		Air Quality
X	Biological Resources	X	Cultural Resources	X	Geology / Soils
	Greenhouse Gas Emissions	X	Hazards & Hazardous Materials	X	Hydrology / Water Quality
X	Land Use / Planning		Mineral Resources		Noise
	Population / Housing		Public Services		Recreation
	Transportation / Traffic	X	Utilities / Service Systems	X	Mandatory Findings of Significance

Instructions:

1. A brief explanation is required (see VI. "Explanation of Environmental Checklist Responses") for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question (see V. Source List, attached). A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that any effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier Analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets:

   a) *Earlier Analysis used*. Identify earlier analyses and state where they are available for review.

   b) *Impacts adequately addressed*. Identify which effects from the above checklist were within the scope

of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

c) *Mitigation measures.* For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. The explanation of each issue should identify:

a) The significance criteria or threshold, if any, used to evaluation each question; and

b) The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?			X	
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?		X		
c) Substantially degrade the existing visual character or quality of the site and its surroundings?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X
2. AGRICULTURE RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?			X	
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?			X	
b) Violate any air quality standard or contribute to an			X	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
existing or projected air quality violation?				
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?			X	
e) Create objectionable odors affecting a substantial number of people?			X	
4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?		X		
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		X		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?		X		
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X
5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the				

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
significance of a historical resource as defined in Section 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		
6. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking? iii) Seismic-related ground failure, including liquefaction? iv) Landslides?			X	
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
7. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on			X	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
the environment?				
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?			X	
8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?		X		
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?		X		
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge			X	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?			X	
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?			X	
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			X	
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows?			X	
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?			X	
10. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?		X		
c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?				X

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
11. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				X
12. NOISE. Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?			X	
c) Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X
13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?			X	
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other public facilities?			X	
15. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			X	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
16. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?			X	
b) Conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location, that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example,			X	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
farm equipment)?				
e) Result in inadequate emergency access?			X	
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (for example, bus turnouts, bicycle racks)?			X	
17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?		X		
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?			X	
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?			X	
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			X	
g) Comply with federal, state, and local statutes and regulations related to solid waste?			X	
17. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of			X	

ENVIRONMENTAL IMPACTS **Issues (and Supporting Information Sources):**	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)				
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?		X		

DISCUSSION OF ENVIRONMENTAL EVALUATION

See Section **VI--ENVIRONMENTAL EVALUATION** for discussion.

IV. DETERMINATION:

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	X
I find that the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.	
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Rosemary Menard

Rosemary Menard
City of Santa Cruz Water Director

6/30/2014

June 30, 2014

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VI. Explanation of Environmental Checklist Responses

INTRODUCTION & OVERVIEW OF IMPACTS

In June 2004, the SCWD initiated the preparation of a programmatic Environmental Report (PEIR, ENTRIX 2005) for the North Coast System Rehabilitation Project. The PEIR addressed the potential impacts and mitigation measures for the overall system repair, including diversion structures, and piping improvements. The PEIR analyzed replacement of the pipeline along the existing alignment, as well as alternative alignments identified in the Preliminary Engineering Report. The segment of pipeline to be replaced in Phase 3 – Coast Segment (the proposed project) would generally follow the existing pipeline alignment, which the PEIR determined to be the environmentally superior and preferred alignment. The PEIR was certified by City Council at a Public Hearing held on November 8, 2005.

This IS/MND for the proposed project includes a comprehensive project-level analysis of all CEQA impact categories. The PEIR is referenced in this document as a source of some of the information provided, but the IS/MND is not formally tiered to the PEIR as allowed under CEQA, given that the pipeline alignment has changed somewhat over that analyzed in the PEIR, as described in the Introduction.[2]

1. AESTHETICS. Would the project:

a) Have a substantial adverse effect on a scenic vista?

Less Than Significant Impact. Public views and vistas are areas that provide the public with clear, panoramic views of significant regional features, such as the Pacific Ocean. Important visual features include beaches, waterways, mountains, or pastoral lands that comprise the overall visual landscape of the region. Because the proposed project is located along Highway 1, the length of the project area offers public views and vistas of the Pacific Ocean and agricultural and open space land associated with Wilder Ranch State Park. As described further below, Highway 1 has been designated a Scenic Highway by Santa Cruz County and is an eligible State Scenic Highway according to Caltrans. Therefore, public vistas along Highway 1 are afforded the highest level of protection, according to the Santa Cruz County General Plan (Policy 5.10.10).

As described in the PEIR, during much of the year, the existing pipeline right-of-way (ROW) is not visible due to the height of surrounding vegetation. However, following mowing activities (usually twice a year), the pipeline ROW is highly visible to anyone within one-quarter mile of the ROW. Portions of the pipeline are visible along Highway 1 and in Wilder Ranch State Park. The existing pipeline route is marked at regular intervals with required white and blue plastic stakes (approximately 3 feet high and 3 inches wide).

The proposed project that is evaluated in this Initial Study consists of replacement of an existing raw water main, primarily along the existing alignment. Upon completion, most

[2] "Tiering" during to the CEQA process refers to using the analysis of general matters contained in a programmatic EIR with later EIRs and negative declarations on narrower projects and concentrating the subsequent documents solely on issues specific to the narrower project.

of the proposed pipeline would be located underground and out of view. The proposed project would not result in new above-ground pipe or other facility construction that would be visible from Highway 1. As currently occurs, routine mowing and/or hand removal of vegetation along the alignment would be conducted to clear the pipeline ROW on a regular basis. These maintenance activities would continue once the existing pipeline has been replaced with the proposed project. As the proposed project would not result in new above-ground pipe or other facility construction that would be visible from Highway 1, the project would not block, impair or substantially affect views on a permanent basis.

During construction of the project, activities such as excavation, trucks hauling materials and machinery would be temporarily visible to some viewers along Highway 1 and from adjacent uses, including Wilder Ranch State Park. Construction equipment and materials would be staged in an area near Station 89+00 used for staging farm equipment and other agriculturally-related materials. The construction period would be temporary; therefore, the presence of construction equipment would result in minor short-term changes in the views from along Highway 1.

Additionally, it is likely that one or more "significant trees" under the County's Significant Tree Ordinance would need to be removed or trimmed during project construction. However, these activities would not result in substantial adverse impacts to the scenic views available from Highway 1, given the limited extent of the tree removal. Removal/trimming of trees associated with project construction would not substantially degrade the broad scenic vistas available from Highway 1 along the project alignment. Therefore, the impact of the project on scenic vistas would be less than significant.

b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?

Potentially Significant Impact Unless Mitigation Incorporated. Scenic resources include but are not limited to trees, rock outcroppings, and historic buildings located along scenic highways and roads. A scenic corridor is associated with a road that has been designated by either Caltrans or a local agency, such as Santa Cruz County, as being a scenic highway or road or determined to be eligible for such a designation. Scenic highways are recognized as having exceptional scenic qualities or as affording panoramic views. Policy 5.10.10 of the Santa Cruz County General Plan designates the entire length of Highway 1 within Santa Cruz County as a State Scenic Highway. Highway 1 is also listed as an eligible State Scenic Highway by Caltrans (Caltrans 2011).

As described above, the proposed project would replace the existing pipeline, primarily along the existing alignment adjacent to Highway 1. The proposed project would not be located near any rock outcroppings or historic buildings and therefore would not impact such resources. The project could affect the recorded portions of the abandoned (circa 1930s) Highway 1 (CA-SCR-334H) identified by the cultural resources assessment. However, the portion of the CA-SCR-334H within the project limits has compromised integrity due to its fragmented and abandoned condition, and the generally poor condition of the asphalt and associated features. Further, it is not visible from the adjacent scenic highway.

The project would result in some tree removal and trimming to replace the existing pipeline. It is likely that one or more "significant trees" under the County's Significant Tree Ordinance would need to be removed or trimmed during project construction. As further described in Section IV.4(e), the Significant Tree Protection Ordinance seeks to preserve significant trees and forest communities to protect and enhance the County's natural beauty, property values, and tourist industry (Santa Cruz County Code Section 16.34.010). An initial arborist assessment has identified 46 significant trees within the area of potential impact. These trees include 3 common Douglas-fir (*Pseudotsuga menziesii*), 7 Monterey pine, 5 blue gum eucalyptus, 2 coast live oak, and 29 Monterey cypress (M. Hamb, pers. comm.). A final arborist report will be prepared as part of the final design and permitting process to determine whether significant trees would need to be removed or could otherwise be damaged during construction. Implementation of Mitigation Measure TREE-1, described in Section VI.4(e), would reduce potential impacts associated with removal of "significant trees" within a scenic highway to less than significant. Additionally, the County may attach reasonable conditions to the coastal development permit to mitigate visual impacts and ensure compliance with the County's Significant Tree Protection Ordinance. With implementation of Mitigation Measure TREE-1, impacts to scenic resources would be less than significant.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

Less Than Significant Impact. The existing visual character in the vicinity of the project consists of rolling hills east of Highway 1 and marine terraces to the west of Highway 1. The Pacific Ocean and coastline, agricultural fields and uses, and coastal recreational access points visually dominate the character of the immediate project area. The project site location is visible from surrounding public sites, including Highway 1 and Wilder Ranch State Park. As currently occurs, routine maintenance (e.g., mowing and/or hand clearing of vegetation along the ROW) would continue to be conducted.

The proposed project would replace an existing water line, primarily along the existing alignment. Where the proposed pipeline diverges from the existing alignment, it would be located within disturbed lands consisting of existing access roads and railroad ROW. Upon completion, most of the proposed pipeline would be located underground and out of view. None of the new piping would be visible from Highway 1.

While one or more "significant trees" under the County's Significant Tree Ordinance would need to be removed or trimmed during project construction, these activities would not substantially degrade the visual quality of the site. Due to the limited extent of tree removal and the visual character of the project alignment (e.g., undeveloped coastline, agricultural fields and uses), tree removal/trimming proposed as part of the project would not significantly change the existing viewshed for travelers along Highway 1, adjacent residents/businesses, or visitors to Wilder Ranch State Park. See Sections VI.1(b) and VI.4(e) for additional information about "significant trees."

Based on the above, the proposed project would not substantially degrade the existing visual character or quality of the site and its surroundings and the impact is less than significant.

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

No Impact. Streetlights, vehicle head and tail lights, and lighting associated with existing development (sparse) are the existing sources of light and glare in the project area. The proposed project would include construction of an underground water pipeline. No light standards would be installed as part of the proposed project. Additionally, there will be no nighttime construction activities that would require lighting. Therefore, the project would not create a new source of light or glare, which would adversely affect day or nighttime views.

2. AGRICULTURAL RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

Less Than Significant Impact. Portions of the proposed project discontinuously cross lands identified as Prime Farmland or Farmland of Statewide Importance pursuant to the Farmland Mapping and Monitoring Program (FMMP). These lands are generally in agricultural production and are expected to remain in production throughout the implementation of the proposed project under long-term conservation easements with California State Parks and Wilder Ranch State Park. The project alignment has been designed to avoid productive agricultural land by locating the new pipeline within agricultural roads or adjacent to agricultural fields. As the proposed project does not include any new above ground facilities in areas identified as Prime Farmland or Farmland of Statewide Importance, these lands would not be converted to non-agricultural use and therefore the impact is less than significant.

As described below in Section VI.4, Biological Resources, construction of the proposed pipeline could impact approximately 6.76 acres of agricultural land that includes dirt roads and equipment areas, as well as the margins of agricultural fields. In these areas along the alignment, the construction footprint could temporarily encroach upon the margin of adjacent fields during the construction period (between Stations 69+00 and 87+00; 43+00 and 50+00; 134+00 and 146+00; 153+00 and 166+00; and 174+00 and 211+00). As a result, agricultural activities could be temporarily disrupted during the growing season in the immediate vicinity of pipeline construction activities. Agricultural lands that rely exclusively on NCS water for irrigation could experience a short-term disruption to irrigation water supply when and if the existing pipeline is removed or disconnected during construction. In addition, soil productivity may be reduced in the immediate vicinity of the pipeline if fertile topsoil and less productive subsurface soils are mixed during construction activities. Soil compaction may also occur along the pipeline alignment and at the staging area with repeated use during construction. Implementation of the following Recommended Condition of Approval would minimize the potential for temporary loss of agricultural production during project construction.

Recommended Condition of Approval AG-1: To minimize the temporary disruption to agricultural activities, the following measures should be implemented during project construction.

- Notify growers of construction schedule three months prior to any construction activities.
- Schedule heavy construction and restoration activities to avoid excessively wet periods.
- During construction, SCWD will minimize service interruptions to the maximum extent practicable, to limit impacts to irrigators during summer months (typically August and September), however service may be interrupted for multi-week periods.
- Introduce topsoil segregation and subsurface soil turnover in agricultural areas to help control and mitigate the multiple effects of soil compaction due to construction.
- The City will work with the growers to fairly compensate them for any temporary loss of production due to project construction activities.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Less Than Significant Impact. Several parcels along and in the vicinity of the proposed project are zoned CA (Commercial Agriculture) in the Santa Cruz County zoning ordinance. Much of the land in the project area is also designated as "Williamson Act – Mixed Enrollment Agricultural Land". These lands are enrolled under California Land Conservation Act contract and contain a combination of Prime, Non-Prime, Open Space Easement or other contracted or enrolled lands not yet delineated by the County.

As described in Section VI.2(a) above, implementation of the proposed project would not convert the site to a non-agricultural use nor would it interfere with long-term agricultural use of these lands. During construction, agricultural activities may be temporarily disrupted due to interruption of irrigation water supply, soil compaction, or reduction in soil productivity associated with soil disturbance along the margins of some agricultural fields. However, there would be no conflicts with existing zoning for agricultural use or Williamson Act contracts and the impact would be less than significant. As described in Section VI.2(a) above, implementation of Recommended Condition of Approval AG-1 would minimize any potential temporary effects on agricultural uses in the immediate vicinity.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

No Impact. The project area contains no forest or timberland and is not zoned for forest land, timberland, or timberland production. Therefore, the project would not result in conflicts with existing zoning or cause rezoning of forest land.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

No Impact. The project would not result in the loss of forest land or conversion of forest

land to non-forest uses. See Section VI.2(c) above.

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Less Than Significant Impact. See Sections VI.2(a) and VI.2(c) above.

3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?

Less Than Significant Impact. An Air Quality Management Plan (AQMP) describes air pollution control strategies to be taken by counties or regions classified as nonattainment areas. The AQMP's main purpose is to bring the area into compliance with the requirements of federal and State air quality standards. CEQA Guidelines Section 15125(b) requires that CEQA documents discuss the consistency between the proposed project and applicable regional plans, including the AQMP. Consistency determinations with the AQMP are used by the Monterey Bay Unified Air Pollution Control District (MBUAPCD) to address a project's cumulative impact on regional air quality (i.e., ozone levels).[3]

The AQMP uses the assumptions and projections by local planning agencies to determine control strategies for regional compliance status. For a project in the North Central Coast Air Basin (NCCAB) to be consistent with the AQMP, the population growth attributable to the project would need to have been accommodated for in the population forecasts adopted by AMBAG which were used to forecast population-related emissions. Projects which are not consistent with the AQMP have not been accommodated in the AQMP and will have a significant cumulative impact on regional air quality unless emissions are totally offset. The District provides consistency determinations for projects including population related projects, non-residential population related commercial, industrial and institutional projects, stationary and area source emissions, transportation projects and wastewater treatment projects.[4] The proposed project would allow for the repair of existing piping, and would not increase population or result in operational emissions. Therefore, the proposed project would not conflict with the AQMP and the impact would be less than significant.

b) Violate any air quality standard or contribute to an existing or projected air quality violation?

Less Than Significant Impact. The potential for the proposed project to violate any air quality standard or contribute to an existing or projected air quality violation is described below.

Construction Emissions**.** The CEQA Guidelines published by MBUAPCD note that construction activities (grading, excavation, and on-site vehicular traffic) would have a

[3] Monterey Bay Unified Air Pollution Control District, 2008. *CEQA Air Quality Guidelines.* February.
[4] Monterey Bay Unified Air Pollution Control District, 2008. *CEQA Air Quality Guidelines.* February.

significant effect on local air quality when they emit greater than 82 pounds of PM_{10} near sensitive receptors. Sensitive receptors are defined as residences, schools, hospitals or other land uses where air sensitive people may reside. The closest sensitive receptors to proposed construction areas would be the rural residential units located on agricultural land at 3451 Highway 1, and those located south of Highway 1 at Dimeo Lane. These units could be located as close as 40 feet from the nearest potential construction area.

If MBUAPCD approved dispersion modeling demonstrates that direct emissions under individual or cumulative conditions would not cause an exceedance of state PM_{10} standards, the impact would not be considered significant. MBUAPCD has determined that when minimal earthmoving (grading) takes place, disturbance of greater than 8 acres per day can exceed the 82 pound per day threshold. When both grading and excavation occur, disturbance of greater than 2.2 acres per day can exceed the emissions threshold.

Construction projects that temporarily emit precursors of ozone (i.e., ROG or NO_X) are accommodated in the emission inventories of State and federally required air plans and would not have a significant impact on the attainment and maintenance of ozone ambient air quality standards (AAQS). In addition, construction projects that may cause or substantially contribute to the violation of other State or national AAQS or that could emit toxic air contaminants could result in temporary significant impacts.

Heavy construction is a source of dust emissions that may have substantial temporary effects on local air quality. Building and road construction are the construction categories with the highest emissions potential. Construction emissions for many types of projects are associated with land clearing, blasting, ground excavation, cut and fill operations, and the construction of the particular facility itself. Dust emissions also vary substantially from day to day, depending on the level of activity, the specific operations, and the weather conditions. A large portion of the emissions results from equipment traveling over unpaved surfaces at the construction site.

The total area of disturbance (grading and excavation) for the North Coast System Rehabilitation Project is anticipated to be approximately 17.5 acres. The worst-case maximum acreage that could be subject to grading and excavation on a daily basis is estimated to be less than one acre. This level of activity is below the MBUAPCD screening criteria of 2.2 acres per day for a project when both grading and excavation would occur. Therefore, the proposed project would not violate any short-term air quality standard or contribute substantially to an existing or projected air quality violation and the impact would be less than significant. Implementation of the following Recommended Condition of Approval would minimize dust emissions during project construction.

Recommended Condition of Approval AIR-1: The following measures will be implemented by the project construction contractor:

- Haul trucks shall maintain at least 2 feet of freeboard.
- All trucks hauling dirt, sand, or loose materials shall be covered.
- Vegetative ground cover shall be planted in disturbed areas as soon as possible.

- Inactive storage piles shall be covered.
- Wheel washers shall be installed at the entrance to construction sites for all exiting trucks.
- Streets shall be swept if visible soil material is carried out from the construction site.
- A publicly visible sign shall be posted with the telephone number and person to contact regarding dust complaints. This person shall respond and take corrective action within 48 hours. The phone number of the MBUAPCD shall also be visible to ensure compliance with Rule 402 (nuisance).

Operational Air Quality Impacts. Long-term air emission impacts are those associated with stationary sources and mobile sources involving any change related to the proposed project. The proposed project would not include any stationary sources of emissions. Additionally, the project would not generate any long-term mobile source emissions over existing conditions, as on-going maintenance activities for the new pipeline would be the same as those associated with the existing pipeline. Therefore, project operation would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

Less Than Significant Impact. The NCCAB is non-attainment for the state ozone and PM_{10} standards, but is in attainment or unclassified for all other state and federal standards. As discussed in Section VI.3(a), the proposed project would not conflict with the AQMP and therefore would not have a cumulative impact related to ozone levels. Additionally, as described above in Section VI.3(b), the proposed project would result in temporary increases in air pollutants during construction; however, these increases would not result in a cumulatively considerable net increase of any air pollutants. Therefore, the impact would be less than significant.

d) Expose sensitive receptors to substantial pollutant concentrations?

Less Than Significant Impact. Construction of the proposed project may expose surrounding land uses to airborne particulates and fugitive dust, as well as a small quantity of pollutants associated with the use of construction equipment (e.g., diesel-fueled vehicles and equipment). As noted above residential receptors are located as close as 40 feet from the project site. The duration of the construction period is expected to be a total of eight months, which is relatively short when compared to the 70-year risk exposure period.[5] Additionally, the project duration would account for construction of the entire 3.5 mile length of the project, therefore emission concentrations at any one receptor location would have a much shorter duration. Therefore, due to the short duration of the construction period and the dispersion of project construction emissions, health risk impacts associated with project construction would be less than significant. As discussed in Sections VI.3(a and b), the proposed

[5] According to BAAQMD and EPA guidance, the defined exposure period to determine significant health risks is based on a 70-year lifetime pollutant exposure rate.

project would not result in any substantial long-term air quality impacts. Therefore, nearby sensitive receptors would not be exposed to substantial pollutant concentrations.

e) Create objectionable odors affecting a substantial number of people?

Less Than Significant Impact. Implementation of the proposed project would not result in permanent objectionable odors affecting a substantial number of people. During project construction, emissions from diesel-driven equipment and vehicles may result in odors on the project site and immediate vicinity. However, construction is short-term in nature and these emissions would cease to occur after construction is completed. In addition, odors from construction equipment and vehicles on the project site would be dispersed quickly and would not likely subject sensitive receptors to objectionable odors. Long-term operation of the proposed project would not generate objectionable odors. Therefore, impacts related to objectionable odors would be less than significant from the proposed project.

4. BIOLOGICAL RESOURCES.

This section reports the results of the Biological Resources Assessment (LSA 2014a) prepared for the project. As documented in the Biological Resources Assessment, biologists conducted field surveys in the project area,[6] consulted regulatory agency databases, and assessed project impacts based on relevant project information, and field survey and background research results.

The habitat/land cover communities identified within the proposed project alignment area are provided below. These designations are adapted and modified from the *City of Santa Cruz Habitat Conservation Plan Terrestrial Resources Technical Report* (H.T. Harvey & Associates with Entomological Consulting Services 2004) and the Operations and Maintenance Habitat Conservation Plan (Draft O&M HCP) (City of Santa Cruz 2012a). Appendix B provides a habitat map of these communities in the project area and within the area of potential impact for the biological resources analysis.[7]

Agriculture. Row-crops, particularly cold-season vegetables such as globe artichoke (*Cynara cardunculus* subsp. *cardunculus*), Brussels sprouts (*Brassica oleracea*), culinary herbs, and other greens are the primary crops in the fields along the alignment at the time of the surveys. The North Coast Pipeline route generally skirts the edge of cropland along the Highway 1 corridor.

Ruderal/ Landscaped/ Ornamental. Ruderal areas (disturbed, non-native herbaceous communities) and ornamental and landscape plantings occur near the developed areas within the proposed project alignment (Appendix B). Eucalyptus (*Eucalyptus* spp.) trees are a particularly common and invasive non-native species.

Developed. Developed areas include buildings and paved surfaces, such as Highway 1,

[6] LSA conducted two reconnaissance surveys in November and December 2012, two protocol-level plant surveys in March and August 2013, and a preliminary wetland delineation in May 2014.

[7] The area of potential impact is the same as the proposed project alignment and is based on the proposed work area identified in the Project Description (e.g., 40-foot and 20-foot width work areas).

parking lots, driveways, and roads (Appendix B). These areas are mostly bare of native vegetation.

Coastal Scrub. Coastal scrub is a low-statured community dominated by the mat-forming evergreen shrub coyote brush (*Baccharis pilularis* subsp. *pilularis*). This community intergrades within non-native annual grassland and mixed evergreen forest (oak woodland) along the project alignment (Appendix B). Shrub densities vary with grazing regime, aspect, and soil characteristics, becoming very sparse in ecotonal areas. Coastal scrubs, like the grasslands they intergrade with, are xeric communities commonly found on fine-textured, sandy-loam soils. Common shrub species include poison oak (*Toxicodendron diversilobum*), coffeeberry (*Frangula californica*), coyote brush, and California sagebrush (*Artemisia californica*). Subshrubs and herbaceous species include California blackberry (*Rubus ursinus*), bracken fern (*Pteridium aquilinum*), naked stemmed buckwheat (*Eriogonum nudum*), California figwort (*Scrophularia californica*), and sticky monkeyflower (*Mimulus aurantiacus*). These sites are subject to near constant winds with high salt content, and soils are typically rocky and poorly developed.

Riparian Forest and Scrub. Riparian communities are assemblages of deciduous, broad-leaved trees that grow along stream courses and within the floodplains of rivers within the alignment (Appendix B). Several subtypes of riparian forest and riparian scrub occur in the Santa Cruz area. Central coast arroyo willow riparian forest, a taller, more stable riparian community, occurs along the proposed project alignment near Baldwin Creek.

Mixed Evergreen Forest. Mixed evergreen forest is a broadleaf tree association of madrone (*Arbutus menziesii*), coast live oak (*Quercus agrifolia*), and frequently California buckeye (*Aesculus californica*) (Figures 2 and 15 Appendix B). Another plant species of note is blue elderberry (*Sambucus nigra* subsp. *caerulea*). Poison oak, coyote brush, coffeeberry, and California blackberry often form a thick shrub layer within this community. Breaks in the canopy of the tree and shrub layers may contain a nearly continuous layer of native and non-native grasses and forbs. Common native herbs include yerba buena (*Clinopodium douglasii*), wild rye (*Elymus glaucus*), common chickweed (*Stellaria media*), wild cucumber (*Marah fabacea*), hedge nettle (*Stachys ajugoides*), and California brome (*Bromus carinatus*).

Seasonal Wetland. Seasonal wetlands are basins that support hydrophytic vegetation and are flooded for at least part of the growing season and dry out during the summer and fall. Seasonal wetlands are present in several areas along the alignment (Figures 4-10, and 15, Appendix B). One seasonal wetland was observed in the project area outside of the project alignment at the Graniterock Wilder Sand Quarry (Figure 15, Appendix B). Seasonal wetland vegetation, dominated by introduced hydric species such as Italian ryegrass, rabbitsfoot grass (*Polypogon monspeliensis*), annual willow herb (*Epilobium brachycarpum*), and curly dock (*Rumex crispus*) also occurs in drainage ditches and man-made channels along the alignment. Other common plant species in this habitat include toad rush (*Juncus bufonius*), nut sedge (*Cyperus eragrostis*), and common monkeyflower (*Mimulus guttatus*).

Seep Wetland. Seep wetlands are wet areas in which surface saturation and water is perennial. Four seep wetlands occur within the alignment (Figures 10 and 15, Appendix B). Plant species observed in the seep wetlands include water cress (*Rorippa nasturtium-aquaticum*), western water hemlock (*Cicuta douglasii*), and cattails. Other common plant species in this habitat include bulrush (*Schoenoplectus* and *Bolboschoenus* spp.).

Non-Native Grassland/ Coastal Terrace Prairie. Grassland on the alignment is a sparsely-to-densely vegetated community dominated by introduced annual grasses intermixed with occasional native grasses and native and non-native annual and perennial forbs, wildflowers, and shrubs (Appendix B). This community is typically found on well-developed, finely-textured soils that are moist or waterlogged during the winter and very dry in the summer and fall. Most plants germinate with the onset of winter rains and have set seed and senesced by mid-summer, although many native herbs in the sunflower family (Asteraceae) bloom through the fall. Species in this community include a variety of non-native annual grasses, including, Italian ryegrass (*Festuca perennis*), bromes (*Bromus hordeaceus, B. diandrus,* and *B. madritensis* subsp. *rubens*), rattail fescue (*Festuca myuros*), wild oat (*Avena barbata*), and rattlesnake grasses (*Briza maxima* and *B. minor*). Associated forbs include a mixture of native and non-native species, including Italian thistle (*Carduus pycnocephalus*), California poppy (*Eschscholzia californica*), clovers (*Trifolium* spp.), and filaree (*Erodium cicutarium*). A rush meadow community occurs in patches along the existing pipeline on the marine terraces east of Majors Creek.

Coastal terrace prairie within the proposed project alignment is a dense grassland community dominated by non-native grasses with occasional stands of purple needle grass (*Stipa pulchra*) on comparatively dry sites. Patches of coastal terrace prairie intergrade with non-native grassland within and along the alignment (Appendix B). The percent composition of non-native annual grasses such as rattlesnake grass, Italian ryegrass, wild oat and rattail fescue is typically significant within these areas.

Creeks/ Drainages/ Ditches. Several creeks, drainages, and ditches occur within the proposed project alignment. These habitat features drain water from the hills northeast of the project alignment, stormwater from developed areas, and/or irrigation water from adjacent agriculture. The main creeks within the alignment, such as Baldwin Creek, Little Baldwin Creek, Old Dairy Gulch, and Lombardi Gulch, support riparian forest and scrub vegetation. These creeks and other vegetated drainages and ditches also support hydrophytic vegetation. Some of the ditches along the alignment are concrete-lined and unvegetated.

Freshwater Pond. Freshwater ponds (marshes) occur in areas permanently flooded by freshwater that lack a significant current (Appendix B). These ponds typically support deep, peaty soils that are colonized by perennial, emergent aquatic plants, such as cattail (*Typha latifolia*), California bulrush (*Schoenoplectus californicus*), and various sedges (*Carex* spp.) and rushes (*Juncus* spp.). A freshwater pond occurs outside of the project alignment, upstream of Little Baldwin Creek, northeast of Station 82+00 (Figure 4, Appendix B). Although not observed within the project area, marshes along the immediate coast often receive some input of salt water and may support brackish species such as common pickleweed (*Sarcocornia* [*Salicornia*] *pacifica*) and gumplant (*Grindelia stricta* var. *angustifolia*).

Irrigation Pond. Irrigation ponds are artificial ponds that are constructed ponds for irrigation. These ponds are often colonized by perennial, emergent aquatic plants, such as cattail and California bulrush. Three irrigation ponds occur adjacent to the proposed project alignment (Figures 10, 12, and 13, Appendix B) and will not be affected by the project.

The new alignment will impact up to approximately 17.4 acres of habitat along an 18,500 foot-long area of potential impact. These impacts include the areas with full-width trenching, reduced-width trenching, trenchless-crossing pits, and abandoned/removed pipeline and are listed below by habitat:

Habitat/Land Cover Type[8]	Acres
Agriculture	6.76
Ruderal /Landscaped/ Ornamental	6.40
Developed	2.13
Coastal Scrub	0.91
Riparian Forest and Scrub	0.75
Mixed Evergreen Forest	0.35
Seasonal Wetland	0.14
Seep Wetland	0.10
Non-Native Grassland/ Coastal Terrace Prairie	0.03
Total	**17.39**

In addition to these habitat communities, the pipeline alignment contains 5,328 linear feet of creeks, drainages, and ditches within the area of potential impact[9]. The majority of these features are roadside and agricultural drainage ditches (see Figures 1-15, Appendix B).

The impact area would be up to 40 feet wide to accommodate installation of the proposed pipeline. This area generally consists of an approximately 5-foot-wide trench, a 10-foot-wide zone for excavated material storage adjacent to the trench, and a 15-foot-wide travel way for construction access. In several areas the width of the impact area would be reduced to avoid sensitive resource(s), including riparian vegetation, wetlands, drainage areas, and other sensitive areas. In these locations, the construction footprint would be limited to 20 feet wide in order to minimize impacts to these resources. The reduced width area would be accomplished by using a combination of techniques applicable to the specific location such as having the travel way straddle the trench and/or transporting excavated material away from sensitive areas. The locations of the reduced width impact areas are provided in Table A in the Project Description and are shown on the project figures in Appendix B.

Following completion of the proposed pipeline, aboveground sections of the existing pipeline would be removed and capped, while below ground sections of the existing pipeline would be abandoned in place. The acreage of the abandoned and removed pipeline totals approximately 0.33 acre. Approximately 231 linear feet of the streams, including ditches and Lombardi Gulch, are located in areas where the pipeline will be abandoned and removed. At the Lombardi

[8] Freshwater ponds and irrigation ponds are in the study area assessed in the Biological Resources Assessment, but are located outside of the project alignment; therefore these habitat/land cover types are not included below.

[9] Note the acreages of these linear features are included in the respective Habitat/Land Cover Type in which they occur.

Gulch, Little Baldwin Creek, Baldwin Creek, and the eastern tributary to Baldwin Creek locations, the existing pipeline is located above ground to cross over a natural creek channel or highway drainage feature. At the eastern tributary of Baldwin Creek, approximately 360 feet of HDPE piping was installed above ground as a temporary repair. The length and location of the five segments of existing, above ground pipeline that would be abandoned and removed are shown in Table B in the Project Description.

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Potentially Significant Unless Mitigation Incorporated. The following sections discuss potential impacts of the proposed project and required mitigation measures related to special-status plant and animal species in the project area.

Plants. No special-status plants (Table C, Appendix C) were observed within the project alignment during focused plant surveys conducted in 2013. These focused surveys were conducted during the applicable blooming periods of the target special-status plants (Table C, Appendix C) on March 19 and August 6, 2013 to verify presence or absence of special-status species. These surveys were conducted in the suitable undeveloped habitat within the alignment according to the CDFW *Protocols for Surveying and Evaluating Impacts to Special Status Plant Populations and Natural Communities* (CDFG 2009).

The negative findings of the plant surveys are generally considered valid for two years because after the two-year period, special-status species could colonize the alignment. As long as construction of the project occurs within this two-year period, the impact would be less than significant and no mitigation measures would be necessary. If construction occurs beyond two years of the surveys (August 2015 or later) or new populations of rare plants are located in the project alignment, additional surveys should be conducted. If additional focused surveys are conducted and special-status plant species are found within the alignment, potentially significant impacts could occur and the following mitigation measures, General Minimization and BMPs as modified from the Draft O&M HCP (City of Santa Cruz 2012a), would be implemented to reduce impacts to any subsequently identified special-status plants to less than significant:

Mitigation Measure RP-1: Preconstruction surveys for special-status plants shall be conducted if construction is initiated after August 2015. The surveys shall follow standard survey protocols and shall be timed to occur when target species are present and identifiable. If special-status plant species are identified, the following Mitigation Measures RP-2 through RP-5 shall be implemented.

Mitigation Measure RP-2: Prior to the initiation of construction activities, population boundaries for special-status plant species shall be clearly delineated with visible flagging or fencing, which shall remain in place for the duration of construction activities. Flagged areas shall be avoided during construction activities in that area. Warning signs shall be posted on the temporary fencing to alert excavators and other

workers not to proceed beyond the fence. All protective fencing shall remain in place until all repairs have been completed. Signs shall include the following language: "NOTICE: SENSITIVE HABITAT AREA. DO NOT ENTER." If the area cannot be avoided and it is determined that the activity will adversely affect the special-status plant species, the activity shall be conducted outside of the bloom period for that species to the extent practicable. In the appropriate season prior to construction, seed from the special-status plant species shall be collected from plants within the impact area and stored. Soil excavation activities in areas where special-status plant species are known to occur shall ensure that the topsoil will be segregated to preserve the viability of the seed bank. To adequately capture the seed bank, the top few inches of soil shall be removed and appropriately stored. Upon completion of the project, the soil shall be replaced in the area affected and seed collected from plants within the impact area shall be hand broadcast onto the revegetated area. Success of the revegetation efforts shall be monitored for a minimum of five years, wherein the number of plant species growing within the area shall be inventoried. The revegetation shall be deemed successful if the alignment attains 50 percent of the pre-disturbed number of plants. If no special-status plant species are detected in Year 1 of monitoring, the City shall develop and implement remedial measures, which may include additional management and revegetation, upon concurrence from the USFWS. Occurrences of problematic invasive, non-native plant species shall be removed from the revegetated area for a minimum of five years.

Mitigation Measure RP-3: Appropriate dust control measures, such as periodically wetting down the work areas, shall be used as necessary for any project-related construction activities that generate dust.

Mitigation Measure RP-4: The spread or introduction of problematic invasive exotic plant species shall be avoided to the extent practicable. All heavy equipment shall be thoroughly inspected and cleaned of invasive plants prior to entrance to the work site. When practicable, noxious and invasive plants in the project areas shall be removed.

Mitigation Measure RP-5: Prior to any on-site work in areas where special-status plant species may occur, an agency-approved biologist shall conduct a tailgate training session in which all construction personnel shall receive training regarding measures that are to be implemented to avoid environmental impacts. This training shall include a presentation of the potential for sensitive species to occur at the alignment and measures to protect habitat, including aquatic habitat, and avoid impacts to the species. All personnel working on the alignment shall receive this training, and shall sign a sign-in sheet showing they received the training.

Ohlone Tiger Beetle. Based on the results of species surveys in 2011 by Dr. Arnold, the Ohlone tiger beetle is assumed to be absent in the proposed project alignment and would not likely be impacted by the proposed project, unless conditions along the proposed project alignment change over time such that tiger beetles re-occupy isolated areas along the alignment. If this species is discovered in the project area in the future, however, the following mitigation measures as modified from the Draft O&M HCP (City of Santa Cruz 2012a), and PEIR (ENTRIX 2005) would be implemented to reduce impacts to any subsequently identified Ohlone tiger beetle or Ohlone tiger beetle habitat to less than significant:

Mitigation Measure OTB-1: Preconstruction Survey: A preconstruction survey for the Ohlone tiger beetle shall be conducted by a qualified entomologist within suitable grassland habitat during its active flight period (January 15 to May 30). If individual beetles are identified during the survey, mitigation measures shall be implemented according to OTB-2 through OTB-9 below. If individual beetles are not identified during the survey, no additional mitigation measures will need to be implemented.

Mitigation Measure OTB-2: Locate Project Within Previously Disturbed Areas: To the extent practical, new habitat disturbance shall be minimized by locating components of this project either within the footprint of or adjacent to previously disturbed areas (such as the existing pipeline alignment or roads) or paved areas. Micro-siting of the new pipeline within the project alignment shall be utilized to the extent practical to avoid impacts to active Ohlone tiger beetle larval burrows that are encountered. Alternatively, the City may explore new technologies that would minimize or avoid new ground disturbance.

Mitigation Measure OTB-3: Educational Awareness Training Session for All Construction Workers: Prior to the start of any construction-related activities, a USFWS-approved entomologist shall conduct a training session for all construction personnel. This training shall include a description of the Ohlone tiger beetle life stages that might be encountered by workers, information about its natural history and habitat, and measures to be implemented to avoid and minimize impacts to the beetle and its habitat during all work activities. The training shall also include a discussion of why sensitive habitat areas are fenced and procedures workers will follow if any Ohlone tiger beetle life stages are encountered.

Mitigation Measure OTB-4: Delineate Boundaries of the Impact Area: In portions of the project located on Watsonville loams occupied by the Ohlone tiger beetle, temporary fencing and signs shall be erected before any vegetation clearing or ground disturbing (i.e., excavation, trenching, grading, etc.) activities occur to clearly delineate the boundaries of the project's impact area. Warning signs shall be posted on the temporary fencing to alert equipment operators and other construction workers not to proceed beyond the fence. Protective fencing shall remain in place until all construction and revegetation activities have been completed. Signs shall include the following language: "NOTICE: SENSITIVE HABITAT AREA. DO NOT ENTER."

Mitigation Measure OTB-5: Identify Locations for Refueling, Worker Parking, and Staging Areas Outside of Sensitive Habitat: Whenever possible, locations for refueling, maintenance, and staging of equipment and vehicles shall be situated outside of sensitive habitat areas. Similarly, worker's vehicles shall be parked in designated areas outside of sensitive habitat areas. The City shall ensure that contamination of sensitive habitat does not occur during such operations, including accidental spills. All workers shall be informed of the appropriate procedures to prevent spills and response measures should an accidental spill occur.

Mitigation Measure OTB-6: Relocate Observed Life Stages of Ohlone Tiger Beetles: To avoid the need to relocate adult Ohlone tiger beetles, pipeline construction activities in areas occupied by the species shall not occur during the flight season (January 15 to May 30), unless monitoring surveys indicate that adults are no longer active. If avoidance during the flight season is not practicable, a pre-construction survey shall be

performed by a USFWS-approved entomologist to salvage and relocate any larvae and other life stages of the Ohlone tiger beetle. The approved monitor shall remain onsite during construction activities in occupied habitat to salvage and relocate any Ohlone tiger beetle encountered during construction. If a larva is found in an earthen tunnel, a new tunnel of the same depth shall be created outside of the impact area and the larva placed in it. If suitable habitat is not present adjacent to the impact area, salvaged tiger beetles shall be relocated, subject to USFWS approval, to Pogonip Park in an attempt to reestablish the beetle at this formerly occupied location. The salvaging and relocating of Ohlone tiger beetles will be authorized under Section 7 of the federal Endangered Species Act, which is expected to be authorized under the Biological Opinion issued through the Section 404 permit from the Corps.

Mitigation Measure OTB-7: Dust Control: Dust can clog the spiracles of adult beetles and larvae, the latter which are active throughout much of the year. Appropriate dust control measures, such as periodically wetting down the work areas, shall be used as necessary for any project-related activities that generate dust. Care will need to be exercised to avoid saturating areas supporting life stages of the Ohlone tiger beetle.

Mitigation Measure OTB-8: Revegetation of Coastal Terrace Prairie Habitat: Ohlone tiger beetle adults and larvae prefer patches of bare to sparsely vegetated soil in this grassland habitat. Revegetation of disturbed portions of the project area at locations known to support the Ohlone tiger beetle shall use only grasses and forbs indigenous to the coastal terrace prairie habitat. Also, weed control shall be part of the revegetation activities. Dense ground covers, weed matting, aggregate, and mulch can degrade habitat conditions and shall not be used.

Mitigation Measure OTB-9: Trench Backfilling: All excavated soil shall be retained and used to refill the trench after installation of the new pipeline. To maintain the pre-construction soil profile, soil from the bottom of the trench shall be returned to the trench's bottom. Similarly, top soil shall be redeposited as top soil. No off-site soils or other materials shall be utilized to refill the trench.

Steelhead, Coho Salmon, and Tidewater Goby. Steelhead are known to occur in Majors Creek (Station 52+00, Figure 1, Appendix B) and Baldwin Creek (Station 16+50, Figure 6, Appendix B). Although coho salmon have not been documented in either creek and their potential for occurrence is considered to be low, both creeks are accessible (e.g., no documented migration barriers) and provide potential suitable habitat for this species. Although these two streams meet critical habitat criteria for coho (defined as all river reaches accessible to listed coho), neither Majors nor Baldwin creeks are identified as streams with Focus Populations in the Recovery Plan for coho (NMFS 2012). The tidewater goby is known to occur in the Baldwin Creek Lagoon, downstream of the proposed project alignment (CDFW 2012). The proposed project will likely not directly require work within either Majors Creek or Baldwin Creek as the pipeline will be buried in existing road crossings of these creeks. There is sufficient fill depth over the creek culverts for pipeline construction to occur and construction is not expected to require culvert removal or replacement. Additionally, installation of new pipeline near the 20 linear feet of Baldwin Creek that occurs within the proposed project alignment will occur on agricultural roads above the culverted creek channel (Figure 6, Appendix B). While considered highly unlikely, dewatering could be required for the open trench construction across Little Baldwin and Old Dairy Gulch. The latter would

only occur if the City pursues the second option at Old Dairy Gulch of replacing the existing above ground pipe via open trenching, which is not the preferred option, as identified in the Project Description. Removal of sections of the old pipeline would likely be the only direct impact to streams, and therefore, impacts to special-status fish, if any, would be minimal.

Potential impact considerations for steelhead and coho salmon are primarily related to potential temporary effects during construction: sediment entering the creek, stream dewatering and maintenance of downstream flows, loss of overhead cover, potential increases in stream temperature, and discharge of sediment or contaminants. Construction could also result in temporary minor degradation of tidewater goby habitat due to discharge of sediment or contaminants to Baldwin Creek and to the downstream Baldwin Creek Lagoon where the species is known to occur (CDFW 2012). The project could also affect these species by impacting the turbidity and sedimentation of downstream habitat within the creek channels that may support these species.

The only creek in which directional drilling is proposed is Lombardi Gulch, which may provide suitable habitat but is not known to support special-status fish species, possibly due to a potential barrier to passage at Highway 1. Directional drilling under this creek would avoid the above-mentioned direct impacts. The primary issue for directional drilling is the potential for a frac-out and drilling mud entering the creek. Detailed geologic studies have been conducted to minimize the potential for a frac-out and a contingency plan will be prepared and implemented in case a frac-out occurs. Impacts from the discharge of drilling mud could have more significant impacts and affect a larger area than a more traditional trenching installation.

As stated above, although unlikely, the project may impact special-status fish species, if present. The standard operating procedures (SOPs) and BMPs from the *Draft City of Santa Cruz Habitat Conservation Plan Conservation Strategy for Steelhead and Coho Salmon* (City of Santa Cruz 2011) and the PEIR were used, in part, to develop the mitigation measures below.

Additionally, the following measures modified from the Draft O&M HCP (City of Santa Cruz 2012a) are applicable and in many cases implement or further clarify PEIR and Draft Steelhead and Salmon HCP conditions to reduce the potential impacts to steelhead, coho salmon, tidewater goby, and other aquatic resources to less than significant as discussed above:

Mitigation Measure FISH-1: All refueling, maintenance, and staging of equipment and vehicles shall occur at least 65 feet from any riparian habitat or water body. The City shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the City shall ensure that the contractor has prepared a plan to allow a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.

Mitigation Measure FISH-2: The City shall submit the name(s) and credentials of biologists who would conduct activities specified in the following measures at least 30 days prior to construction to the USFWS, NMFS, and CDFW. No project activities shall begin until the City receives approval from the agencies that the biologist(s) is qualified

to conduct the work.

Mitigation Measure FISH-3: Prior to any on-site work where special-status fish species may occur, an agency-approved biologist shall conduct a tailgate training session in which all construction personnel shall receive training regarding measures that are to be implemented to avoid impacts to special-status fish and associated aquatic habitats. This training shall include a presentation of the potential for the designated species to occur at the alignment and measures to protect habitat, including aquatic habitat, and to avoid impacts to the species. All personnel working on the alignment shall receive this training, and shall sign a sign-in sheet showing they received the training.

Mitigation Measure FISH-4: Each morning before work begins at Majors Creek and Baldwin Creek, an agency-approved biologist shall survey the work site and habitat immediately surrounding the work site for conditions that could impact steelhead, coho salmon, or tidewater goby and shall remain on-site whenever work is occurring in these locations. No work shall be allowed to begin each morning until the monitor has inspected the work site in these locations.

Mitigation Measure FISH-5: To protect water quality, water pumped from construction areas shall be discharged into a basin created out of straw bales lined with filter fabric.

Mitigation Measure FISH-6: To reduce the potential for erosion after work is completed, disturbed areas within the alignment shall be decompacted and revegetated with an appropriate assemblage of native riparian, wetland, and upland vegetation suitable for the area. Planted material shall include native seed mixes, pole cuttings, or container stock as appropriate. All seed and plant sources shall be approved by the California Department of Parks and Recreation Senior Environmental Scientist.

Mitigation Measure FISH-7: Stream contours shall be returned to the original condition at the end of project activities, unless consultation with the USFWS, NMFS, and CDFW has determined that it is not beneficial to the species or feasible.

Mitigation Measure FISH-8: To control erosion during and after project implementation, the applicant shall implement best management practices, including:

- Install straw wattles/silt fencing to break up and filter surface runoff.
- Install rice straw, jute netting, or native duff to cover bare soil after work is completed except in Ohlone tiger beetle (coastal terrace prairie) habitat. Avoid use of plastic mesh netting at all sites, as this can entrap native animals such as snakes.
- Install exclusion fencing to prevent heavy equipment from entering muddy/unstable areas.
- Install rolling dips and revegetation on accessways utilized for repairs.
- Install energy dissipators on pump/dewatering equipment outlets.
- Revegetate with site-specific native materials, where appropriate.

- Conduct activities outside of the channel whenever feasible by timing work to the low flow season or by utilizing equipment or methods that do not require access in the channel.
- Conduct instream activities in Majors and Baldwin creeks (if necessary) during the low flow season (June 15 through October 15 depending on the weather conditions) unless that conflicts with seasonal restrictions in other species-specific measures presented elsewhere in this report.
- Conduct instream activities in Little Baldwin Creek, Old Dairy Gulch, Lombardi Gulch, and un-named streams during the low flow season between April 1 and November 1 (depending on the weather conditions) unless these dates conflict with seasonal restrictions in other species-specific measures presented elsewhere in this report.
- Avoid disturbance of retained riparian/wetland vegetation where practicable.
- Utilize "floating" platforms for mobilization of heavy equipment in saturated soil conditions, as appropriate.
- Repair by high-lining high-density polyethylene pipeline to ensure longevity of pipeline repairs and to avoid site disturbance/unnecessary excavation and subsequent erosion impacts. Where placing pipeline in trench is not feasible because of topographic features, the pipeline shall be elevated on piers above ground, as opposed to placement directly on the ground, to avoid potential for creating a barrier to movement/habitat use by species.
- Limit removal of riparian vegetation to pruning/trimming where practicable.
- Minimize excavation in the active stream channel to that which was historically permitted.
- Isolate channels from flowing water through temporary bypass before beginning work (i.e. aquadam, coffer dam, etc.).
- Store construction and erosion control materials outside of the stream channel and cover loose soils/excavations during non-work hours and wet periods.

Mitigation Measure FISH-9: An agency-approved biologist or biological monitor shall remove from within the proposed project alignment in or near creeks and drainages, any individuals of exotic species that are encountered, such as bullfrogs, crayfish, and centrarchid fishes to the extent practicable.

Mitigation Measure FISH-10: Upon locating individuals of federally listed special-status animal species that are dead or injured as a direct result of activities conducted by the City, initial notification shall be made within three working days of its finding to the appropriate responsible agency for the species: Ventura Fish and Wildlife Office at (805) 644-1766; NMFS Southwest Region at (582) 980-4000; and CDFW Bay-Delta Region at (707) 944-5500 if the species is also State-listed. Written notification shall be made within five calendar days and shall include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information. If necessary, the City shall work with the applicable agencies to locate contacts for the deposition of dead insects and other species.

Mitigation Measure FISH-11: Prior to any instream work in the bed and banks of creeks that requires the construction of cofferdams or dewatering of the creek bed, a stream diversion plan shall be prepared by a qualified biologist after consultation with NMFS and CDFW, and per an approved LSAA. The stream diversion plan shall require that: (1) a qualified fisheries biologist be present during the closing and dewatering of all cofferdams; (2) a qualified fisheries biologists collect, handle, and relocate fish in dewatered areas; and (3) all pump intakes are screened according to CDFW and NMFS criteria. Construction specifications shall incorporate the terms of the stream diversion plan.

Diversion and routing of the stream channel to a temporary diversion channel to allow construction work in the existing channel shall be supervised by the qualified fisheries biologist after consultation with NMFS and CDFW, consistent with any terms imposed by those two agencies pursuant to their regulatory authorities under the FESA and/or Section 1602 of the California Fish and Game Code. The diversion and routing shall not disrupt the connectivity of the upstream reaches with the lower reaches of the creek. The existing channel shall remain untouched until the temporary diversions are constructed and the erosion control measures are in place. Diversion channels shall be opened from the downstream end first; and only clean washed material shall be used to close existing channels to divert water to temporary diversion channels. The temporary diversion channel shall be designed to accommodate the flow of expected storm events, and have gradient controls to ensure that diversion channel slopes correspond to the existing channel gradients.

Mitigation Measure FISH-12: This mitigation measure applies to Lombardi Gulch where directional drilling is proposed in order to reduce potential construction impacts in the creek and riparian corridor. Prior to construction, a drilling-fluids management and response plan shall be prepared to address the potential for fluid releases. The plan shall include but not be limited to the following measures:

- Conducting a pre-construction geologic study to examine the work area to determine soil types, ground conditions, and appropriate construction procedures;
- Isolating the work area with siltation fencing so that any fluid leaks are contained within a controlled area;
- Maintaining materials and equipment on site to allow for the cleanup of any leak that may occur;
- Constantly monitoring the work site by having inspector(s) maintain constant radio contact with equipment operators;
- If a fluid leak does occur, the contractor shall stop work immediately and assess the nature of the leak. Remedial actions shall be implemented and may include spot cleanup with adsorbent materials, or sub-containment of a localized area for the duration of the work.
- Once construction is complete, the site shall be restored to existing conditions.

The City shall include the requirement for a drilling fluids management and response plan in construction specifications and bid document for the construction contractor, and shall ensure its implementation during construction.

Mitigation Measure FISH-13: Required clean-up and remediation materials shall be stored and available at each drilling site for immediate containment and clean-up response.

California Red-legged Frog. California red-legged frogs may occur in all vegetation communities, including agricultural areas, along the entire route; however, they are most likely to occur within the coastal scrub, mixed evergreen forest, and riparian habitats in or adjacent to the creek channels, larger drainages, and irrigation ponds on or near the alignment. Specifically, this core red-legged frog habitat within or adjacent to the alignment occurs within:

- The channel and surrounding natural vegetated habitat (i.e., riparian forest and scrub, grassland, scrub) in the vicinity of Majors Creek and two vegetated drainages between Station 44+50 and 61+00 (Figures 1-2, Appendix B);
- Little Baldwin Creek, the irrigation pond, and surrounding natural vegetated habitat between Stations 81+00 and 84+00 (Figure 4, Appendix B);
- Baldwin Creek and surrounding natural vegetated habitat between Stations 16+00 and 25+00 (Figure 6, Appendix B);
- The drainage channel, seasonal wetlands, and surrounding natural vegetated habitat between Stations 31+00 and 42+50 of the railroad alignment (Figures 7-8, Appendix B);
- The drainage channel and surrounding natural vegetated habitat north of Stations 31+00 to 38+00 of the railroad alignment (Figure 9, Appendix B);
- The irrigation pond and surrounding natural vegetated habitat between Stations 138+00 and 145+00 (Figure 10, Appendix B);
- Lombardi Gulch and surrounding natural vegetated habitat between Stations 147+50 and 160+00 (Figures 10-11, Appendix B);
- The natural vegetated habitat in the vicinity of the irrigation pond between Stations 179+00 and 191+00 (Figure 13, Appendix B); and
- Old Dairy Gulch and surrounding natural vegetated habitat between Stations 207+00 and 218+00 (Figure 15, Appendix B).

The following mitigation measures and General Minimization and BMPs as modified from the Draft O&M HCP (City of Santa Cruz 2012a) shall be implemented to avoid and minimize impacts to California red-legged frogs. The potential impacts include direct impacts to red-legged frogs during construction-related activities and temporary impacts to red-legged frog habitat, most of which occurs in the vicinity of the creeks, drainages, irrigation ponds, and riparian forest and scrub. These impacts could occur anywhere within the proposed project alignment but are more likely to occur near these habitat areas. The mitigation measures are applicable to both directional drilling and conventional trenching operations and also implement the applicable PEIR measures for impacts to the California red-legged frog and when implemented, will reduce potential impacts to California red-legged frogs to less than significant:

Mitigation Measure CRLF-1: The City shall submit the name(s) and credentials of biologists who would conduct activities specified in the following measures at least 30

days prior to construction to the USFWS and CDFW. No project activities shall begin until the City receives approval from the agencies that the biologist(s) is qualified to conduct the work.

Mitigation Measure CRLF-2: An agency-approved biologist shall conduct a pre-construction California red-legged frog survey of each work area of the alignment within 48 hours prior to the onset of activities. If California red-legged frogs, tadpoles, or eggs are found, the approved biologist shall determine the closest appropriate relocation site. The approved biologist shall be allowed sufficient time to move them from the alignment before work activities begin. Only agency-approved biologists shall participate in activities associated with the capture, handling, and moving of California red-legged frogs. The handling of California red-legged frogs will be authorized under Section 7 of the federal Endangered Species Act, which is expected to be authorized under the Biological Opinion issued through the Section 404 permit from the Corps.

Mitigation Measure CRLF-3: Before any activities begin on a project, an agency-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the California red-legged frog and its habitat, the importance of the California red-legged frog and its habitat, general measures that are being implemented to protect the California red-legged frog as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

Mitigation Measure CRLF-4: An agency-approved biologist shall be present at the proposed project alignment until such time as all removal of California red-legged frogs, instruction of workers, and disturbance of core aquatic and riparian habitat areas and establishment of a 100-foot buffer has been completed. After this time and in agricultural and upland areas more than 100 feet from of core habitat areas, the contractor or City shall designate a person to monitor on-site compliance with all mitigation measures and any future staff training. The agency-approved biologist shall ensure that this individual receives training outlined in measure CRLF-3 above and in the identification of California red-legged frogs. The monitor and the agency-approved biologist shall have the authority to stop work if California red-legged frogs are in harm's way.

Mitigation Measure CRLF-5: The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated, and these areas shall be outside of riparian and wetland areas to the extent practicable. Where impacts occur in these staging areas and access routes, restoration shall occur as identified in the general BMP measures above.

Mitigation Measure CRLF-6: In core riparian and aquatic habitats, work activities shall be completed between April 1 and November 1. The City shall coordinate with the USFWS on a case-by-case basis prior to conducting such activities, outside of this time period.

In uplands, ground-disturbance, mechanical clearing of vegetation, and associated work activities shall be conducted between June 1 and November 1 or until the first fall

rain that produces 0.25 inch of rainfall, unless preconstruction surveys have been conducted and California red-legged frogs are shown to be absent from the site and the site boundary is fenced to preclude California red-legged frogs from moving onto the site. Alternatively, an agency-approved biological monitor shall be present during all active construction activities to survey and clear the construction site continuously as pipeline construction progresses during the wet season.

Mitigation Measure CRLF-7: If the alignment is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 5 millimeters to prevent California red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the least disturbance to the substrate.

Mitigation Measure CRLF-8: The Declining Amphibian Populations Task Force's Fieldwork Code of Practice shall be followed to minimize the possible spread of chytrid fungus or other amphibian pathogens and parasites. This measure is applicable to any construction personnel and equipment as well as biological monitors and shall require equipment and personal gear such as work boots that come in contact with water in any waterway be disinfected prior to use in another waterway. Compliance with this measure shall require establishing decontamination procedures and stations at each creek area.

Mitigation Measure CRLF-9: During project activities, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.

Mitigation Measure CRLF-10: Prior to the commencement of work, the limits of the work area shall be clearly marked with orange construction fencing to prevent workers from impacting habitat outside the work area. No work shall occur outside the designated marked work area.

Mitigation Measure CRLF-11: Each morning before work begins, a qualified monitor, as defined in CRLF-4 above, shall survey the work site and habitat immediately surrounding the work site for conditions that could impact red-legged frogs and other special-status species, and shall remain on-site whenever work is occurring. No work shall be allowed to begin each morning until the monitor has inspected the work site.

Mitigation Measure CRLF-12: Upon locating individuals of California red-legged frogs (or other special-status species) that are dead or injured as a direct result of activities conducted by the City, initial notification shall be made to the Ventura Fish and Wildlife Office at (805) 644-1766 within three working days of its finding. Written notification shall be made within five calendar days and shall include the date, time, and location of the carcass, a photograph, cause of death, if known, and any other pertinent information. Written notification shall be sent to the Ventura Fish and Wildlife Office at 2493 Portola Road Suite B, Ventura, California 93003. Dead California red-legged frogs may be placed with the California Academy of Sciences. If necessary, the City shall

work with the USFWS to locate contacts for the deposition of dead insects and other species.

In addition to the above measures, the stream and riparian habitat protection measures FISH-1 and FISH-5 through FISH-8 as described above for steelhead, coho salmon, and tidewater goby, and WET-1 through WET-3 as described below for wetlands, are also applicable to minimize impacts to California red-legged frogs at the described locations.

Western Pond Turtle. Western pond turtles may occur within the natural vegetated habitat in or adjacent to the creek channels, larger drainages, and irrigation ponds on or near the alignment. The suitable western pond turtle habitat within the alignment occurs within the same streams, ponds, and riparian habitat as described for California red-legged frogs above.

The following mitigation measures as modified from the Draft O&M HCP (City of Santa Cruz 2012a) should be implemented to reduce impacts to western pond turtles to less than significant:

Mitigation Measure WPT-1: The City shall submit at least 30 days prior to construction the name(s) and credentials of biologists who would conduct activities specified in the following measures to the CDFW for approval. No project activities shall begin until the City has received approval from the CDFW that the biologist(s) is qualified to conduct the work.

Mitigation Measure WPT-2: An agency-approved biologist shall survey the alignment 48 hours prior to the onset of activities. If western pond turtle adults, juveniles, or eggs are found, the approved biologist shall determine the closest appropriate relocation site. The approved biologist shall be allowed sufficient time to move them from the alignment before work activities begin. Only agency-approved biologists shall participate in activities associated with the capture, handling, and moving of western pond turtles.

Mitigation Measure WPT-3: Before any activities begin on a project, an agency-approved biologist shall conduct a training session for all construction personnel. At a minimum, the training shall include a description of the western pond turtle and its habitat, the importance of the western pond turtle and its habitat, general measures that are being implemented to conserve the western pond turtle as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books, and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

Mitigation Measure WPT-4: An agency-approved biologist shall be present at the alignment until such time as all removal of western pond turtles, instruction of workers, and disturbance of habitat have been completed. After this time, the contractor or City shall designate a person to monitor on-site compliance with all mitigation measures. The agency-approved biologist shall ensure that this individual receives training outlined in measure WPT-3 and in the identification of the western pond turtle. The monitor and the agency-approved biologist shall have the authority to stop work if western pond turtles are observed in harm's way.

Mitigation Measure WPT-5: The number of access routes, number, and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated, and these areas shall be outside of riparian and wetland areas to the extent practicable. Where impacts occur in these staging areas and access routes, restoration shall occur as identified in measures FISH-6 and FISH-8.

Mitigation Measure WPT-6: Work activities within or adjacent to creek channels, ponds, and riparian areas shall be completed between April 1 and November 1 to the extent practicable. Should the City need to conduct activities outside this period, the City shall conduct such activities after providing notification to the CDFW.

Burrowing Owl. Project construction may impact nesting and/or wintering burrowing owls if occupied burrows are present within or adjacent to the project alignment. While no burrowing owls or evidence of owls were observed during the surveys for the proposed project, burrowing owls could occur in mammal burrows, culverts, or other suitable burrow sites within the agriculture, non-native grassland/ coastal terrace prairie, and ruderal/ landscaped/ ornamental habitat types.

Protocol-level surveys should be conducted for burrowing owls prior to construction activities to determine presence or absence. These surveys should conform to the survey protocol established in the Staff Report on Burrowing Owl Mitigation (Staff Report) (CDFG 2012) and would need to be conducted regardless of the time of year. Burrowing owls could nest or winter in the ruderal/disturbed non-native grassland and agricultural habitat on and adjacent to the proposed project alignment. The following mitigation measures are consistent with the provisions of the MBTA and the Staff Report. Implementation of the following measures will reduce potential impacts to burrowing owl to less than significant:

Mitigation Measure BO-1: The City shall submit the name(s) and credentials of biologists who would conduct activities specified in the following measures at least 30 days prior to construction to the CDFW for approval. No project activities shall begin until the City has received approval from CDFW that the biologist(s) is qualified to conduct the work.

Mitigation Measure BO-2: No more than 14 days prior to any ground disturbing activities, a qualified biologist shall conduct a protocol-level survey for burrowing owls. If no owls are found during this first survey, a final survey shall be conducted within 24 hours prior to ground disturbance to confirm that burrowing owls are still absent. If ground disturbing activities are delayed or suspended for more than 14 days after the initial survey, the alignment shall be resurveyed (including the final survey within 24 hours of disturbance). All surveys shall be conducted in accordance with CDFW guidelines (CDFG 2012).

Mitigation Measure BO-3: If burrowing owls are found within the alignment during the surveys, 250-foot wide breeding season buffers and 160-foot wide non-breeding season buffers shall be established. If the surveys identify breeding activity, no construction-related activity (e.g., site grading, staking, surveying, any use of construction equipment) shall occur in the exclusion zone during the breeding season

or until the young have fledged. Standard construction buffer widths may be reduced in accordance with the following requirements:

- A site-specific analysis prepared by an Approved Biologist indicates that the nesting pair(s) or wintering owl(s) would not be adversely affected by construction activities. The County and CDFW must approve this analysis in writing before construction can proceed.
- Monitoring by an Approved Biologist is conducted for a sufficient time (during all construction activities for a minimum of 10 consecutive days following the initiation of construction), the nesting pair does not exhibit adverse reactions to construction activities (e.g., changes in behavioral patterns, reactions to noise), and the burrows are not in danger of collapse due to equipment traffic.
- Monitoring is continued at least once a week through the nesting/wintering cycle at that site, and no change in behavior by the owls is observed. This longer-term monitoring may be reduced to a minimum of 2 hours in the morning and 2 hours in the afternoon during construction activities; however, additional and more frequent monitoring shall be required if any adverse reactions are noted.

Where avoidance is not feasible during the non-breeding season, a site-specific exclusion plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) may be implemented to encourage owls to move away from the work area prior to construction and to minimize the potential to affect the reproductive success of the owls. The exclusion plan shall be subject to CDFW approval and monitoring requirements.

Other Nesting Birds. The proposed project may impact special-status nesting birds and other nesting birds that are protected by the MBTA and California Fish and Game Code. Suitable nesting habitat is present along the entire pipeline alignment and includes trees, shrubs, grasslands and other ground surfaces, and buildings within any of the land cover types/habitat communities that occur within or adjacent to the proposed project alignment, including the agricultural and developed areas. The following measures shall be implemented to minimize and avoid impacts to nesting birds:

Mitigation Measure NB-1: The project shall avoid vegetation removal during the bird nesting season (February 1 through August 31), to the extent feasible. For construction activities during the nesting season, a qualified biologist shall conduct a preconstruction survey of the alignment within 14 days of the start of construction activities. All trees, shrubs, or other suitable nesting habitat within 250 feet of the project alignment shall be searched for nests during the preconstruction survey. If the survey indicates the presence of nesting birds, protective buffer zones shall be established around the nests as follows: for raptor nests, the size of the buffer zone should be a 250-foot radius centered on the nest; for other birds, the size of the buffer zone should be a 50-foot radius centered on the nest. In some cases, these buffers may be increased or decreased depending on the bird species and the level of disturbance that will occur near the nest. Changes to the buffer shall be made by the project biologist in consultation with CDFW.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Potentially Significant Unless Mitigation Incorporated. Up to approximately 0.57 acre of riparian forest and scrub habitat may be temporarily impacted in the proposed project alignment at:

- Stations 60+50 to 61+00 (Figure 2, Appendix B);
- Station 82+00 (Figure 4, Appendix B);
- Stations 18+00 to 19+00 (Figure 6, Appendix B);
- Along the railroad alignment with no designated station numbers (north of Stations 31+00 to 38+00 of the regular project alignment (Figure 9, Appendix B);
- Station 151+00 (Figure 11, Appendix B);
- Stations 156+00 to 158+00 (Figure 11, Appendix B); and
- Stations 210+50 to 214+50 (Figure 15, Appendix B). Impacts to riparian forest and scrub habitat would only occur if the pipeline is replaced through open-trench construction, which is not the preferred option.

Although 0.57 acre of riparian forest and scrub habitat occurs within the proposed project alignment, reduced-width trenching and trenchless pipeline installation would reduce the impacted area within this habitat type. Any construction in riparian forest and scrub habitat that does occur will likely require a LSAA from CDFW. Impacts resulting in loss of vegetation will likely require mitigation by restoring the riparian vegetation within and/or outside of the proposed project alignment.

The following measures modified from the Draft O&M HCP (City of Santa Cruz 2012a) shall be implemented for the proposed project construction to reduce impacts to riparian forest and scrub habitat to less than significant:

Mitigation Measure RIP-1: Above ground construction activities in riparian areas shall be limited to April 15 to October 15 except where work windows are more restricted based on special-status species considerations.

Mitigation Measure RIP-2: The City shall prepare and implement a plan to re-establish riparian habitat within the 800 linear feet abandoned pipeline segments where above-grade pipe is removed and work areas within the proposed project alignment that extend beyond required maintenance access areas. All native, woody vegetation greater than 1 inch in diameter that is removed as a result of the above activities shall be replaced by establishing native woody vegetation at a 3:1 ratio. This ratio represents the number of native trees and shrubs that shall become established in the riparian mitigation area through direct planting and/or natural recruitment by monitoring year 5. The riparian habitat restoration plan shall be approved by the California Department of Parks and Recreation Senior Environmental Scientist prior to implementation.

Up to 0.91 acre of coastal scrub and 0.03 acre of non-native grassland/coastal terrace prairie habitat may be impacted within the proposed project alignment. Both of these

habitats are considered to be sensitive habitats. The coastal scrub habitat is spread throughout the proposed project alignment (see figures in Appendix B), while the non-native grassland/ coastal terrace prairie within the alignment occurs near the Graniterock Wilder Sand Quarry (Figure 15, Appendix B).

The following measures modified from the Draft O&M HCP (City of Santa Cruz 2012a) shall be implemented for the proposed project construction to reduce potential impacts to coastal scrub and non-native grassland/ coastal terrace prairie habitat to less than significant:

Mitigation Measure S/TP-1: Identify locations for refueling, worker parking, and staging areas in designated areas outside of sensitive habitat whenever possible. The City shall ensure that contamination of sensitive habitat does not occur during such operations, including accidental spills. All workers shall be informed of the appropriate procedures to prevent spills and response measures should an accidental spill occur.

Mitigation Measure S/TP-2: Revegetation of coastal scrub and coastal terrace prairie habitat: revegetation of disturbed portions of the project alignment within these habitat areas shall use only grasses and forbs indigenous to these habitats. Also, weed control shall be part of the revegetation activities. Dense ground covers, weed matting, aggregate, and mulch can degrade habitat conditions and shall not be used. The California Department of Parks and Recreation Senior Environmental Scientist shall approve the revegetation plan and material list prior to implementation.

Mitigation Measure S/TP-3: All excavated top soil shall be retained and used to cover the trench after installation of the new pipeline.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Potentially Significant Unless Mitigation Incorporated. Potential waters of the United States, State, and/or California Coastal Act (CCA) wetlands occur within the vicinity of the proposed project alignment. These features include creeks, drainages, certain agricultural ditches, a freshwater pond, seasonal wetlands, and seep wetlands. Specifically, these potentially jurisdictional features include:

- Majors Creek (Station 51+50, Figure 1, Appendix B);
- Little Baldwin Creek (Station 82+00, Figure 4, Appendix B);
- Baldwin Creek (Station 16+50, Figure 6, Appendix B);
- Lombardi Gulch (Station 151+00, Figure 10, Appendix B);
- Old Dairy Gulch (Station 212+50, Figure 15, Appendix B);
- The freshwater pond that connects to Little Baldwin Creek north of Highway 1 (Station 82+00, Figure 4, Appendix B);

- Approximately 0.55 acre of potentially jurisdictional and non-jurisdictional seasonal wetlands and 0.26 acre of potentially jurisdictional seep wetlands that occur within the proposed project alignment or study corridor:
    - Potentially jurisdictional seasonal wetland in the study corridor at Station 83+50 (Figure 4, Appendix B);
    - Potentially non-jurisdictional seasonal wetlands between Stations 3+00 and 10+00 of the railroad alignment (Figure 5, Appendix B);
    - Potentially non-jurisdictional seasonal wetlands between Stations 35+50 and 43+00 of the railroad alignment (Figures 7 and 8, Appendix B);
    - Potentially non-jurisdictional seasonal wetlands along the railroad alignment south of Stations 133+50 to 138+00 of the proposed project alignment (Figures 7 and 8, Appendix B);
    - Potentially jurisdictional seep wetland north of Stations 34+00 and 36+00 of the railroad alignment (Figure 9, Appendix B);
    - Four potentially jurisdictional seep wetlands between Stations 148+00 and 151+50 (Figure 10, Appendix B);
    - Potentially jurisdictional seep wetland at Station 213+50 (Figure 15, Appendix B); and a
    - Potentially jurisdictional seasonal wetland in the study corridor at the Graniterock Wilder Sand Quarry northwest of Station 218+50 (Figure 15, Appendix B).
- Eight vegetated ditches/drainages that occur within the proposed project alignment or study corridor:
    - The drainage at Stations 44+50 to 49+00 (Figure 1, Appendix B);
    - The drainage at Station 60+50 and associated culvert from the crossing under Highway 1 (Figure 2, Appendix B);
    - The agricultural ditch at Stations 61+00 to 81+00 (Figures 3-4, Appendix B);
    - The drainage at Station 64+50 and associated culvert for the crossing under Highway 1 (Figure 3, Appendix B);
    - The drainage along the railroad tracks between Stations 9+50 to 17+00 of the railroad alignment (Figures 5-6, Appendix B);
    - The drainage that crosses through a culvert approximately 40-50 feet below the railroad alignment at Station 32+00 (Figure 7, Appendix B);
    - The drainage north of Stations 34+50 to 38+00 of the railroad alignment (Figure 9, Appendix B); and
    - The drainage at Stations 153+00 to 166+00 (Figure 11, Appendix B).

The concrete-lined “v” ditches are likely non-jurisdictional because they were constructed in upland habitat in order to provide roadside drainage along Highway 1 and do not exhibit wetland characteristics, such as wetland soils and hydrophytic vegetation. These “v” ditches include:

- Ditches that flow into Little Baldwin Creek at Stations 80+00 to 84+00 (Figure 4, Appendix B);
- Ditch from 89+00 to 91+50 (Figure 5, Appendix B);
- Ditches on north side of Highway 1 north of Stations 36+00 to 38+00 of the railroad alignment (Figure 9, Appendix B);
- Ditches on north side of Highway 1 at Stations 166+00 to 169+00 (Figure 12, Appendix B);
- Ditch at Stations 178+00 to 187+00 (Figure 13, Appendix B);
- Ditches at Stations 192+50 to 199+00 (Figure 14, Appendix B); and
- Ditch at Stations 203+50 to 208+50 (Figure 14, Appendix B).

In addition to the concrete-lined "v" ditches, the constructed ditch at Stations 203+50 to 207+00 (Figure 14, Appendix B) is likely non-jurisdictional. This ditch was constructed on upland habitat in order to provide roadside drainage along an agricultural road. Although portions of this ditch may exhibit wetland characteristics, it appears to be isolated and to not connect to jurisdictional features.

The irrigation pond situated within the study corridor between Stations 142+50 and 143+50 (Figure 10, Appendix B) is also likely exempt from Section 404 and 401 jurisdiction and the County's LCP because it is constructed on upland habitat, not connected to jurisdictional waters, and/or is currently being used for agricultural purposes.

The proposed project may impact potentially jurisdictional waters of the United States and/or waters of the State. A preliminary wetland delineation was completed in May 2014. Approximately 0.14 acre of seasonal wetlands and 0.1 acre of seep wetlands may be impacted within the project alignment, but some of these areas may be avoided by limiting construction to a 20-foot width. The approximate 0.14 acre of these seasonal wetlands, which are likely non-jurisdictional, occurs along the railroad alignment; these wetlands will likely be avoided by limiting construction to a 20-foot width within the roads adjacent to the agricultural and railroad operations (Figures 5-8, Appendix B). Ditches and drainages within the full width trenching areas, creeks and ditches within the reduced width trenching areas, and drainages and creeks within the abandoned and removed pipeline areas occur within the area of potential impact within the proposed project alignment (see figures in Appendix B). Areas with directional drilling and jack and bore are not likely to impact any of the creeks and drainages. Although likely avoided, especially in areas with reduced-width trenching, the proposed project may impact up to approximately 0.041 acre of these potentially jurisdictional creeks, drainages, and ditches and 0.232 acre of non-jurisdictional ditches and culverts as listed in Table D below. Permit requirements for impacts to these features vary depending on the construction approach and associated work activities at each regulated area.

Table D: Approximate Area of Impact to Potentially Jurisdictional Creeks, Drainages, Ditches, and Culverts within the Proposed Project Alignment

Potentially Jurisdictional Creek, Drainage, or Ditch	Linear Feet	Estimated Average Width	Approximate Square Feet (sf)/Acres
Baldwin Creek	67	7.5	503 sf/ 0.012 acre
Little Baldwin Creek	20	8	160 sf/ 0.004 acre
Lombardi Gulch	20	6.5	130 sf/ 0.003 acre
Majors Creek	43	8	344 sf/ 0.008 acre
Old Dairy Gulch	20	6	120 sf/ 0.003 acre
Un-named Stream	29	6	174 sf/ 0.004 acre
Ditches	68	3	204 sf/ 0.004 acre
Culverts	36	4	144 sf/ 0.003 acre
Total	**303**	**---**	**1,779 sf/ 0.041 acre**
Total Non-jurisdictional Ditches and Culverts	**4,051**	**2.5**	**10,128 sf/ 0.232 acre**

Note: The average width and total acreage of these features is estimated based on a preliminary wetland delineation and should be considered preliminary until the wetland delineation is verified by the Corps (see below).

The preliminary wetland delineation will be submitted to the Corps and verified by the Corps as the formal jurisdictional determination to officially document the extent of potentially jurisdictional features within the impacted areas of the proposed project alignment. The formal jurisdictional determination will be required for filing an application to the Corps. Activities resulting in the placement of fill in jurisdictional features will require permits from the Corps, RWQCB, CDFW, and County, including preparation and implementation of a Mitigation and Monitoring Plan.

The specific permit required for the project depends on the type of the construction work that is conducted within a jurisdictional feature, as described below:

- Construction work requiring digging/trenching or other activities resulting in the placement of more than incidental fallback of fill within a seasonal wetland or jurisdictional stream/tributary will require a permit from the Corps and a water quality certification from the RWQCB will be required. The project should be suitable for authorization under existing Nationwide Permit (NWP) 12 for Utility Line Activities. Directional drilling or other subsurface construction under Lombardi Gulch and some of the other drainages would not trigger the need for CWA Section 404 or 401 permits from these agencies.
- Any construction work that requires digging, trenching, tunneling/directional drilling under or otherwise modifying the bed or bank and associated riparian vegetation of a stream channel or jurisdictional vegetated ditch will additionally require a LSAA from the CDFW.

In addition to the need to obtain a jurisdictional determination and prepare regulatory permit applications, the PEIR (ENTRIX 2005) requires seasonal restrictions to be implemented to reduce the potential impacts to wetlands during construction. The following measures implement the PEIR requirements and reduce the potential temporary impacts to approximately 0.041 acre of potentially jurisdictional creeks, drainages, and ditches; 0.232 acre of non-jurisdictional ditches and culverts; 0.14 acre

of potentially jurisdictional seasonal wetlands; and 0.1 acre of potentially jurisdictional seep wetlands to less than significant:

Mitigation Measure WET-1: In perennial streams, construct stream crossings or remove old pipes during the low flow season (approximately June 15 through October 15 depending on the weather conditions). This measure applies to the following waterways:

- Little Baldwin Creek, Station 82+00 (Figure 4, Appendix B);
- Lombardi Creek, Station 151+00 for pipe removal (Figure 10, Appendix B); and
- Old Dairy Creek, Station 212+50, only if the pipeline is replaced through open-trench construction, which is not the preferred option (Figure 15, Appendix B).

In ephemeral streams,[10] construct stream crossings when there is no flow. Impacts to some of these streams shall be avoided during construction through reduced-width trenching, if possible, but may occur if avoidance is not possible. The intent of this measure is for it to apply to streams or other regulated tributaries with ephemeral to intermittent flows at the following locations:

- Drainage, Stations 60+50 (Figure 2, Appendix B);
- Drainages, Stations 61+00 to 81+00 (Figures 3-4, Appendix B);
- Drainage, north of Stations 34+50 to 38+00 of the railroad alignment (Figure 9, Appendix B); and
- Drainage, Stations 153+00 to 166+00 (Figure 11, Appendix B).

Mitigation Measure WET-2: All disturbed work areas in wetlands shall be returned to its approximate pre-construction profile to ensure that flow patterns are unaltered. The upland areas in the right-of-way shall also be recontoured to restore original grades, elevations, and flow patterns into wetlands.

Mitigation Measure WET-3: The City shall prepare and implement a plan to re-establish wetlands or waters that are temporarily impacted during construction. The plan at a minimum shall include provisions for:

- Salvage, stockpiling and replacement of the top 6 to 10 inches of soil (or the depth 50 percent of more roots for the dominant native wetland species) and reseeding of the disturbed soils with appropriate native grasses and forbs;
- Periodic maintenance to remove/control establishment of highly invasive exotic plant species as classified by California Invasive Plant Council (Cal-IPC; http://www.cal-ipc.org/) for a minimum of three years;

[10] The terms ephemeral as used in the PEIR do not appear to reflect Corps regulatory definitions for steam flow. The Corps also defines ephemeral streams has having flowing water only during, and for a short duration after precipitation events in a typical year. Ephemeral stream beds are located above the water table year-round and groundwater is not a source of water for the stream. The term intermittent is a more applicable regulatory description of the stream flow in the non-perennial tributaries as it is likely that groundwater contributes to stream flow.

- A description of performance criteria which shall include at a minimum standards for no net loss of wetland acreage and percent cover for native species and total wetland species based on achieving equal to or greater cover than pre-project conditions; and
- A minimum three-year monitoring program to document progress toward achieving appropriate performance criteria. At a minimum, there shall be no loss of wetland acreage.

Measures FISH-1, FISH-5, FISH-6, FISH-7, and FISH-8 are also applicable to these wetland habitats.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

Potentially Significant Unless Mitigation Incorporated. Construction activities would not be conducted at night and therefore, night safety lighting would not cause temporary disruptions of wildlife movement or increased predation of species as a result of such lighting. Open trenches could, however, impede or block normal wildlife movement. These potential impacts mostly apply to the stream channels and adjacent habitat because these areas are where red-legged frogs and other species are more likely to move through the project alignment. Special-status species, including California red-legged frogs, and common wildlife species, however, could occur and move throughout the project pipeline, but stream and associated riparian habitat are the movement corridors that would more likely be used by wildlife. The following measures shall be implemented to reduce these impacts to less than significant:

Mitigation Measure MOV-1: Open trenches shall be limited to the maximum necessary for efficient construction.

Mitigation Measure MOV-2: A qualified, agency-approved biologist shall inspect any trench segments left open overnight and remove any stranded animals to safe locations away for the proposed project alignment.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Potentially Significant Unless Mitigation Incorporated. As indicated previously, the proposed project, which is a public project being undertaken by the SCWD, will be subject to the policies, requirements, standards and conditions of the General Plan and the County's LCP, given its location in the Coastal Zone (Section 13.20.150 of the Santa Cruz County Code). Therefore, the proposed project will need to comply with Chapter 16.30 Riparian Corridor and Wetland Protection, Chapter 16.32 Sensitive Habitat Protection, and Chapter 16.34 Significant Tree Protection. Project conformance and/or potential conflicts with these ordinances are further described below.

Riparian Corridor and Wetland Protection. The Riparian Corridor and Wetland Protection ordinance seeks to minimize and eliminate any development activities in riparian corridors and to protect wildlife habitat, water quality, open space and other resource values, and floodways, as well as to implement the policies of the General

Plan and LCP (Section 16.30.010). Development activities, land alteration, and vegetation disturbance in the riparian habitat located along the proposed project alignment, as identified in Impact (b) above, would be prohibited unless a riparian exception is granted per Section 16.30.060. As a condition of the riparian exception, the City would need to provide evidence of approval for development from the Corps, CDFW, and RWQCB. Additionally, the County must make a series of findings to approve an exception, including:

1. That there are special circumstances or conditions affecting the property;
2. That the exception is necessary for the proper design and function of some permitted or existing activity on the property;
3. That the granting of the exception will not be detrimental to the public welfare or injurious to other property downstream or in the area in which the project is located;
4. That the granting of the exception, in the Coastal Zone, will not reduce or adversely impact the riparian corridor, and there is no feasible less environmentally damaging alternative; and
5. That the granting of the exception is in accordance with the purpose of this chapter, and with the objectives of the General Plan and elements thereof, and the LCP (Section 16.30.060).

Replacement of the existing pipeline along the proposed project alignment requires several stream crossings that cannot be avoided. Where feasible, new pipe through riparian areas would be installed using trenchless construction methods such as horizontal directional drilling and jack and bore, as described in the Project Description. Additionally, the width of the construction footprint and area of work has been reduced to 20 feet wide along portions of the project alignment to reduce the removal of riparian vegetation (see Table A). These construction approaches would serve to reduce the overall impact to riparian habitat, to the extent possible. Additionally, removal of the existing pipeline would require encroachment into riparian areas in several locations. As indicated in Impact (b), the implementation of Mitigation Measures RIP-1 and RIP-2 would reduce potentially significant impacts to riparian forest and scrub habitat to less than significant. With the approval of a riparian exception from the County, the proposed project would not conflict with the County's Riparian Corridor and Wetland Protection ordinance.

Sensitive Habitat Protection. The Sensitive Habitat ordinance seeks to minimize disturbance of biotic communities which are rare or especially valuable because of their special nature or role in the ecosystem (Section 16.32.010). Based on the County's definition of sensitive habitat in Section 16.32.040, the proposed project alignment includes the following types of sensitive habitats: coastal scrub; non-native grassland/coastal terrace prairie; streams; riparian corridors; wetlands; and areas that provide habitat or potential habitat for special-status species. Any development activity within an area of biotic concern requires a biotic approval from the County, supported either by a biotic assessment or biotic report that includes conditions of approval, as determined by the County's Environmental Coordinator. This biological resources assessment has been reviewed by the County and serves as the biotic report for the proposed project. As indicated in Impacts (a), (b), and (c), the implementation of Mitigation Measures RP-1 to -5; OTB-1 to -9; FISH-1 to -13; CRLF-1 to -12; WPT-1 to -

6; BO-1 to -3; NB-1; RIP-1 to -2; S/TP-1 to -3; WET-1 to -3; and MOV-1 to -2 would reduce potentially significant impacts to coastal scrub; non-native grassland/coastal terrace prairie; streams; riparian corridors; wetlands; and areas that provide habitat or potential habitat for special-status species to less than significant. With a biotic approval from the County, the proposed project would not conflict with the County's Sensitive Habitat ordinance.

Significant Tree Protection. The Significant Tree Protection ordinance seeks to preserve significant trees and forest communities and to protect and enhance the County's natural beauty, property values, and tourist industry (Section 16.34.010). Within the urban and rural services line, significant trees are any tree which is equal to or greater than 20 inches diameter at breast height (dbh) (approximately 5 feet in circumference); any sprout clump of five or more stems each of which is greater than 12 inches dbh (approximately 3 feet in circumference); or any group consisting of five or more trees on one parcel, each of which is greater than 12 inches dbh (approximately 3 feet in circumference) (Section 16.34.030[A]). Additionally, any tree located in a sensitive habitat as defined in Chapter 16.32, is also categorized as a significant tree (Section 16.34.030[C]).

The proposed project may impact trees that are protected by the County's Significant Tree Ordinance. An initial arborist assessment has identified 46 significant trees within the area of potential impact. These trees include 3 common Douglas-fir (*Pseudotsuga menziesii*), 7 Monterey pine, 5 blue gum eucalyptus, 2 coast live oak, and 29 Monterey cypress (M. Hamb, pers. comm.). A final arborist report will be prepared as part of the final design and permitting process to determine whether significant trees would need to be removed or could otherwise be damaged during construction. If so, the following findings will need to be made by the County in its consideration of the coastal permit for the project:

1. That the significant tree is dead or is likely to promote the spread of insects or disease.
2. That removal is necessary to protect health, safety, and welfare.
3. That removal of a nonnative tree is part of a plan approved by the County to restore native vegetation and landscaping to an area.
4. That removal will not involve a risk of adverse environmental impacts such as degrading scenic resources.
5. That removal is necessary for operation of active or passive solar facilities, and that mitigation of visual impacts will be provided.
6. That removal is necessary in conjunction with another permit to allow the property owner an economic use of the property consistent with the land use designation of the Local Coastal Program Land Use Plan.
7. That removal is part of a project involving selective harvesting for the purpose of enhancing the visual qualities of the landscape or for opening up the display of important views from public places.
8. That removal is necessary for new or existing agricultural purposes consistent with other County policies and that mitigation of visual impacts will be provided.

With the implementation of Mitigation Measure TREE-1 below, as modified from the PEIR (ENTRIX 2005), the potentially significant impact related to significant tree removal would be reduced to less than significant. Additionally, the County may attach reasonable conditions to the coastal development permit to mitigate visual impacts and ensure compliance with the County's Significant Trees Protection ordinance. With a coastal development permit from the County, the proposed project would not conflict with the County's Significant Trees Protection ordinance.

Mitigation Measure TREE-1: The City shall inventory trees for removal and retention within the project work area to document trees which qualify as significant trees under the County's regulations. This information shall be documented in an arborist report. The City shall implement measures from the arborist report to protect trees to be retained in order to minimize inadvertent damage to protected trees and their root zones during construction. Measures shall include, but are not limited to, the following: installation of temporary construction fencing around the dripline of the trees; prohibition of storage or dumping of any kind inside the fenced area; protection of the trees and root zones as specified; and pruning as may be specified in the report. Require that the project arborist be retained throughout the duration of the project to inspect and monitor tree protection zones at regular intervals and to ensure that all arborist recommendations are implemented. Tree removal in sensitive riparian habitat shall be compensated for at a 3:1 ratio through the implementation of Mitigation Measure RIP-2. The City shall otherwise comply with the County's Significant Trees Ordinance as part of the County's coastal development permit process.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

No Impact. As described in Section VI.4(e), Biological Resources, the City has prepared a Draft O&M HCP for federally listed species (City of Santa Cruz 2012a) to address the effects of City operations and maintenance activities on terrestrial species. The City has also prepared a draft conservation strategy (City of Santa Cruz 2012b) as part of a pending draft HCP addressing the effects of City activities related to sediment delivery, storm flow management, and stream flow diversion on steelhead and coho salmon (City of Santa Cruz 2011 and 2012b). Neither of these documents has been adopted at this time; however, the mitigation measures presented in this report incorporate or expand upon the measures contained in these documents. As such, the project would not conflict with any adopted or currently proposed HCPs.

5. CULTURAL RESOURCES. Would the project:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

Potentially Significant Unless Mitigation Incorporated. The results of the cultural resources assessment (LSA 2014b) prepared for the proposed project identified two previously recorded cultural resources in the project corridor: a prehistoric archaeological site (CA-SCR-10) recorded north and south of Highway 1 and segments of the abandoned (circa 1930s) Highway 1 (CA-SCR-334H). Archaeological excavations at a portion of CA-SCR-10 outside of the current project have identified

multiple temporal components and human remains. The recorded portions of CA-SCR-334H identified by the cultural resources assessment may be affected by project activities. However, to be eligible for listing on the California Register of Historical Resources, the resource must retain those aspects of its integrity that convey its historical significance. The portion of the CA-SCR-334H within the project limits has compromised integrity of design, materials, workmanship, feeling, and association due to its fragmented and abandoned condition, and the generally poor condition of the asphalt and associated features. Additional study or mitigation of this resource for the project is not warranted or recommended.

The project, however, may have a potentially significant impact on prehistoric archaeological deposits at CA-SCR-10 that may qualify as historical resources. Potential impacts are discussed in Section VI.5(b) below. Implementation of Mitigation Measures CULT-1 through CULT-3, described below, would reduce potential impacts to these resources to less than significant.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

Potentially Significant Unless Mitigation Incorporated. The project would traverse the recorded boundary of prehistoric archaeological site CA-SCR-10 south of Highway 1. To avoid impacts to this resource, the proposed pipeline alignment would follow an alternate alignment (Railroad Alignment) that utilizes an existing access road paralleling the railroad right-of-way. This alternate alignment is situated within a disturbed portion of CA-SCR-10 that has been excavated below bedrock, and this portion of the site does not appear eligible for listing in the California Register of Historical Resources. A sparse scatter of shell was observed in a cutbank adjacent to the alternate alignment, however, and there is a potential for project activities to impact adjacent archaeological deposits associated with CA-SCR-10.

In addition, the potential for encountering previously unidentified, buried archaeological deposits and human remains in the project corridor cannot be discounted. In addition to CA-SCR-10, the eastern terminus of the project is approximately 600 feet from the recorded boundary of prehistoric archaeological site CA-SCR-38/123/H, an extensive Middle Period (600 B.C to A.D. 1000) occupation site. Due to the general archaeological sensitivity of the coastal terrace and the presence of significant prehistoric archaeological sites within and adjacent to the project (CA-SCR-10 and CA-SCR-38/123/H), potentially significant impacts to known and as-yet unidentified resources could occur with project implementation. The implementation of Mitigation Measure CULT-1 (establishment of fencing around known resources), Mitigation Measure CULT-2 (conducting an archaeological monitoring program during construction) and Mitigation Measure CULT-3 (standard inadvertent discovery procedures) would reduce the impacts to less than significant.

Mitigation Measure CULT-1. Prior to construction of the pipeline within the access road that traverses CA-SCR-10, temporary construction fencing shall be erected at the location of the sparse shell deposit identified during the archaeological survey conducted for the project. The fencing shall be erected to restrict construction personnel and equipment, and no project staging or equipment storage shall be

permitted within the temporary fencing. Furthermore, all construction activities shall be restricted to the existing access road. A qualified archaeologist shall oversee installation of the fencing. The City shall be responsible for ensuring (1) the integrity of the fencing for the duration of construction at this location, and (2) that construction-related activities are restricted to the access road within CA-SCR-10.

Mitigation Measure CULT-2. A qualified archaeological monitor shall be present for construction-related ground disturbance in archaeologically sensitive areas below soil that is demonstrated to be fill. For purposes of the project, these sensitive areas consist of stream terraces for a distance of 300 feet from drainage center lines. Archaeological monitoring may occur outside of these areas, however, if archaeological deposits are unearthed during construction. Archaeological monitoring is not required at areas that are too disturbed to contain intact archaeological deposits.

Monitoring shall be guided by an Archaeological Monitoring Plan (AMEP). The AMEP shall include the following elements/protocol: pre-construction assessment; construction worker training; construction monitoring; site recording and evaluation; mitigation planning (e.g., data recovery protocol); curation; guidelines for tribal coordination; and report of findings.

If archaeological resources are identified during construction, all construction activities shall be halted in the vicinity, in full compliance with Santa Cruz County Code 16.40.040. Specific discovery procedures under Recommended Mitigation Measure CULT-3 shall be implemented.

Mitigation Measure CULT-3. Standard inadvertent discovery procedures, in accordance with County Code 16.40.040, as relevant, shall be implemented as part of all construction contracts. The following steps, which summarize the relevant procedures from the regulations above, shall be taken in the event of any unanticipated discoveries of any artifact or any other object which reasonably appears to be evidence of an archaeological/cultural resource:

- Immediately cease all further excavation, ground disturbance, and work on the project site;
- Place visible stakes completely around the area of discovery not more than ten feet apart forming a circle having a radius of not less than one hundred feet from the point of discovery; provided, that such staking need not take place on adjoining property unless the owner of the adjoining property authorizes such staking;
- Notify the County of Santa Cruz planning director;
- If any artifacts or remains are discovered, the planning director shall arrange an on-site inspection of the property to be made. The purpose of the inspection shall be to determine whether the discovery is a historical resource or a unique archaeological resource;
- Upon determining that the discovery is a historical resource or a unique archaeological resource, no further excavation or development shall take place until a mitigation plan has been prepared and approved, as applicable, and an archaeological site development approval and excavation approval have been obtained, as per relevant per County requirements. The mitigation plan is further

described below.

- If the find is determined to be either an historical resource or a unique archaeological resource, the feasibility of avoiding the resource shall be evaluated. If avoidance is determined to be infeasible, a qualified archaeologist shall prepare and implement a research design and archaeological data recovery plan (mitigation plan) for the resource for approval, as per appropriate County Code. The archaeologist shall also conduct appropriate technical analyses, prepare a comprehensive written report and file it with the appropriate information center (NWIC), and provide for the permanent curation of the recovered materials.

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Potentially Significant Unless Mitigation Incorporated. A paleontological resources study was conducted adjacent to the project site as part of the City of Santa Cruz General Plan Update. The study identified areas of low, moderate, and high sensitivity for paleontological resources (fossils) (Pulcheon, Jones, and Konzak 2006). While review of the fossil locality search submitted to the University of California Museum of Paleontology did not identify recorded fossils within the project corridor, the Late Pleistocene (100,000-10,000 years ago) alluvium and Late Miocene (9-7 million years ago) Santa Cruz Mudstone, which are located along the coastal terraces, are identified as "high sensitivity" for paleontological resources. These deposits are also located within the project area (Brabb 1997; Hatch Mott MacDonald 2013). Construction of the proposed pipeline alignment could impact fossils within the project area. Implementation of Mitigation Measure CULT4, described below, would reduce potential impacts to paleontological resources to less than significant.

Mitigation Measure CULT-4: If paleontological deposits (fossils) are encountered during project subsurface construction, the stipulations outlined in the Santa Cruz County Code Section 16.44.070 (Resources Discovered during Development) shall be implemented, as appropriate. In addition, a qualified paleontologist shall give a preconstruction meeting to appropriate project personnel to discuss procedures to be followed if fossils are identified during the project. Should paleontological resources be encountered during project subsurface construction activities, all ground-disturbing activities within 25 feet shall be redirected and a qualified paleontologist contacted to assess the situation, consult with agencies as appropriate, and make recommendations for the treatment of the discovery. The City shall notify the County Planning Director to arrange for an inspection of the paleontological deposit and make recommendations for additional study in consultation with a qualified paleontologist. The Planning Director shall also make a determination if the existing permit conditions for the project will need to be amended to mitigate impacts to paleontological resources. If effects to paleontological resources are found to be significant, and project activities cannot avoid the resources, adverse effects to paleontological resources shall be mitigated. Mitigation may include monitoring, recording the fossil locality, data recovery and analysis, and a final report. Educational outreach may also be appropriate. Upon completion of the assessment, a report documenting methods, findings, and recommendations shall be prepared and submitted to the City and County Planning Director for review, and (if paleontological materials are recovered) a paleontological

repository shall be identified, such as the University of California Museum of Paleontology

d) Disturb any human remains, including those interred outside of formal cemeteries?

Potentially Significant Unless Mitigation Incorporated. Native American skeletal remains have been identified adjacent to the project area at CA-SCR-10 north of Highway 1, and such remains could be located within the project corridor. Ground-disturbing activities associated with project construction could impact previously unidentified Native American human remains. Implementation of Mitigation Measure CULT-5, as well as Mitigation Measures CULT-2 and CULT-3 above would reduce this impact to less than significant:

Mitigation Measure CULT-5: In the event of accidental discovery of human remains, the specific protocol and channels of communication outlined by CEQA Guidelines, Section 15064.5(e)(1), and in accordance with Section 7050.5 of the Health and Safety Code, Section 5097.98 of the PRC (Chapter 1492, Statutes of 1982, Senate Bill 297), Senate Bill 447 (Chapter 44, Statutes of 1987), and County Code 16.40.040, as relevant, would be followed. Section 7050.5 (c) shall guide the potential Native American involvement, in the event of discovery of human remains, at the direction of the County Coroner. Per County Code 16.40.040 the County Planning Director would also be notified about the find upon its discovery and by the Coroner after his or her determination. If the Coroner determines that the remains are not subject to his or her authority and if the Coroner recognizes the remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she will contact the NAHC by telephone within 24 hours.

The NAHC shall identify the person or persons it believes to be the most likely descended from the deceased Native American. The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC, Section 5097.98. Such recommendations will be made as part of the mitigation plan prepared under Mitigation Measure CULT-3, in accordance with County Code 16.40.040.

6. GEOLOGY AND SOILS.

The proposed project runs along the coastline of Monterey Bay at the base of the western flank of the Santa Cruz Mountains in the central portion of the Coast Ranges physiographic province of California. The project site mostly traverses the back edge of a broad, extensively cultivated bench closest to the ocean, known as the Santa Cruz Terrace, which is the lowest of the marine terrace sequence of Ben Lomond Mountain. The project site traverses a number of different formations, most of which are directly tied to the long term fluctuations in sea levels and the seismically driven uplift of Ben Lomond Mountain. Geologic units encountered and mapped along the project alignment include: Santa Margarita Sandstone, Santa Cruz Mudstone, Marine Terrace Deposits, Alluvium, Colluvium, and Artificial Fill. Several geotechnical investigations were conducted for the proposed project, including a Geotechnical Report for Trenchless Crossings (Hatch Mott MacDonald 2013a), Geotechnical Report for Pipeline Replacement (Hatch Mott MacDonald 2013b), and Trenchless Alternatives Analysis

Report (Hatch Mott MacDonald 2013c). These geotechnical investigations included review of published literature, historical documents, field investigations, and laboratory analysis of soil borings. The proposed project would be designed and constructed consistent with the recommendations contained in the geotechnical reports. The impact analysis provided below is based on the information contained in those reports.

Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less Than Significant Impact. According to the available maps of Earthquake Fault Zones published by the California Geologic Society (2006), the alignment is not located within any designated Alquist-Priolo Zone. Therefore, the potential for ground surface rupture or displacement at the pipeline locations associated with any known active faults is low (Hatch Mott MacDonald 2013a).

ii) Strong seismic ground shaking?

Less Than Significant Impact. The project area is located in an active seismic region. A number of active and potentially active faults are present regionally that are capable of producing strong ground motions at the project site, including the Monterey Bay-Tularcitos Fault (approximately 3.13 miles from the site), the San Gregorio Fault (approximately 5.7 miles from the site), the San Andreas Fault (approximately 14.5 miles from the project site) and the Calaveras Fault (approximately 31.5 miles from the project site). The proposed project would be designed to resist seismic forces.

Accepted procedures for placement of the water lines and construction measures necessary to minimize potential adverse effects have been incorporated into the project design. Conformance with these project design features and measures would reduce the effects of potentially strong groundshaking to less than significant.

iii) Seismic-related ground failure, including liquefaction?

Less Than Significant Impact. Soil liquefaction is a phenomenon whereby rapid cyclic loading, typically by an earthquake, increases the pore water pressures to the point where the shear strength of the soil is reduced momentarily, causing failures, settlements, and displacements. Liquefaction risk is greatest where soils are loose, saturated, and consist of medium to fine-grained sands and coarse silts. The combination of loose soil located below groundwater and strong groundshaking conditions may occur along portions of the project alignment.

A map published by the USGS in 1975 indicates that much of the project alignment is located in zones that have a low potential for liquefaction. However, portions of the alignment that are in the areas of creeks or ancient creek channels have higher liquefaction potential and some of these areas have a high potential for liquefaction.

An evaluation of the liquefaction potential of the sand soils underlying the alignment (Hatch Mott MacDonald 2013a) indicated that some of the poorly- to well-graded sand layers that have higher liquefaction potential are isolated. Therefore, the overall liquefaction potential along the alignment is considered to be low to moderate. The proposed project would replace the existing aged pipeline with a new, stronger pipeline thereby reducing the overall vulnerability of the system to seismic hazards, including liquefaction. The impact of seismic-related ground failure, including liquefaction, is less than significant.

iv) Landslides?

Less Than Significant Impact. No incidences of deep-seated landslides are known on the project site and the project site is underlain by bedrock. Therefore, landslides are not considered to be a hazard for the project (Hatch Mott MacDonald 2013a).

b) Result in substantial soil erosion or the loss of topsoil?

Potentially Significant Unless Mitigation Incorporated. Construction of the proposed project, including vegetation clearing, grading, topsoil segregation, trenching and backfilling, could destabilize the soil surface and increase erosion potential from water and wind. According to the PEIR, the potential for substantial soil erosion or the loss of topsoil that could result from construction of the proposed project is moderate.

Soil erosion in and near creeks and drainages has been minimized through the implementation of directional drilling and jack and bore construction to cross under wetlands or flowing watercourses. Soil erosion would also be minimized with both temporary and permanent erosion control practices. These practices include the use of temporary and permanent structures such as interception dikes (i.e., soil berms and sand bags), sediment barriers (e.g., soil berms, silt fences, staked hay or straw bales, or sand bags), and trench barriers and breakers (constructed of materials such as sandbags or polyurethane foam). Soil erosion would also be minimized by limiting the time of soil disturbance, avoiding construction during periods of maximum runoff, reestablishing contours and vegetative cover as soon as possible and stabilizing the soil surface with temporary and permanent planting and mulching (consisting of straw, erosion control fabric, or some functional equivalent).

Consistent with the Santa Cruz County Erosion Control Ordinance (Section 16.22), the City would be required to prepare an Erosion Control Plan that will indicate proposed methods for control of runoff, erosion and sediment movement. As described in Section VI.8(a) and VI.9(a), the City would also be required to prepare a Stormwater Pollution Prevention Plan (SWPPP) in accordance with National Pollution Discharge Elimination System (*NPDES*) *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (NPDES General Construction Permit)(Order No. 2009-0009-DWQ, NPDES No. CAS000002) (SWRCB, 2009). Preparation and implementation of the SWPPP would also minimize potential impacts from soil erosion during construction activities. (See also Sections VI.8(a) and VI.9(a)).

To mitigate or minimize potential impacts from soil erosion, the City would prepare an Erosion Control Plan prior to construction. The Erosion Control Plan could be included

as part of the SWPPP, provided it is identified as such. Implementation of Mitigation Measure GEO-1, as modified from the PEIR, in conjunction with Mitigation Measure HAZ-1 (see Section VI.8(a)) would reduce potential erosion impacts to less than significant.

Mitigation Measure GEO-1: Consistent with the Santa Cruz County Erosion Control Ordinance (Section 16.22), Best Management Practices shall be implemented to reduce soil erosion and shall be detailed in the Erosion Control Plan that will be prepared as part of the project design process. The Erosion Control Plan shall include, at a minimum the measures required under Santa Cruz County Code Sections 16.22.070, 16.22.080, 16.22.090, and 16.22.100, as applicable. Such measures include:

- Retain and disperse runoff over vegetated surfaces so that the runoff rate does not exceed the predevelopment level.
- Discharge concentrated runoff to non-erodible channels or conduits to the nearest drainage course designated for such purpose.
- Detain and filter runoff from disturbed areas via berms, vegetated filter strips, catch basins, or other means to prevent the escape of sediment from the disturbed area.
- Prohibit placement of earth or organic materials where it may be directly carried into a stream or other water body.
- Minimize land clearing to the amount necessary for access and construction.
- Prepare and maintain disturbed surfaces to control erosion and to establish native or naturalized vegetative growth such as:
    - Effective temporary planting such as rye grass, barley, or some other fast-germinating seed, and mulching with straw and/or other slope stabilization material;
    - Permanent planting of native or naturalized drought resistant species of shrubs, trees, etc., pursuant to the County's landscape criteria, when the project is completed;
    - Mulching, fertilizing, watering or other methods may be required to establish new vegetation. On slopes less than 20 percent, topsoil shall be stockpiled and reapplied.
- No land clearing shall take place prior to approval of the Erosion Control Plan. Vegetation removal between October 15th and April 15 shall not precede subsequent grading or construction activities by more than 15 days. During this period, erosion and sediment control measures shall be in place.
- Land clearing of more than one-quarter acre that is not part of a permitted activity shall not take place on slopes greater than 30 percent.
- No land clearing operations greater than one acre per year per site or greater than 100 cubic yards may take place between October 15th and April 15th unless authorized by the Planning Director.
- When winter operations are permitted, the following measures will be taken:

- Between October 15th and April 15th, disturbed surface shall be protected by mulching or other effective means of soil protection.
- All roads and driveways shall have drainage facilities sufficient to prevent erosion.
- Runoff shall be detained and filtered by berms, vegetated filter strips, and/or catch basins.
- Erosion control measures shall be in place at the end of each day's work.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

Less Than Significant Impact. As described in Section VI.6(a)(iii) above, the overall liquefaction potential along the proposed pipeline alignment is considered to be low to moderate, with isolated areas of higher liquefaction potential (Hatch Mott MacDonald 2013a). Based on the current alignment, lateral spreading is estimated to be fairly low (Hatch Mott MacDonald 2013a) along the pipeline alignment. In areas along and in the vicinity of the creek banks, the potential for lateral spreading may be higher due to the steeper topography. The proposed pipeline would be designed and constructed with adequate foundations and bedding in accordance with the California Uniform Building Code, standard engineer practices and the recommendations contained in the geotechnical reports prepared for the proposed project. Therefore, the proposed project would not result in a geologic hazard from landslide, lateral spreading, subsidence, liquefaction or collapse and the impact is less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

Less Than Significant Impact. Expansion and contraction of volume can occur when expansive soils undergo alternating cycles of wetting (swelling) and drying (shrinking). During these cycles, the volume of the soil changes markedly. Expansive soils are common throughout California and can cause damage to foundations and slabs unless properly treated during construction. Areas of highly expansive soils have been identified along the pipeline alignment (Entrix 2005). However, the proposed project would be designed and constructed in accordance with the California Uniform Building Code, using standard construction methods. Standard construction methods for pipelines include appropriate selection of backfill materials that do not exhibit expansive behavior. Therefore, impacts associated with expansive soils would be less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

No Impact. The proposed project would not include installation of septic tanks or alternative wastewater disposal systems. Therefore, there would be no impact to soils and wastewater disposal.

7. GREENHOUSE GAS EMISSIONS. Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Less Than Significant Impact. The proposed project would contribute a temporary, short-term increase in greenhouse gas (GHG) emissions from construction equipment usage. Due to the temporary nature of the GHG contributions during construction, the proposed project would not result in a significant impact to the environment associated with GHG emissions.

Following construction, the proposed project would not result in an increase in GHG emissions over existing conditions; therefore, operation of the proposed project would not result in GHG emissions that could have a significant impact on the environment.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Less Than Significant Impact. The proposed project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs in the project area.

8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Potentially Significant Unless Mitigation Incorporated. Hazardous materials would not be routinely used or transported during the operation and maintenance (O&M) phase of the proposed project. The hazardous materials most likely to be used during construction include typical construction materials such as gasoline, diesel, motor oil, lubricants, solvents, and adhesives, as well as drilling fluids used during trenchless construction activities. Drips and small spills would be the most likely potential hazardous materials releases to occur, however any release that occurs in close proximity to sensitive habitat (e.g. a stream) could have a significant impact on the environment, if not properly controlled. Additionally, construction worker exposure to releases of hazardous materials could lead to adverse health conditions. Implementation of Mitigation Measure HAZ-1, identified more generally in the PEIR, requiring the preparation and proper implementation by the City of a SWPPP in accordance with the *NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (NPDES General Construction Permit)(Order No. 2009-0009-DWQ, NPDES No. CAS000002) (SWRCB, 2009) permitting requirements would reduce the potential for hazardous materials releases to occur during construction, and would reduce the potential for spills to impact sensitive habitat or human health, to less than significant. SWPPPs are required for construction sites over one acre that do not qualify for a waiver. This mitigation measure also applies to the impact described in Section VI.9(a), Hydrology and Water Quality.

In addition, the PEIR identified a potential threat to workers and the environment posed by an unauthorized trash dump that had been observed during a site reconnaissance performed in April and June 2002 by Entrix. The dump was observed on the existing NCP Reach, immediately east of the stream crossing illustrated in Appendix B, Figure 9. It was described as containing glass bottles, aluminum and tin cans, animal bones,

and oil and antifreeze containers. However, no indications of this dump were observed during a more recent site reconnaissance performed in November 2012 by BASELINE Environmental Consulting. It is possible that the debris observed in 2002 was trash dumped on the surface (that was subsequently cleaned up). The lack of any recent evidence of the "dump" indicates that the materials observed during the previous reconnaissance have been removed and that the area no longer poses a threat to workers or the environment. Furthermore, a database search conducted as part of the PEIR did not identify any areas of soil or groundwater contamination with the potential to impact the project area.

Although the PEIR did not identify any areas of soil or groundwater contamination within the proposed project reach, a previous soil investigation along the Santa Cruz Branch Rail Line found that arsenic in the shallow soil (less than or equal to 1.5 feet below ground surface) along the rail line is elevated above the site-specific background concentration of 14.4 milligrams per kilogram (mg/kg) (Amec Geomatrix 2009). As part of the proposed project approximately 4,000 feet of new pipeline will be installed along the Santa Cruz Branch Rail Line. The installation will involve trenching activities, which could expose construction workers to arsenic levels above the 11 mg/kg direct exposure soil screening levels established by the San Francisco Regional Water Quality Control Board to protect construction workers directly exposed to potentially contaminated soils (San Francisco Regional Water Quality Control Board 2013).[11] However, the results of the incremental cancer risk assessment to construction workers indicate that the risk posed by the concentrations of arsenic along the rail branch are within the U.S. EPA's largest risk range, and potential exposures to arsenic in soil are not significantly different from naturally occurring levels (Amec Geomatrix 2009). In addition to arsenic, soil samples along the rail line were analyzed for metals, volatile organic compounds, total petroleum hydrocarbons, pesticides, and polynuclear aromatic hydrocarbons. These compounds were not detected above direct exposure soil screening levels in any of the samples collected near the proposed project reach.

As a result of the prevalence of the use of leaded gasoline from the 1920s to the mid-1980s, shallow soils within approximately 30 feet of the edge of pavement on heavily trafficked roadways have the potential to be contaminated with aerially deposited lead ("ADL") from historical car emissions (Department of Toxic Substances Control 2009). Portions of the proposed project reach are located adjacent to Highway 1 and trenching and other activities that disturb the soil within 30 feet of the highway could expose workers to elevated levels of lead. Furthermore, the disturbance of the soil in areas previously or currently used for agriculture could expose workers to elevated levels of pesticides. If soils and groundwater are not properly managed during construction, exposure to arsenic, lead, and/or pesticides could pose a health hazard to construction workers. Exposure to contaminants in soil and groundwater could occur through inhalation of fugitive dust, incidental ingestion, or dermal contact with contaminated material. The implementation of Mitigation Measure HAZ-2 described below would reduce the potential health hazard impacts from the exposure of construction workers to contaminated material present in soil or groundwater to less than significant.

[11] The Central Coast RWQCB, which has jurisdiction over the project area, does not have screening levels. The screening levels established by the San Francisco Bay RWQCB are the best available screening levels for this area.

The existing pipeline is covered with a non-friable asbestos wrap.[12] Air Districts are responsible for regulating asbestos hazards in California. The MBUAPCD issues permits for activities including asbestos demolition and renovation activities (Air District Rule 424). All friable (crushable by hand) asbestos containing materials (ACMs) or non-friable ACMs subject to damage must be abated prior to demolition in accordance with applicable requirements. Friable ACMs must be disposed of as an asbestos waste at an approved facility. Non-friable ACMs may be disposed of as nonhazardous waste at landfills that will accept such wastes. Workers conducting asbestos abatement must be trained in accordance with state and federal OSHA requirements.

The California Department of Industrial Relations (DIR) regulates implementation of worker health and safety in California. The DIR includes the Division of Occupational Safety and Health (DOSH), which acts to protect workers from safety hazards through its California OSHA (Cal/OSHA) program and provides consultative assistance to employers. Construction work involving asbestos is regulated under Title 8, California Code of Regulations Section 1529. Compliance with existing regulations during pipeline removal activities would be sufficient to prevent the exposure of the public and construction workers to asbestos during the removal of the existing pipeline.

Mitigation Measure HAZ-1: The City shall prepare a Notice of Intent (NOI) to be submitted to the Central Coast RWQCB, which indicates the intent to comply with the Statewide NPDES General Construction Permit (Order No. 2009-0009-DWQ) prior to construction being initiated. Prior to submittal of the NOI, the City shall prepare a Stormwater Pollution Prevention Plan (SWPPP) to comply with the Statewide NPDES General Construction Permit.

The SWPPP shall identify Best Management Practices (BMPs) to prevent or reduce pollution into surface waters. BMPs shall include—but shall not be limited to—construction or installation of sediment retention or erosion control structures such as hay bales, coconut fiber rolls, geofabric, sand bags, and water filters over storm drains; reseeding of exposed soils; stockpiling of topsoil removed during construction; wetting of dry and dusty surfaces to prevent fugitive dust emissions; and clear water diversions to protect channels during trenching/pipeline installation. The SWPPP shall also establish good housekeeping measures such as construction vehicle storage and maintenance, suitable re-fueling locations, handling procedures for hazardous materials, and waste management BMPs, which would minimize the potential for spills. Additional required components of the SWPPP shall include run-on and runoff control measures; inspection, maintenance, and repair of BMPs; and periodic reporting to show compliance with the NPDES Construction General Permit.

Depending on the Risk Level assessed to the project discharges, the City shall ensure that project construction complies with Numeric Action Levels for pH and turbidity, which is required for Risk Level 2 and 3 projects. Risk Level 2 and 3 projects also require development of Rain Event Action Plans by qualified individuals, and water quality sampling of non-stormwater discharges and stormwater runoff during qualifying rain events. Exceedance of the Numeric Action Levels shall require mandatory follow-up, including additional evaluation, BMPs, and/or corrective action. Corrective actions

[12] Asbestos TEM Laboratories, Inc., 2013. EPA Interim Method Polarized Light Microscopy Analytical Report. Laboratory Job #318066. Job site: Majors @ Little Baldwin. Job No.: 2012-002. June 6.

will be implemented to bring the discharge to within the Numeric Action Levels. The City shall ensure that a copy of the SWPPP is available at the construction site at all times and that it shall be implemented and amended as necessary to ensure compliance with the NPDES Construction General Permit.

Additionally, as required by OSHA, construction personnel handling hazardous materials would be trained to understand the hazards associated with these materials and would be instructed in the proper methods for storing, handling, and using these hazardous materials.

Mitigation Measure HAZ-2: The City shall ensure that construction bid documents and construction contracts require the contractor to test soils to be disposed of to ensure compliance with the disposal requirements of the County's landfill or another regional landfill and compliance with state and federal worker safety regulations. The shallow soil quality within the proposed project's area of potential impact shall be investigated by the contractor prior to transporting and disposing of the soil. Potential sources of contamination include: potential lead contamination of shallow soils along the alignment within 30 feet from the edge of the pavement of Highway 1, and potential pesticide contamination of shallow soils located in areas historically or currently used for agriculture. The soil sampling plan shall be submitted to the City of Santa Cruz for review and approval prior to implementation. Upon completion of sampling, a report summarizing the results of the investigation shall be prepared by the qualified environmental professional and shall be submitted to the City of Santa Cruz for review.

If contamination is identified by the contractor, construction activities shall be conducted under a project-specific Construction Risk Management Plan (CRMP) to protect construction workers, the general public, and the environment from subsurface hazardous materials. The CRMP shall characterize the soil, delineate areas of known soil contamination, and identify soil (and groundwater, if encountered) management options for excavated soil and dewatered groundwater (if applicable), in compliance with local, state, and federal statutes and regulations.

The CRMP shall: 1) provide procedures for evaluating, handling, storing, testing, and disposing of soil and groundwater during project excavation activities; 2) require the preparation of a project-specific Health and Safety Plan that identifies hazardous materials present, if any, describes required health and safety provisions and training for all workers potentially exposed to hazardous materials in accordance with state and federal worker safety regulations, and designates the personnel responsible for Health and Safety Plan implementation. The CRMP shall be submitted to the City of Santa Cruz for review and approval prior to construction activities. Once approved the CRMP shall be implemented during construction of the proposed project.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Potentially Significant Unless Mitigation Incorporated. See Section VI.8(a) above.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school?

No Impact. There are no schools located within 0.25 miles of the project area.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

No Impact. The project area does not contain a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project area is not located within the boundaries of an airport land use plan or within two miles of a public or public use airport. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

No Impact. The project site is not located in the vicinity of a private airstrip. The nearest private airstrip is the Bonny Doon Village Airport, located about six miles north of the project site. Therefore, the proposed project would not result in a safety hazard for people residing or working in the project area.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Less Than Significant Impact. The O&M phase of the proposed project, which would be the same or similar to O&M activities associated with the existing pipeline, would not have the potential to impair or physically interfere with emergency response or evacuation plans.

The construction phase of the proposed project would not result in the closure of Highway 1 because trenchless methods would be used to install new pipeline under this highway. Additionally, the construction phase of the proposed project would not result in substantial temporary traffic delays as traffic flow would be maintained even if temporary lane closures are required for some activities (e.g., moving equipment into the project site). Therefore the proposed project would not temporarily physically interfere with the implementation of adopted emergency response or emergency evacuation plans. The impact would be less than significant.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

Potentially Significant Unless Mitigation Incorporated. The project area is located in both moderate and high fire hazard zones as determined by the California Department of Forestry and Fire Protection (CalFIRE) (California Department of Forestry and Fire Protection 2007). CalFIRE implements fire safety regulations in the state of California. The California Public Resources Code includes fire safety

regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas.

Due to the abundance of dry vegetation in and surrounding the project area, a wildland fire could potentially be set during construction of the proposed project, if regulatory requirements are not properly implemented during construction. O&M activities after construction is completed would be the same or similar to those associated with the existing pipeline. A fire could present a threat to construction workers, to the City of Santa Cruz, located 1.5 miles east of the project area, and to the multiple rural residences and business located in close proximity to the project area. The implementation of Mitigation Measure HAZ-3, as modified from the PEIR, would reduce the potential for construction activities to cause a wildland fire to less than significant.

Mitigation Measure HAZ-3: The City shall ensure that appropriate measures be taken to minimize the risk of fire during construction activities. Specifically, the City shall require that all fire safety regulations cited in the California Public Resources Code be incorporated into construction bid documents and contracts for the project, including regulations that restrict the use of equipment that may produce a spark, flame, or fire; require the use of spark arrestors on construction equipment that use an internal combustion engine; specify requirements for the safe use of gasoline-powered tools in fire hazard areas; and specify fire suppression equipment that must be provided onsite for various types of work in fire-prone areas. Additionally, special precautions shall be identified and taken to minimize the potential for fires resulting from the welding and fusing processes necessary for linking sections of pipeline together. BMPs shall be implemented during construction to reduce the potential for accidental spills or fires involving the use of hazardous materials.

9. HYDROLOGY AND WATER QUALITY. Would the project:

a) Violate any water quality standards or waste discharge requirements?

Potentially Significant Unless Mitigation Incorporated. Implementation of the proposed project would not result in a net increase in the amount of impervious surface area or an associated increase in the rate and volume of stormwater runoff. Continued long-term operation and maintenance of the proposed pipeline would not violate any water quality standards or waste discharge requirements.

Ground disturbance during construction could result in erosion and associated discharge of additional sediment and/or other pollutants from disturbed areas into streams. Upland trenching spoils generated during construction would be stored on the project route for a short time (generally less than one day). The City would backfill trenches at the end of each workday to minimize the transport of soil to channels and adjacent waterways. Where backfilling is not feasible, proper erosion control practices would be established to eliminate or minimize transport of sediment and other pollutants to stream channels. As described in Section VI.8, Hazards and Hazardous Materials, Impact 8(a), the NPDES General Construction Permit requires construction sites over one acre that do not qualify for a waiver to prepare and implement a SWPPP.

The SWPPP shall incorporate BMPs to control sedimentation and runoff. With the implementation of Mitigation Measure HAZ-1, requiring the preparation and proper implementation of a SWPPP for the project, water quality standards would not be violated and the impact would be reduced to less than significant. Additionally, the County of Santa Cruz will require an Erosion Control Plan as part of the preparation of design plans for the project that will be submitted for the Coastal Development Permit. The implementation of this plan, identified in Mitigation Measure GEO-1, will also serve to minimize erosion and sedimentation (see Section VI.6(b)).

As described further below, groundwater may be encountered during installation of the proposed pipeline. If dewatering is necessary in areas where groundwater is encountered within the planned depth of excavation, a permit for discharge of the extracted groundwater would be obtained from the RWQCB. This discharge would be consistent with RWQCB standards and would not result in violation of water quality standards or waste discharge requirements.

Portions of the proposed pipeline alignment would be installed using directional drilling. This construction method was selected because it is the least intrusive and can often be completed without any adverse effects on the stream channel or associated riparian zone. Frac-outs can occur during directional drilling, which can increase sediment input into the stream. Temporary increases in turbidity or sedimentation could be adverse if the rate of sediment generation exceeds the rate of sediment transport in a stream. During the boring operation, bentonite is used to lubricate the bore and to help remove cuttings from the borehole. The bentonite mixture can seep to the surface within a stream channel (i.e., frac-out) (Entrix 2005).

Several geotechnical reports, including soil borings, were prepared to assess proposed directional drilling locations and recommend methods to reduce frac-out potential. A number of soil samples were selected for laboratory analyses to provide physical material properties for design and construction for both pipeline and trenchless segments and to choose a bore profile that would minimize the chance for frac-out during construction (Hatch Mott MacDonald 2013a). The Trenchless Alternatives Analysis Report (Hatch Mott MacDonald 2013c) describes recommended construction methods for each trenchless crossing. Consistent with this report, drill paths have been proposed to provide a minimum cover depth of 20 feet beneath creek basins. This depth is conceptually thought to minimize the risk of hydrofracture due to drilling fluid pressures into the creek.

Although the proposed project has been designed to minimize the potential for frac-out, implementation of Mitigation Measure HYDRO-1 identified in the PEIR, would reduce this potential impact to less than significant.

Mitigation Measure HYDRO-1: The City shall ensure that measures be implemented to minimize the potential for bentonite seeps (frac-outs), including: requiring boring crews to strictly monitor drilling fluid pressures, retaining containment equipment on-site, monitoring waters downstream of the crossing sites to quickly identify any seep, immediately stopping work if a seep into a steam is detected, immediately implementing containment measures, which would be specified in the SWPPP, and adhering to agency reporting requirements. Containment equipment should include staked and floating silt barriers to isolate frac-out locations from flowing water.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Less Than Significant. Implementation of the proposed project would not significantly affect groundwater supplies, groundwater recharge, or result in a net deficit in aquifer volume or a lowering of the local groundwater level. The proposed project would install replacement pipeline either by trenching, directional drilling, or jack and bore construction. The depth of the proposed trench would vary from approximately 6 to 10 feet deep, with a minimum of 3 to 4 feet of cover over the pipe. According to the geotechnical report prepared for the trenchless crossings (Hatch Mott MacDonald 2013a), within the borings in which groundwater was encountered, groundwater was observed at varying depths ranging from 1 foot below ground surface (bgs) to 23.2 bgs. Within the project area, groundwater has been known to be seasonally and locally perched, particularly at the interface between soil units and the underlying Santa Cruz Mudstone Formation (Hatch Mott MacDonald 2013a). Trench dewatering may be necessary where the proposed construction intersects with the groundwater table. Dewatering could decrease water levels in the immediate area surrounding the trench. However, trench dewatering would be a temporary, short-term activity that would not significantly impact aquifer recharge or the groundwater table. If dewatering is necessary in areas where groundwater is encountered within the planned depth of excavation, a permit for discharge of the extracted groundwater would be obtained from the RWQCB. This discharge would be consistent with RWQCB standards and would not result in violation of water quality standards or waste discharge requirements. The impact would be less than significant.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

Less Than Significant Impact. Project construction would not substantially alter existing drainage patterns or alter the course of a stream or river such that substantial erosion or siltation would occur. After installation of the proposed pipeline, soils would be compacted and recovered to be consistent with current topography. See Sections VI.6(a) and VI.9(a) for an analysis of erosion due to grading during construction. Therefore, this impact would be less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Less Than Significant Impact. The proposed project would replace an underground water transmission pipeline. Implementation of the proposed project would not significantly alter existing drainage patterns, including alteration of the course of a stream or river or substantial increase in the rate/amount of surface runoff that could lead to on-site or off-site flooding. See Sections VI.9(a) and VI.9(c) above.

e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?

Less Than Significant Impact. As described in Section VI.9(a), the project would not result in a substantial increase in impermeable surfaces that could lead to a significant amount of runoff. It would not affect drainage capacity nor would it lead to a substantial addition of sources of polluted runoff.

f) Otherwise substantially degrade water quality?

Less Than Significant Impact. The implementation of the proposed project would not lead to a significant degradation of water quality. Please see Section VI.9(a) above.

g) Place housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

No Impact. No housing units are proposed as part of the project. Therefore, the proposed project would not place housing within a 100-year flood hazard area.

h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows?

Less Than Significant Impact. Portions of the project alignment would cross the 100-year floodplain (i.e., an area in which there is a one percent chance per annum of a one hundred year storm event) according to maps published by the Federal Emergency Management Agency (FEMA) (2012). However, most of the proposed pipeline would be placed underground either by trenching, directional drilling, or jack and bore construction. In the vicinity of Old Dairy Gulch (Figure 15, Appendix B), the preferred option is that the existing above ground pipeline would be retained and no new construction would occur in this area except tying into the two ends of the existing pipeline located at Stations 211+00 and 215+00. The section of the pipeline between Stations 212+00 and 214+00 is located within the 100-year floodplain designated by FEMA. However, the proposed pipeline would not be significantly impacted by potential flooding compared to present baseline conditions as the existing pipeline is currently located aboveground and the existing pipeline would remain in place. Under the second option, the replacement pipeline would be installed underground via open trench construction. Under either option, the proposed project would not place structures within a 100-year flood hazard area which would impede or redirect flood flows. This impact would be less than significant.

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i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

No Impact. The proposed project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam as it is replacing existing water system facilities.

j) Inundation by seiche, tsunami, or mudflow?

Less Than Significant Impact. The project alignment is located approximately 1,400 to 2,500 feet from the Pacific Coast separated by relatively flat farm and grassy areas,

beaches, creeks, and ponds that may be temporarily submerged by water during a tsunami. However, damage to the proposed project, which would be buried underground, is not anticipated. Therefore, tsunami is not considered a hazard for the proposed project (Hatch Mott MacDonald 2013a).

10. LAND USE AND PLANNING. Would the project:

a) Physically divide an established community?

No Impact. The physical division of an established community typically refers to the construction of a physical feature (such as an interstate highway or railroad tracks) or removal of a means of access (such as a local road or bridge) that would impair mobility within an existing community, or between a community and outlying areas. The proposed project would replace an existing water pipeline. The proposed project would not physically divide an established community.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Potentially Significant Unless Mitigation Incorporated. The proposed project would be subject to the policies, requirements, standards and conditions of the *County of Santa Cruz 1994 General Plan and Local Coastal Program*, given its location in the Coastal Zone (Section 13.20.150 of the Santa Cruz County Code), as well as relevant portions of the Santa Cruz County Code that relate to coastal policies.

According to the Santa Cruz County General Plan, the project site has the following land use designations: O-R (Parks, Recreation and Open Space), AG (Agriculture), and R-M (Mountain Residential). The Santa Cruz County Code specifies that the land in the project area is zoned PR (Parks and Recreation), CA (Commercial Agriculture), PF (Public Facility), and SU (Special Use). The proposed project would not permanently change existing land use within the project area. Where the pipeline cannot be replaced within the existing ROW, permanent agreements or easements would be required to provide ongoing access for inspection and maintenance of the pipeline and the ROW. However, no change to established land uses would be expected. The proposed project would not result in the conversion of adjacent land uses or conflicts with applicable Santa Cruz County land use designations or zoning standards. The City would need to obtain Coastal Zone approval from Santa Cruz County in accordance with the County's Local Coastal Program, as part of a development permit for the proposed project. The proposed project would need to comply with the design criteria for Coastal Zone developments outlined in Section 13.20.130 of the Santa Cruz County Code, which includes by reference all design criteria for the applicable zoning districts.

The Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County 1994) and relevant sections of the Santa Cruz County Municipal Code (Santa Cruz County 2013) outline relevant policies and regulations applicable to the proposed project, including policies to preserve visual, cultural, and natural resources and to protect the health and safety of the citizens of Santa Cruz County. Consistent with the goals and policies of these relevant planning documents, the project has been

designed to minimize impacts to natural and cultural resources. The proposed project would need to comply with the Environmental and Resource Protection measures outlined in Title 16 of the Santa Cruz County Code, including Chapter 16.30 Riparian Corridor and Wetland Protection, Chapter 16.32 Sensitive Habitat Protection, and Chapter 16.34 Significant Tree Protection. Project conformance and/or potential conflicts with these ordinances are described in Sections VI.1(a) and VI.4(e). As described in Section VI.5(b), the proposed project would comply with the stipulations outlined in the Santa Cruz County Code Section 16.40.040 (Site Discovered during Excavation or Development) regarding actions to be taken if cultural resources are identified during project construction.

Where potentially significant environmental impacts have been identified in this Initial Study/Mitigated Negative Declaration, they have been mitigated to less than significant with implementation of appropriate mitigation measures. Therefore, the proposed project is determined to be consistent with applicable land use plans, policies and regulations.

c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?

No Impact. As described in Section VI.4(e), Biological Resources, the City has prepared a Draft O&M HCP for federally listed species (City of Santa Cruz 2012a) to address the effects of City operations and maintenance activities on terrestrial species. The City has also prepared a draft conservation strategy (City of Santa Cruz 2012b) as part of a pending draft HCP addressing the effects of City activities related to sediment delivery, storm flow management, and stream flow diversion on steelhead and coho salmon (City of Santa Cruz 2011 and 2012b). Neither of these documents has been adopted at this time; however, the mitigation measures presented in this report incorporate or expand upon the measures contained in these documents. As such, the project would not conflict with any adopted or currently proposed HCPs.

11. MINERAL RESOURCES. Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

No Impact. A portion of the proposed project would intersect the southeast corner of the Santa Margarita Formation, in which the Santa Cruz Sand Plant is located. However, less than 1,500 feet of pipeline is located in this area, and the pipeline does not directly intersect existing quarry operations. Replacement of the pipeline in this area would not disrupt quarry operations or affect the mineral resources in this area since the ROW is already established. The proposed project would not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state.

b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?

No Impact. See Section VI.11(a).

12. NOISE. Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?

Less Than Significant Impact. The County of Santa Cruz addresses noise in the Noise Element of the County's General Plan and in the County Code. Noise Policy 6.9.7, of the General Plan, requires mitigation of construction noise as a condition of all future project approvals. Construction noise impacts are evaluated for compliance with the noise ordinance of the County Code, which limits the permissible hours of noise-producing construction activities to 8:00 a.m. to 10:00 p.m. when such noise would occur within 100 feet of any residence or place regularly used for sleeping purposes.

An analysis of potential noise impacts during construction and operation of the project is provided as follows.

Construction Noise Impacts. Construction would be expected to begin in April 2015 and last approximately 8 months. The new pipe would be installed by open trench, horizontal/directional drilling, or jack and bore methods of construction, depending on the size of pipe and location. The trenching operation would be carried out with a chain trencher, a tracked or wheeled excavator, or a backhoe. Directional drilling would install the water pipe through the control of a directional drill head that bores horizontally or in an arc through which the pipe would be pulled. Jack and bore construction would be used for completing crossings under the railway, and would involve the use of an augur drill; the pipes would then be pushed (jacked) behind the augur head.

The following two types of short-term noise impacts could occur during the construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the project site would incrementally increase noise levels on access roads leading to the project construction sites. Although there would be a relatively high intermittent and short-term noise nuisance in close proximity to passing equipment, the effect on longer-term (hourly or daily) ambient noise levels would be small. Therefore, short-term construction-related impacts associated with worker commute and equipment transport to the construction sites would be less than significant.

The second type of short-term noise impact is related to noise generated during construction on the project site. Construction is completed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on the site and, therefore, the noise levels surrounding the site as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table E lists typical construction equipment noise levels recommended for noise impact assessments for large complex projects, based on a distance of 50 feet between the equipment and a noise receptor. Typical noise levels range up to 90 dBA Lmax at 50 feet during the noisiest construction phases.

Anticipated construction equipment to be used for the proposed project would include tracked excavators (such as a chain trencher, a tracked or wheeled excavator, or a backhoe), soil compactors, ½ ton and ¾ ton haul trucks, a directional drill rig, and an augur drill rig. Typical operating cycles for these types of construction equipment may involve one or two minutes of full-power operation followed by three or four minutes at lower power settings. Impact equipment such as pile drivers are not expected to be used during construction of this project. As shown in Table E, the typical maximum noise level generated by excavators, auger drill rigs, and compactors or rollers is assumed to be 85 dBA L_{max} at 50 feet from the operating equipment. The maximum noise level generated by haul/dump trucks is approximately 84 dBA L_{max} at 50 feet from these vehicles. Each doubling of the sound sources with equal strength would increase the noise level by 3 dBA. Assuming each piece of construction equipment operates at some distance apart from the other equipment, the worst-case combined noise level during this phase of construction would be 90 dBA L_{max} at a distance of 50 feet from multiple pieces of heavy construction equipment operating at full power simultaneously.

Table E: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Impact Pile Driver	Yes	95
Auger Drill Rig	No	85
Vibratory Pile Driver	No	95
Jackhammers	Yes	85
Pneumatic Tools	No	85
Pumps	No	77
Scrapers	No	85
Cranes	No	85
Portable Generators	No	82
Rollers	No	85
Dozers	No	85
Tractors	No	84
Front-End Loaders	No	80
Backhoe	No	80
Excavators	No	85
Graders	No	85
Air Compressors	No	80
Dump Truck	No	84
Concrete Mixer Truck	No	85
Pickup Truck	No	55

Source: FHWA, Highway Construction Noise Handbook, August 2006.

The closest residential land uses to the proposed construction areas would be the rural residential units located on agricultural zoned land at 3451 Highway 1, and those located south of Highway 1 at Dimeo Lane. These units could be located as close as 40 feet from the nearest potential construction area. At a distance of 40 feet, the nearest facades of these buildings could be exposed to noise levels of up to approximately 92 dBA L_{max} intermittently when individual pieces of heavy construction equipment operate at the nearest construction area. The next closest residential units would be those located at 2101 Highway 1, located approximately 55 feet from the pipeline construction areas, which could then experience noise levels from construction activities of up to approximately 89 dBA L_{max} intermittently when heavy construction equipment operates at the nearest construction area. The next closest residential land uses to the pipeline construction areas are located over 390 feet from proposed pipeline construction areas. At this distance, noise levels from the operation of heavy construction equipment would attenuate to below 73 dBA L_{max}.

As noted previously, typical operating cycles for heavy construction equipment involve one or two minutes of full-power operation followed by three or four minutes at lower

power settings. Therefore, although there is the potential for short periods of relatively high noise exposure causing intermittent noise nuisance, the effect on longer term (hourly or daily) ambient noise levels would be small. No nighttime construction activities would be conducted for the proposed project. Given that construction noise would be intermittent and temporary and would not be scheduled during restricted nighttime hours, construction noise impacts would be less than significant. Implementation of standard noise reduction measures as a recommended condition of approval (including required use of approved mufflers on equipment) and compliance with the County's Noise Ordinance establishing permissible hours of noise-producing construction activity would minimize short-term construction noise. See Recommended Condition of Approval NOISE-1 below.

Recommended Condition of Approval NOISE-1:

1) All construction equipment must have appropriate sound muffling devices, which shall be properly maintained and used at all times such equipment is in operation.
2) The project contractor shall place all stationary construction equipment so that emitted noise is directed away from the closest off-site sensitive receptors.
3) The construction contractor shall locate on-site equipment staging areas so as to maximize the distance between construction-related noise sources and noise-sensitive receptors nearest the pipeline construction areas.
4) All noise producing construction activities, including warming-up or servicing equipment and any preparation for construction, shall be limited to the hours between 8:00 a.m. and 10:00 p.m. when such activities would occur within 100 feet of any residential unit. However, it should be noted that nighttime construction is not anticipated with the proposed project.

Operational Noise Impacts. The proposed project would only consist of temporary construction activities. Noise associated with these operations would cease after completion of project construction. Implementation of the project would not result in: the creation of any permanent noise sources; the exposure of persons to noise levels in excess of established standards; or a permanent increase in ambient noise levels in the project vicinity.

b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?

Less Than Significant Impact. Refer to Section VI.12(a). No permanent noise sources that would expose persons to excessive groundborne vibration or noise levels would be located within the project site. However, construction activities associated with development of the proposed project could generate excessive groundborne vibration levels.

Project construction activities would require the use of heavy construction equipment. These activities would occur within 40 feet of the nearest structures. The Federal Transit Administration (FTA) has established industry-accepted construction-related groundborne vibration impact criteria. Construction-related groundborne vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). The impact criteria threshold for fragile structures is 0.12 PPV, while the impact criterion for structures of non-engineered timber and masonry construction is 0.2 PPV. Typical groundborne vibration levels from heavy construction equipment in full operation are shown in Table F. Typical groundborne vibration levels for heavy roller compactors can range up to 0.21 PPV as measured at a distance of 25 feet from the operating equipment. At a distance of approximately 40 feet, groundborne vibration levels from the operation of heavy construction equipment would be expected to attenuate to below 0.10 PPV, which is below the damage impact criteria for even the most fragile structures. Therefore, implementation of the project would not expose existing structures to excessive groundborne vibration levels, and this impact would be less than significant.

When assessing annoyance of persons from groundborne noise, vibration is typically expressed as root mean square (rms) velocity in units of decibels of 1 micro-inch per second. To distinguish vibration levels from noise levels, the unit is written as "VdB." Low-frequency groundborne vibration, such as typically produced by heavy construction equipment, is found annoying when levels exceed 85 VdB.[13] Groundborne vibration is almost never annoying to people who are outdoors. Although the motion of the ground may be perceived, without the effects associated with the shaking of the building, the motion does not provoke the same adverse human reaction. As shown in Table F, groundborne vibration levels from vibratory rollers can range up to approximately 94 VdB as measured at a distance of 25 feet; while operation of heavy haul trucks could result in groundborne vibration levels of up to 86 VdB at a distance of 25 feet.

Table F: Typical Vibration Source Levels for Construction Equipment

Equipment		PPV at 25 ft (in/sec)	Approximate VdB at 25 feet
Pile Driver (impact)	Upper range	1.518	112
	Typical	0.644	104
Vibratory roller		0.210	94
Hoe ram		0.089	87
Large bulldozer		0.089	87
Caisson drilling		0.089	87
Loaded trucks		0.076	86
Jackhammer		0.035	79
Small bulldozer		0.003	58

Source: Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment.* May.

The nearest residential structures would be located approximately 40 feet from potential construction areas. At a distance of 40 feet, groundborne vibration levels from the operation of heavy construction equipment such as vibratory rollers or loaded haul trucks would attenuate to below 88 VdB and 80 VdB respectively. These groundborne vibration levels could potentially result in sleep disturbance or nighttime annoyance of persons of normal sensitivity. At a distance of 100 feet, groundborne vibration levels from the operation of heavy construction equipment such as a vibratory roller would attenuate to below 76 VdB, which is below the level that can produce annoyance for persons of normal sensitivity. However, nighttime construction would not take place with the proposed project. Therefore, potential sleep disturbance or nighttime annoyance of nearby sensitive

13 Federal Transit Administration, 2006. *Transit Noise and Vibration Impact Assessment.* May.

receptors from groundborne vibration impacts resulting from construction of the proposed project would be less than significant.

c) Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Refer to Section VI.12(a) and VI.12(d). The proposed project would only consist of temporary construction activities. Noise associated with these activities would cease after completion of the project. Implementation of the project would not result in: the creation of any new permanent noise sources; the exposure of persons to noise levels in excess of established standards; or a permanent increase in ambient noise levels in the project vicinity. Periodic noise increases associated with construction of the proposed project are discussed in Section VI.12(a) and VI.12(d).

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less Than Significant Impact. Refer to Section VI.12(a). Project-related construction activities could result in high intermittent noise levels of up to 92 dBA L_{max} at the closest residential land uses. This noise would result from the temporary use of heavy construction equipment. Given that construction noise would be intermittent and temporary and would not be scheduled during restricted nighttime hours, construction noise impacts would be less than significant. Implementation of standard noise reduction measures as a recommended condition of approval (including required use of approved mufflers on equipment) and compliance with the County's Noise Ordinance establishing permissible hours of noise-producing construction activity would minimize short-term construction noise.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The project site is not located within an airport land use plan. In addition the project site is located over 18 miles northwest of Watsonville Municipal Airport; 28 miles southwest of Mineta San Jose International Airport; approximately 30 miles south of Moffett Field Airport; and approximately 29 miles south of the Monterey Regional Airport. While aircraft noise is occasionally audible on the project site, due to the distance from the airports and the orientation of runways and flight patterns the project site does not lie within the 55 dBA CNEL noise contours of any airport. Therefore, the proposed project would not expose people residing or working in the project area to excessive noise levels.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

No impact. The project site is not located within the vicinity of a private airstrip. The nearest airstrip is the Bonny Down Village Airfield, located over 8 miles northeast of the project site. Therefore, implementation of the proposed project would not expose people to excessive noise levels, and no impact would occur.

13. POPULATION AND HOUSING. Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

Less Than Significant Impact. A project is considered growth-inducing it if would directly or indirectly foster substantial economic or population growth or the construction of additional housing.[14] Examples of projects that could have growth-inducing impacts include extensions or expansion of infrastructure systems beyond what is needed to serve project-specific demand, and development of new residential subdivisions or industrial parks in areas that are currently only sparsely developed or are undeveloped. The proposed project would upgrade the existing water distribution system; however, no increase in system capacity is proposed. The intent of the project is to improve and enhance the reliability of the currently outdated water distribution system. The proposed project would not include any new housing, commercial or industrial spaces; result in the conversion of adjacent land uses; or provide access to previously inaccessible areas. Operation and maintenance activities would remain the same. Therefore, the proposed project would not directly or indirectly induce substantial population growth. This impact is less than significant.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

No Impact. No housing is located along the proposed pipeline alignment. Therefore, the proposed project would not cause any housing displacements.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

No Impact. No persons would be displaced by the proposed project.

14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services: a) fire protection; b) police protection; c) schools; d) parks; and e) other public facilities?

Less Than Significant Impact. The proposed project involves replacement of facilities associated with the North Coast System. The construction and operation of the proposed project would not result in an increase in population or facilities that would require the provision of fire or police services, schools, parks, or other public facilities, or result in the need for physically altered facilities, as described below.

Fire Protection: The project site is currently served by the California Department of Forestry and Fire Protection. The proposed project would not generate a significant need for additional fire protection services. As an upgrade and replacement project, subsequent operation of the water distribution system would be the same as existing conditions. During construction,

14 *CEQA Guidelines,* 2014. Section 15126.2(d)

emergency medical services, typically provided through fire services, may be needed in the event of a construction accident. However, this situation would not pose a significant impact upon existing services. The proposed project would result in the temporary shutdown of portions of the NCS that transport raw water to the City's treatment plant and therefore could temporarily affect the City's water supply reliability for fire protection. The overall goal of the proposed project is to improve the reliability and reduce the number of leaks on the NCS. The City would ensure sufficient supplies exist to supply the City's water needs, including adequate water for fire suppression, during temporary, construction-related shut downs (see also Section VI.17(d)).Therefore, impacts to fire protection and emergency medical services would be less than significant.

Police Protection: The project site is currently served by the Santa Cruz County Sheriff and the California Highway Patrol. Implementation of the proposed project would not have a significant impact upon police protection services. The installation of replacement pipeline would be located in proximity to Highway 1 and other public roadways, where traffic may need to be controlled. In addition, trucks and other equipment associated with construction would increase traffic temporarily during the construction period. There is a possibility for a greater number of accidents that may require police services. However, this potential impact would not be significant since the construction period is of relatively short duration and construction traffic would be intermittent. Therefore, impacts to police services would be less than significant.

Schools, Parks, and Other Public Services: The proposed project would not result in new population growth and therefore would not create demand for additional school facilities, would not have adverse impacts on existing park facilities, and would not generate demand for additional recreational facilities. Therefore, impacts to other public services would be less than significant.

15. RECREATION. Would the project:

a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

Less Than Significant Impact. The proposed project would replace a segment of an existing water pipeline. The proposed project would not result in an increase in population or facilities that would result in increased use of existing recreational facilities. Therefore, development of the proposed project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of these facilities would occur or be accelerated.

The proposed pipeline alignment passes through Wilder Ranch State Park, which extends from the ocean bluffs to Highway 1 on the ocean side of the highway and up the slope of the Santa Cruz Mountains on the opposite side of the highway and includes six beaches (Entrix 2005).The proposed pipeline would cross two coastal access points along Highway 1, at Lombardi Gulch and Baldwin Creek. In addition, the Ohlone Bluff Trail runs along the railroad tracks in proximity to the proposed pipeline alignment (between Stations 25+00 and 42+00 (Figures 6 and 7, Appendix B). Construction of the proposed project could temporarily impact recreational access. Access to certain areas would be impeded by construction activities, equipment and materials staging and construction crew parking. In addition, operation and

maintenance activities, including mowing and periodic staff visits could result in short-term disruption to recreation activities. Given that these impacts are short term and would occur only during construction, the project would not cause substantial deterioration of recreational facilities and the impact would be less than significant.

b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

No Impact. The proposed project would replace an existing water pipeline. It would not include construction or expansion of recreational facilities; therefore the proposed project would have no impact associated with construction or expansion of recreational facilities.

16. TRANSPORTATION/TRAFFIC. Would the project:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Less Than Significant Impact. For two-lane state highways, measures of effectiveness (MOE) for highway performance are defined in terms of Level of Service (LOS) and highway capacity. MOEs for Highway 1 are established by the HCM 2010 and Caltrans. Exhibit 15-7 "Automobile LOS for Two-Lane Highways" of the HCM summarizes the LOS criteria for two-lane highways. Additionally, Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on State Highway facilities. If an existing State highway facility is operating at less than the appropriate target LOS, then the existing MOE should be maintained (Caltrans 2002). Highway 1 (along the project site) operates at a satisfactory LOS "D" during the a.m. and p.m. peak hours. Additionally, based on existing (2012) Caltrans data, the Average Annual Daily Traffic (AADT) on Highway 1 (within the project influence area) is 12,000 vehicles with 1,069 vehicles occurring during the a.m. peak hour and 1,136 vehicles occurring during the p.m. peak hour. Existing capacity is adequate on Highway, as relevant thresholds for oversaturated conditions have not been met.[15]

The pipeline itself would not generate vehicle trips on a regular long-term basis. Once construction is complete, some trips would be generated for routine operations and maintenance activities. However, the ongoing trip generation would be the same or similar to the existing operations and maintenance (O&M) activities of the existing pipeline. Additionally, the proposed project would not permanently alter any public road. According to the PEIR, existing pipeline O&M activities consist of vegetation maintenance, monitoring, and emergency response and repair. It is likely that vehicle

[15] Based on Chapter 15 of the HCM 2010, "The capacity of a two-lane highway under base conditions is 1,700 passenger cars per hour (pc/h) in one direction, with a limit of 3,200 pc/h for the total of the two directions. Because of the interactions between directional flows, when a capacity of 1,700 pc/h is reached in one direction, the maximum opposing flow would be limited to 1,500 pc/h." Under existing conditions, Highway 1 would not be considered over capacity based on this definition.

trips associated with vegetation maintenance and monitoring would remain substantially the same as in the existing condition, while vehicle trips for emergency response and repair would be decreased once the project is completed.

Short-term increases in traffic resulting from construction activities would be expected. During project construction, there would be construction vehicle, material delivery and worker vehicle trips. These trips were estimated in Table 2-2 of the PEIR. The proposed project would construct a portion of the NCP Reach. However, to provide a conservative estimate of construction vehicle trips, trips associated with the entire NCP Reach, as shown in Table 2-2 of the PEIR, are evaluated. Construction of the project is estimated to take approximately eight months or approximately 160 workdays. Construction activities would take place during standard City work hours, which are 7:00 a.m. to 6:00 p.m.

According to Table 2-2 in the PEIR, construction of the NCP Reach would require between 475 and 520 total vehicle trips over the entire construction period. These would be trips associated with the delivery of pipe and materials. Construction equipment and workers would generate additional vehicle trips. Anticipated equipment for the project would consist of tracked excavators, soil compactors, and ½-ton and ¾-ton trucks. Construction equipment and materials would be staged in a disturbed area near Station 89+00. This location is currently used by adjacent farmers to stage farm equipment and manure/fertilizers.

A maximum of 16 construction workers per day would be required during construction of the project. Table G shows the anticipated peak hour and daily trip generation during construction of the project associated with the above construction activities and worker trips. While partial lane closures could be required at times to accommodate construction work adjacent to Highway 1, it is anticipated that traffic flow would be maintained around these areas at all times.

The trip generation calculation assumes that all deliveries would take place during the peak hour with half occurring during the a.m. peak hour and half occurring during the p.m. peak hour. This is highly unlikely to occur, but provides the most conservative estimate of peak hour trip generation. In addition, the construction workers are assumed to drive by themselves (i.e. no carpooling), and the excavator and soil compactor would be moved to the work site each day. As shown in Table G, during construction, the project would generate 60 daily trips with 30 trips occurring during the a.m. peak hour and 30 trips occurring during the p.m. peak hour.

Table G: Trip Generation During Construction

Construction Vehicles				Vehicle Trip Generation						
					AM Peak Hour			PM Peak Hour		
Description	**Quantity**	**Type**	**PCE**	**ADT**	**in**	**out**	**total**	**in**	**out**	**total**
Workers	16	Passenger	1	32	16	0	16	0	16	16
Deliveries	4	Large Truck	2	8	2	2	4	2	2	4
Tracked Excavator	1	Large Truck	2	2	1	0	1	0	1	1
Soil Compactor	1	Large Truck	2	2	1	0	1	0	1	1
1/2 & 3/4-Ton Truck	2	Passenger	1	4	2	0	2	0	2	2
			Total	***48***	***22***	***2***	***24***	***2***	***22***	***24***

Construction Vehicles				PCE Trip Generation						
					AM Peak Hour			PM Peak Hour		
Description	**Quantity**	**Type**	**PCE**	**ADT**	**in**	**out**	**total**	**in**	**out**	**total**
Workers	16	Passenger	1	32	16	0	16	0	16	16
Deliveries	4	Large Truck	2	16	4	4	8	4	4	8
Tracked Excavator	1	Large Truck	2	4	2	0	2	0	2	2
Soil Compactor	1	Large Truck	2	4	2	0	2	0	2	2
1/2 & 3/4-Ton Truck	2	Passenger	1	4	2	0	2	0	2	2
			Total	***60***	***26***	***4***	***30***	***4***	***26***	***30***

Notes:
PCE = passenger car equivalent. A large truck has a PCE of 2. All other vehicles have a PCE of 1.
ADT = average daily traffic

These trips include a calculation of Passenger Car Equivalent (PCE) trip generation (see Table G for definition), as large trucks take longer to start up and are not as easily maneuvered as passenger cars, large trucks consume more roadway capacity than passenger cars. The project construction trips noted above and in Table G would not cause a substantial increase in traffic on Highway 1 relative to existing conditions and therefore would not be expected to degrade levels of service or exceed the capacity of the roadway. Furthermore, project construction traffic would exist only during the 8-month construction period and therefore any associated traffic impacts would be temporary. Therefore, the project would not conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system and the impact would be less than significant.

The primary impacts from construction truck traffic would be slower movements and larger turning radii of the trucks compared to passenger vehicles. The project work zone would not encroach upon Highway 1 and therefore would not affect the available travel width. However, temporary lane closures or partial lane closures could be required when working close to Highway 1, or for equipment deliveries. Limited road closures would be required on adjacent roads south of Highway 1, when pipeline construction and associated trenching cross these roads. Temporary delays due to lane closures would represent a temporary inconvenience and therefore would not be considered significant. Implementation of a construction-period traffic control plan as a condition of project approval would ensure the safe movement of vehicles along the pipeline alignment at road crossings. Such a plan would also minimize traffic delays caused by project construction.

Recommended Condition of Approval TRAFFIC-1: Prior to construction, prepare and implement a traffic control plan for the affected roadways. The traffic control plan must comply with State Parks and Santa Cruz County's encroachment permit requirements and will be based on detailed design plans. The affected jurisdiction will review and approve the plan(s) prior to construction. The traffic control plan will include, but not be limited to the following measures:

- Limit the construction work zone to a width that, at a minimum, maintains traffic flow past the construction zone using appropriate signage and flagmen. If this cannot be achieved, a detour plan will identify appropriate and safe detour routes and installation of signage warning of road closure and detour routes.
- Identify areas where construction traffic and construction activities will be limited to non-peak hours to reduce traffic flow restrictions or delays, such as temporary road closures required when the pipeline corridor crosses a road.
- Prepare a truck routing plan to minimize impacts from construction truck traffic during equipment or material delivery and/or disposal.
- Provide continued access to individual properties adjacent to the pipeline construction alignment and ensure that emergency access will not be restricted. Maintain steel trench plates at the construction sites to restore access across open trenches, as needed. During non-working hours or in the event of an emergency, trenches will be covered with such plates or backfilled.

- Access for emergency vehicles will be maintained at all times. The emergency service providers will be notified of the timing, location, and duration of construction activities throughout the construction period.
- No material or equipment shall be stored where it will interfere with the safe passage of public traffic. At the end of each work day and at other times when construction operations are suspended for any reason, the equipment and other obstructions shall be removed from roads open for use by public traffic. Spillage resulting from hauling operations along or across any public traveled way shall be removed promptly.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

No Impact. In 2000, at the request of the Santa Cruz County Regional Transportation Commission (SCCRTC) local jurisdictions in Santa Cruz County exercised the option initiated by Assembly Bill 2419. The Bill allowed urbanized areas the option to be exempt from the preparation and implementation of a congestion management program (CMP). Consequently, there is no CMP in Santa Cruz County. Measures of effectiveness, as well as the potential circulation impacts associated with the project are discussed in Section VI.16(a). Therefore, no impact to a congestion management program would result from the implementation of the proposed project.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

No Impact. The proposed project is for the construction of a pipeline. The project will not construct, install, or erect any structure which extends into or above air space, or which constitutes an obstruction to air navigation, or which interferes with the use of flight air traffic patterns. Therefore, no impacts to air traffic patterns would result from the proposed project.

d) Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?

Less Than Significant Impact The project site is located south of Highway 1. It is not anticipated that construction of the proposed project would interfere or obstruct an existing roadway design feature. In addition, the proposed project does not include any design features that may increase hazards as the pipeline would be underground. Therefore no impacts associated with hazardous design features would result from the proposed project. The impact would be less than significant.

e) Result in inadequate emergency access?

Less Than Significant Impact. The proposed project would replace an existing water pipeline. Once completed, the proposed project would not interfere or encroach onto an emergency access route. Construction activities may temporarily restrict vehicular traffic; however construction activities would not result in road closures or similar activities that would cause significant delay to emergency vehicles. As previously

discussed in Section VI.16(a), Highway 1 is expected to operate at satisfactory LOS "D" during and after construction of the proposed project and therefore no significant delay to emergency vehicles would be experienced during construction. The impact would be less than significant.

f) Conflict with adopted policies, plans, or programs supporting alternative transportation (for example, bus turnouts, bicycle racks)?

Less Than Significant Impact. The proposed project would replace an existing water pipeline. Once completed, it would not interfere or encroach onto existing bicycle lanes or routes as there are no bike routes on Highway 1 (within the project boundaries). After construction of the proposed project, conditions on Highway 1 and the adjacent transportation network would be restored to the existing condition; and therefore no impacts associated with policies, plans, or programs supporting alternative transportation would result from the proposed project. The impact would be less than significant.

17. UTILITIES AND SERVICE SYSTEMS. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

No Impact. The implementation of the proposed project would not lead to an exceedance of wastewater treatment requirements of the applicable Regional Water Quality Control Board, as the project would not generate or discharge wastewater. No impacts would occur.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?

Potentially Significant Unless Mitigation Incorporated. The proposed project would not result in the construction of new water treatment facilities or expansion of such facilities. The proposed project would install replacement water pipelines along a portion of the NCS. As indicated elsewhere in this document, the construction of the proposed project could cause potentially significant environmental effects in a number of categories (e.g., biological resources, cultural resources). Development of the proposed project would provide beneficial effects by replacement and modification of outdated facilities of the NCS. The replacement of the existing pipeline would address the current physical conditions of the facilities and enhance their reliability to provide a consistent quality water supply. Applicable and required permits (e.g., Regional Water Quality Control Board stormwater permit) would be obtained. In addition, measures (e.g., Best Management Practices, Best Available Control Technologies) have been incorporated into the project design along with conformance with appropriate guidelines and policies to reduce possible environmental impacts to the extent practicable. Potentially significant environmental impacts associated with the proposed project would be reduced to less than significant with implementation of the mitigation measures included in this Initial Study/Mitigated Negative Declaration.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less Than Significant Impact. The proposed project would not affect the amount of on-site runoff and therefore would not lead to the expansion of existing stormwater facilities. No additional drainage facilities would be required and the impact is less than significant.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

Less Than Significant Impact. The project would not result in an increase in the amount of water that is distributed to the site currently. New or expanded water supply entitlements would not be required to serve the project.

The proposed project would result in the temporary shutdown of portions of the NCS that transport raw water to the City's treatment plant and therefore could temporarily affect the City's water supply reliability. The overall goal of the proposed project is to improve the reliability and number of leaks on the NCS. The City would ensure sufficient supplies exist to supply the City's water needs during temporary, construction-related shut downs. Therefore, there would be no significant impact on water supplies as a result of project implementation. The impact would be less than significant.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

No Impact. Implementation of the proposed project would not result in a change in the wastewater treatment needed. See Section VI.17(a) above.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

Less Than Significant Impact. Implementation of the proposed project would generate solid waste associated with construction activities, including construction materials, trench spoils, and general refuse. To minimize the amount of solid waste, some solid waste generated by the proposed project would be recycled on site. Other non-hazardous waste would be hauled to local disposal centers for recycling or taken to landfills. Solid wastes generated during construction activities would be removed by licensed haulers to the City's Sanitary Landfill located at 605 Dimeo Lane. The City of Santa Cruz Landfill currently has the capacity to accept 535 tons per day and a total capacity of 7.12 million cubic yards. Based on the current usage rate, the City Sanitary Landfill has sufficient capacity through 2037.[16] The quantity of solid waste materials associated with construction would be relatively small, limited to the construction period, and would not pose a significant impact upon existing landfills. No additional

[16] Santa Cruz County Local Agency Formation Commission, 2005. Public Review Draft Countywide Service Review. June. Available online at: http://www.santacruzlafco.org/pages/reports/CSR%20Public%20Review%20Draft/06.SolidWaste.06-05.pdf (Accessed 3 June 2014).

solid waste would be generated by long-term operations of the proposed project. The impact would be less than significant.

g) Comply with federal, state, and local statutes and regulations related to solid waste?

Less Than Significant Impact. As described in Section VI.17(f), implementation of the proposed project would generate solid waste associated with construction activities. To the extent possible, solid waste would be recycled either on-site or transported to a local disposal center for recycling. Overall, the quantity of solid waste resulting from construction would be relatively small and limited to the construction period. The proposed project would comply with federal, State, and local statutes and regulations related to solid waste. This impact would be less than significant.

18. MANDATORY FINDINGS OF SIGNIFICANCE. Does the project:

a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Potentially Significant Unless Mitigation Incorporated. Implementation of the mitigation measures recommended in this Initial Study/Mitigated Negative Declaration would ensure that the construction and operation of the proposed project would not substantially degrade the quality of the environment; reduce the habitat, population, or range of a plant or animal species; or eliminate important examples of California history or prehistory. The proposed project has been designed to avoid impacts to sensitive resources, including riparian vegetation, wetlands, drainage areas, cultural resources, and other sensitive areas. Section VI.4, Biological Resources, includes mitigation measures to minimize impacts to special-status species, riparian areas, wetlands, and migration/wildlife corridors. Mitigation measures are provided in Section VI.5, Cultural Resources, in the event that unanticipated archaeological or paleontological resources and/or human remains are identified in the project area during construction. Therefore, identified impacts would be reduced to less than significant with the implementation of mitigation measures.

b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)

Less Than Significant Impact. The *CEQA Guidelines* require a discussion of significant environmental impacts that would result from project-related actions in combination with “closely related past, present, and probably future projects: located in the immediate vicinity (CEQA Guidelines Section 15130[b][1][A]). Cumulative environmental impacts are those impacts that by themselves are not significant, but when considered with impacts occurring from other projects in the vicinity would result in a cumulative impact. Related projects considered to have the potential of creating cumulative impacts in association with the proposed project consist of projects that are

reasonably foreseeable and that would be constructed or operated during the life of the proposed project.

The proposed project would be located in a rural, lightly populated, open space/agricultural area. No other construction projects are anticipated in the immediate area of the proposed pipeline and given the timeframe for this project (construction in 2015) are unlikely to be under construction at the same time as the proposed project. As described in this Initial Study/Mitigated Negative Declaration, impacts associated with the proposed project would be temporary, construction-related and would be reduced to less than significant with implementation of the mitigation measures contained herein. Therefore, the proposed project would not make a considerable contribution towards a cumulative impact related to construction impacts. Additionally, the proposed project would not generate a significant amount of greenhouse gas emissions and would therefore not result in a cumulatively considerable impact to global climate change. The proposed project would improve the reliability of the existing water distribution system.

c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

Potentially Significant Unless Mitigation Incorporated. As described in this Initial Study/Mitigated Negative Declaration, any potential environmental impacts from the proposed project would be reduced to less than significant with the implementation of the recommended mitigation measures. With implementation of measures both incorporated into the project design and recommended as mitigations to reduce the impacts associated with aesthetics, cultural resources, geology and soils, and hazards, the proposed project would not result in substantial adverse effects on human beings.