

SOUTH COAST CONDUIT/UPPER REACH RELIABILITY PROJECT

Draft Environmental Impact Statement/ Environmental Impact Report

Prepared for:



U.S. Department of the Interior
Bureau of Reclamation



Cachuma Operation and
Maintenance Board

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EXECUTIVE SUMMARY

ES.1 INTENDED USES AND AUTHORIZING AGENCIES

The U.S. Bureau of Reclamation (Reclamation) and the Cachuma Operation and Maintenance Board (COMB) have prepared this Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) to identify and evaluate the potential environmental impacts associated with implementation of the proposed South Coast Conduit/Upper Reach Reliability Project (hereinafter “project”).

Reclamation is the federal lead agency for National Environmental Policy Act (NEPA) compliance and preparation of the EIS for the proposed project, and COMB is the state lead agency for California Environmental Quality Act (CEQA) compliance and preparation of the EIR for the project. Reclamation and COMB have prepared this joint EIS/EIR to assess the environmental impacts associated with construction and operation of the proposed project. The purpose of this document is to inform the public and the permitting agencies about the potential adverse and beneficial environmental impacts of the proposed project and its alternatives, and to recommend all feasible mitigation measures.

This document was prepared in accordance with the requirements of NEPA (42 USC 4341 *et seq.*) and Council on Environmental Quality (CEQ) regulations for implementing NEPA (40 Code of Federal Regulations [CFR] 1500-1508), which require the evaluation of potential environmental impacts resulting from federal actions. The primary federal action associated with the project is the issuance of permits authorizing pipeline construction across stream channels in accordance with Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act. This action may result in significant effects on the environment, thus constituting a major federal action requiring NEPA review (42 USC 4341 *et seq.*).

At this time, however, this document is not serving as a public notice of application for any permits. Public notice of any permit application will be separate from but concurrent with the public review for this EIS/EIR.

This EIS/EIR also fulfills the requirements of CEQA (Public Resources Code, Section 21000 *et seq.*) and State CEQA Guidelines (14 California Code of Regulations [CCR], Section 15000 *et seq.*). According to CEQA Guidelines Section 15121(a) (CCR, Title 14, Division 6, Chapter 3), the purpose of an EIR is to serve as an informational document that:

...will inform public agency decision-makers and the public generally of the significant environmental effect of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project.

This Draft EIS/EIR evaluates the direct, indirect, and cumulative impacts of the project in accordance with the provisions set forth in the CEQA Guidelines. It will be used to address potentially significant environmental issues and to recommend adequate and feasible mitigation measures that, where possible, could reduce or eliminate significant environmental impacts.

Other state and local agencies that have jurisdiction or regulatory responsibility over components of the project would also rely on this EIS/EIR for CEQA compliance as part of their decision-making processes.

ES.2 DESCRIPTION OF THE PROJECT AND ALTERNATIVES

ES.2.1 Project Purpose and Need/Objectives

NEPA Project Purpose and Need

The purpose of the project is to increase the operational flexibility, reliability, and the conveyance capacity of the South Coast Conduit (SCC) between the South Portal of the Tecolote Tunnel (SPTT) and the Corona Del Mar Water Treatment Plan (CDMWTP) to accommodate peak demand levels and to allow maintenance of the pipeline. As limitations and age of the original equipment, significant system modifications, and increased demands constrain the ability of the SCC to function at the system's original design capacity, COMB is forced to rely on water stored in Lauro, Ortega, and Carpinteria reservoirs to meet regional water needs. In addition, no redundant supply or pipeline exists to convey Cachuma Project water or State Water Project (SWP) water to the South Coast if the Upper Reach of the SCC is out of service due to scheduled and/or unexpected repairs. As the Upper Reach of the SCC has the largest demand deficit (i.e., the Upper Reach capacity is insufficient to meet demands) and is located upstream from the sources of demand, the proposed improvements would allow more water flow farther along the pipeline to improve the level of service and reliability. The proposed project would increase reliability and provide COMB the ability to perform regularly scheduled inspections and maintenance to one pipeline while the second pipeline is operational. Operational flexibility would increase due to the ability to provide higher flow rates (up to the 65 million gallons per day [MGD] tunnel capacity) to CDMWTP and increased flow rates to facilities downstream of the CDMWTP during times of peak demand. The total amount of water delivered per year, however, would not increase.

CEQA Project Objectives

The project includes construction of a second water supply pipeline with appurtenant facilities that would increase the operational flexibility, reliability, and capacity of the SCC between the SPTT and the CDMWTP. The EIS/EIR examines in detail those alternatives that COMB determines could "feasibly attain most of the project objectives" (CEQA Guidelines Section 15126.6[f]). The objectives of the proposed project are to:

- Replace deteriorated water infrastructure with adequate structures to accommodate regional water needs and improve the level of service and operability;
- Provide a second pipeline to convey Cachuma Project water or SWP water to the South Coast if the Upper Reach of the SCC is out of service due to scheduled and/or unexpected repairs; and
- Increase operational flexibility by providing higher flow rates to accommodate regional water needs during times of peak demand.

ES.2.2 Project Location

The project site is located in Glen Annie Canyon, north of the City of Goleta, in Santa Barbara County, California. The project site encompasses the area surrounding the existing SCC between the SPTT and the CDMWTP.

ES.2.3 Project Alternatives

NEPA (40 CFR 1502.14[a]) and CEQA Guidelines (15126.6) require that an EIS and an EIR examine alternatives to a project in order to explore a reasonable range of alternatives that meet most of the basic project objectives, while reducing the severity of potentially significant environmental impacts. The EIS/EIR will compare merits of the alternatives and determine an environmentally superior alternative. The five

alternatives that were selected to be carried forward for detailed analysis in the EIS/EIR include the Preferred Alternative, Alternative A (parallel) pipeline, Alternative B (non-parallel) pipeline, the No Project Alternative, and the No Action Alternative.

Preferred Alternative

The Preferred Alternative alignment would be constructed adjacent (parallel) to the existing SCC pipeline along portions of existing easements and south of the existing SCC pipeline from approximately Station 60+00 to the east end of Glen Annie Reservoir and from east of Glen Annie Creek to the Corona Del Mar turnout. This alignment would require crossings at the West Fork and the main stem of Glen Annie Creek.

Construction of the Preferred Alternative pipeline alignment would connect to SCC structures at the South Portal and CDMWTP, and possibly Glen Anne structure. A new South Portal diversion/wasteway structure would be constructed to divert water into each pipeline. Magnetic flowmeters would be installed at the South Portal (or CDMWTP) to provide improved flowrate measurement accuracy. In order to shut down one of the pipelines for maintenance tasks, the structure would include the installation of slide gates (or butterfly valves). Modifications to the CDMWTP turnout structure would also be required for flow control. The existing vent structure would potentially be demolished because the turnout structure functions as a hydraulic control structure; however, a vacuum release valve (or vent) would need to be provided downstream of the CDMWTP turnout. The Preferred Alternative alignment would be connected to the Glen Anne Turnout structure via an interconnection pipeline into the Glen Anne Turnout upstream of the weir that regulates the hydraulic grade line (HGL) to the Goleta West Conduit (GWC).

Alternative A (Parallel)

The Alternative A pipeline would be constructed adjacent to the existing pipeline alignment and would require crossings at the West Fork and the main stem of Glen Annie Creek. Construction of the Alternative A pipeline alignment would be similar to that previously described for the Preferred Alternative. The Alternative A pipeline would require construction of an intertie at the Glen Anne Turnout structure with improvements to the turnout structure that maintain the HGL to the GWC.

Alternative B (Non-Parallel)

The Alternative B pipeline alignment would include portions along the existing pipeline easements; however, this alignment would generally be constructed southwest or north of the existing pipeline. Similar to the Preferred Alternative, Alternative B would require crossings at the West Fork and the main stem of Glen Annie Creek. Construction of the Alternative B pipeline alignment would be similar to that previously described for the Preferred Alternative. Several options would be evaluated for connecting the Alternative B pipeline to the Glen Anne Turnout structure, including connecting the proposed Alternative B pipeline to the Glen Anne Turnout upstream of the weir that regulates the HGL to the GWC, constructing an intertie of the Alternative B pipeline to the GWC without constructing a supplemental pipeline to the existing Glen Anne Structure, and transporting treated water from the CDMWTP to the GWC.

No Project Alternative

The No Project Alternative would include construction of site improvements, regular (annual) maintenance, and operational activities that could occur with issuance of federal permits at stream crossings. Regular maintenance activities include inspection of the air valves and blowoff valves for operability, annual inspection of the right-of-way for encroachments, and maintenance of the turnouts and Glen Anne meter. As the SPTT and Glen Anne meter and turnout structures are substantially corroded, these structures would need to be replaced as part of site improvements. Additionally, existing downstream degradation of all stream

crossings would require substantial improvements to protect the pipeline or reduce the potential for replacement of the pipeline at the crossings. This alternative would include stream crossing work that would require a Section 404 permit from the U.S. Army Corps of Engineers (USACE). Reclamation approval would be needed for construction of the site improvements (MP620 permit for additions and alterations). Under this alternative, long shutdowns would be required to accommodate the reasonably foreseeable site improvements.

No Action Alternative

The No Action Alternative would include no site improvements, but regular (annual) maintenance and operational activities would continue to occur as in the past. These include inspection of the air release valves and blowoff valves for operability and annual inspection of the right-of-way for encroachments. The poor condition of the concrete in the SPTT due to hydrogen sulfide gas within the water would ultimately cause this structure to fail. The consequences of that failure would include an uncontrolled release of water at a rate of 40+ MGD for a minimum of 6 hours and possibly up to 10 hours. The water would flow down slope through the avocado orchard and into West Fork of Glen Annie Creek causing severe erosion and damage or removal of vegetation and wildlife habitat. The two residential structures between the SPTT and Glen Annie Reservoir would be damaged. The water and much of the eroded soil would be contained within Glen Annie Reservoir. The remainder of the eroded soil would be deposited between the SPTT and Glen Annie Reservoir where water velocity slows enough for deposition. The entire SCC would be out of service for the two to four weeks needed to repair the SPTT. The Goleta Water District, Santa Barbara City, Carpinteria Valley Water District, and Montecito Water District would be out of water within two weeks of structure failure, thereby disrupting water service to 200,000 residents of the South Coast.

Erosion of the creek bed or damage to the pipeline and its coating caused by erosion could result in pipeline failure at either the West Fork of Glen Annie Creek or the main stem of Glen Annie Creek. Failure of the pipeline at the West Fork crossing would have effects similar to those described for failure of the SPTT. Failure of the pipeline at the main stem crossing would have the same type of effects, but a citrus orchard could be affected and the erosive effects of the released water would occur downstream to Goleta Slough and the Pacific Ocean.

Glen Anne and Corona Del Mar turnout structures and Glen Anne meter would not be upgraded/replaced to improve operations.

ES.3 ENVIRONMENTAL ISSUES

The following describes the impacts and mitigation measures for the Preferred Alternative by resource area. Impacts of Alternatives A and B would be similar to those for the Preferred Alternative because the different pipeline routes are similar. The No Project Alternative would involve much less construction and would have fewer environmental impacts but would not meet project objectives. The No Action Alternative would have no construction and also would not meet project objectives. Furthermore, the lack of site improvements could result in failure of facilities with greater environmental damage than implementation of the improvements. A comparison of impacts by alternative is presented below in ES.6.

Aesthetics/Visual Resources

Impacts on aesthetics/visual resources were evaluated by determining the potential for the proposed project to adversely affect a scenic vista; degrade the existing visual character or quality of the site and its surroundings; and create new sources of substantial light or glare. Construction and operation of the proposed project pipeline alignment would not substantially change any existing scenic vistas. Existing views of the project area from public view corridors, including U.S. 101, Cathedral Oaks Road, and Glen Annie Road, are extremely limited due to distance from the project site and intervening topographic features. Vehicles

traveling on these roadways would not be capable of discerning any changes (i.e., temporary vegetation clearing) to the project area. Additionally, the Revegetation Plan, which is described in Section 2.3.2, would require that the project site be revegetated to pre-project conditions, thereby restoring views to their original condition. As no scenic vistas would be substantially altered as a result of construction or operation of the proposed project, impacts would be less than significant, and no mitigation would be required.

The proposed project would result in substantial clearing, grubbing, excavation, and grading that would substantially degrade the existing visual character or quality of the site and its surroundings. Throughout these processes, vegetation would be cleared to ground level, and roots of woody vegetation would be removed from the area to be trenched, resulting in short-term impacts to the visual character and quality of the project site and its surroundings. However, implementation of a project Revegetation Plan (as required by **Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a**) would ensure that vegetation coverage would be restored to pre-project conditions, therefore maintaining the existing visual character of the project site. Additionally, the project would potentially result in improper litter disposal during construction. **Mitigation Measure AES-2** would require that covered receptacles be provided onsite to prevent trash from blowing offsite. The visual character of the project site would be temporarily degraded but would not be permanently altered or degraded, and impacts would be significant but feasibly mitigated.

No significant impacts associated with new sources of light or glare would result from construction or operation of the proposed project. The proposed project would not introduce new sources of light or glare to an area that currently has minimal nighttime lighting. During proposed construction, all construction activities would occur during daylight hours so that no additional lighting would be required. During proposed operation, sources of light and glare would be similar to existing conditions because the project does not include any new lighting fixtures. As no new sources of light or glare would be introduced, no impacts would occur, and mitigations would not be required.

Air Quality

Impacts on air quality were evaluated by determining the potential for the proposed project to conflict with implementation of an applicable air quality plan; exceed an ambient air quality standard or contribute to an existing or projected air quality standard violation; result in a net increase of any criteria pollutant for which the project region is in nonattainment; expose sensitive receptors to substantial pollutant concentrations; and create objectionable odors.

Proposed construction activities would produce air emissions of nonattainment pollutants from diesel-powered mobile equipment and fugitive dust (PM₁₀), and operations would produce minor amounts of nonattainment pollutants due to pipeline maintenance and inspection activities. However, proposed earthmoving activities would implement County standard dust control measures as part of the project in accordance with the 2004 and 2007 Clean Air Plans and the Santa Barbara County 1979 Air Quality Attainment Plan. Compliance with these measures would ensure that the proposed project would not conflict with applicable air quality plans, and impacts would be less than significant. Mitigation would not be required.

Project construction and operation would not exceed any ambient air quality standards or contribute to an existing violation. Construction would produce combustive emissions due to the use of diesel-powered mobile equipment. Due to the mobile and intermittent nature of these sources, their combustive emissions would not be substantial at any location. Earth-moving activities could produce uncontrolled fugitive dust emissions at a rate of about 55 pounds of PM₁₀ per day per acre of disturbed land; however, implementation of County standard dust control measures typically reduces such emissions by at least 50 percent. This control level would ensure that earthmoving activities would not contribute to an exceedance of a PM₁₀ or

PM2.5 ambient air quality standard. Impacts would be less than significant, and mitigation would not be required.

Construction and operation would not result in a net increase of any criteria pollutant for which the project region is in nonattainment. The Santa Barbara County Air Pollution Control District (APCD) has not developed quantitative thresholds to determine the significance of construction emissions under CEQA. The analysis used annual conformity thresholds of 100 tons of volatile organic compounds (VOCs) and oxides of nitrogen (NO_x). Construction would result in emissions of VOC, carbon monoxide (CO), NO_x, and particulate matter less than 10 microns in diameter (PM₁₀) that are substantially below the applicable conformity thresholds. The APCD has developed the following daily emission thresholds to determine the significance of operational emissions for CEQA or NEPA purposes: (1) for all source types, 240 pounds of reactive organic compounds (ROCs) and NO_x and 80 pounds of PM₁₀; and (2) for on-road vehicles sources, 25 pounds of ROCs and NO_x. Operations would result in emissions of VOC, CO, NO_x, and PM₁₀ that are substantially below the APCD daily significance thresholds, and annual operational emissions that are substantially below the applicable conformity thresholds. Therefore, project construction and operation would not result in a net increase in any criteria pollutants and impacts would be less than significant. Mitigation would not be required.

The proposed project would not expose sensitive receptors to substantial pollutant concentrations during construction or operation. The only sensitive receptors in proximity to the proposed pipeline route are two residences. Since these residences are located at least 250 feet (76 meters) away from proposed construction activities, emissions would substantially disperse by the time they reach these locations. Due to a minimal amount of maintenance and inspection activities, operational emissions would nominally impact these locations. Therefore, impacts would be less than significant, and mitigation would not be required.

The proposed project would not create odors that would affect a substantial number of people. Construction and operation would increase air pollutants mainly due to the combustion of diesel fuel. The mobile nature of the proposed diesel-powered sources and the distance between these sources and the public would allow for adequate dispersion of their emissions to below objectionable odor levels. As the proposed project would not create objectionable odors that would affect a substantial number of people, impacts would be less than significant, and mitigation would not be required.

Biological Resources

Impacts on biological resources were evaluated by determining the potential for the proposed project to adversely affect special status plant or wildlife species; adversely affect special status natural vegetation communities; adversely affect wildlife movement corridors, breeding or spawning habitats, and nursery habitats; disrupt local biological communities; and conflict with local plans or ordinances protecting biological resources. Construction activities would result in the loss of individuals or habitat for special status plants and wildlife. Specifically, the proposed project would result in the removal of 0.37 acre (0.15 hectare) of Santa Barbara honeysuckle habitat, and could affect special status wildlife species including the California red-legged frog, coast range newt, two-striped garter snake, and southwestern pond turtle. The California red-legged frog could be affected during trenching through the West Fork and main stem of Glen Annie Creek. Impacts to special status plants and wildlife would be significant but feasibly mitigated by the following measures: **BIO-1.1**, requiring that Santa Barbara honeysuckle be avoided during construction; **BIO-1.2**, requiring that Santa Barbara honeysuckle restoration measures be included in the project Revegetation Plan; **BIO-1.3**, requiring a Special Status Special Protection Plan; and **BIO-1.4**, requiring that Glen Annie Creek (including West Fork) bed and banks be restored to pre-project conditions. Implementation of these mitigation measures would ensure that residual impacts would be less than significant.

Similarly, construction would result in a temporary loss of riparian woodland and seasonal wetlands, and a long-term loss of oak woodland. Construction of the proposed project would remove approximately 0.12 acre (0.05 hectare) of riparian woodland from creek crossings at the West Fork and main stem of Glen Annie Creek; however, **Mitigation Measure BIO-2.1** would ensure that all removed riparian woodland would be replaced at a 2:1 ratio. Implementation of this measure would reduce residual impacts on riparian woodland to less than significant. Construction would also result in the removal of 3.37 acres (1.36 hectares) of coast live oak woodland. While **Mitigation Measure BIO-2.2** would include planting coast live oak trees, it can take up to many decades for coast live oaks to mature and provide adequate habitat. This long-term loss of oak woodland habitat would be significant and unavoidable. Construction activities would occur during the dry season such that no permanent loss of Waters of the U.S. would occur, and impacts would be less than significant. Impacts to seasonal wetlands would also be less than significant because any affected wetlands are small and not well developed due to annual scouring by storm runoff during the rainy season. However, **Mitigation Measure BIO-1.4**, as previously discussed, would further reduce impacts on seasonal wetlands.

Construction activities could also adversely affect wildlife migration of breeding habitat for migratory birds and wildlife. Damage to and removal of coast live oak and riparian woodlands, as previously described, would disturb cover, roosting, and nesting habitat for common wildlife and migratory birds, including the red-tailed hawk, red shouldered hawk, white-tailed kite, and American kestrel. Additionally, birds listed as California Species of Special Concern for breeding, including yellow warbler, may also be affected by project construction. **Mitigation Measure BIO-3** would incorporate additional measures into the Special Status Species Protection Plan to avoid or reduce impacts to migratory and resident breeding birds. Implementation of this measure, along with **Mitigation Measures BIO-1.2, BIO-1.3, BIO-2.1, and BIO-2.2**, as previously described, would reduce residual impacts to less than significant.

Construction activities would not substantially disrupt local plant or wildlife communities. Approximately 15.0 acres (6.1 hectares) of native and naturalized vegetation would be removed during project construction, such as coastal scrub and chaparral. Because these plant communities are common and widespread in the region, the removed amount would be small, and recovery would be rapid, this temporary loss would be less than significant. Removal of non-native plant communities would be less than significant. While removal of vegetation along the pipeline corridor could affect wildlife habitat and erosion potential (affecting plant communities and wildlife downslope of the work area), impacts would be less than significant due to the small area affected, short duration of the work, and rapid habitat recovery. Although impacts would be less than significant, **Mitigation Measure BIO-4a** would ensure that the Revegetation Plan would include a seed mix appropriate for coastal sage scrub and chaparral areas as well as non-native grasslands. This would ensure that revegetation of the entire pipeline disturbance corridor would occur. Residual impacts would be less than significant.

The spread of invasive exotic plant species already present onsite could occur during project construction. Additionally, invasive exotic plant species could be introduced from vehicles and equipment coming from other construction sites. Cape ivy is an invasive species of particular concern, and other species that would require careful management include black mustard, castor bean, veldt grass, and tree tobacco. Impacts resulting from the spread of invasive species during construction would be significant but feasibly mitigated by the following mitigation measures: **BIO-4b.1**, requiring mapping of areas of invasive exotic plant infestation; **BIO-4b.2**, requiring that Cape ivy and other weed species be controlled prior to construction; **BIO-4b.3**, invasive exotic plant species infestation in the vicinity of the Ellwood Reservoir shall be treated to reduce growth; **BIO-4b.4**, requiring extreme caution when handling equipment in areas identified as having exotic plant species infestations; and **BIO-4b.5**, requiring that the Revegetation Plan include an invasive exotic plant species control component. Implementation of these mitigations would reduce construction related residual impacts to less than significant. Project operation could have a limited potential to spread invasive exotic plant species because only short unpaved roads would be used for site access, resulting in a less than significant impact. However, two mitigations are recommended to reduce operational impacts:

BIO-4b.6, requiring preparation of a weed manual; and **BIO-4b.7**, requiring that a biologist inspect unpaved access roads annually for invasive exotic plant species. Implementation of these measures would ensure that impacts would be less than significant.

Water transported in the pipeline from Lake Cachuma is unfiltered and could transport non-native species. During use of blowoff valves to drain segments of the pipeline, released water could introduce new species from the Cachuma watershed into West Fork and main stem of Glen Annie Creek, the reservoir, and tributary waterways. However, water from the blowoff valves would be released in upland areas and not directly into existing drainages. This would minimize the potential for introduction of non-native aquatic species, and impacts would be less than significant.

Removal of up to 110 coast live oak trees during project construction would conflict with oak tree protection policies of Santa Barbara County, resulting in a significant but feasibly mitigated impact. Implementation of **Mitigation Measure BIO-2.2**, requiring coast live oak tree planting, would reduce impacts on oak trees. In addition, **Mitigation Measure BIO-5**, requiring that oak trees be avoided and financial compensation be provided for avoiding oak trees, would reduce impacts to less than significant.

Cultural Resources

Impacts on cultural resources were evaluated by determining the potential for the proposed project to adversely affect a resource listed in or eligible for listing in the National Register of Historic Places (NRHP), the California Register of Historic Resources (CRHR), or otherwise considered a unique or important archaeological resource under CEQA. Ground disturbing activities associated with proposed project construction could result in the partial destruction of intact cultural remains associated with one archaeological site (CA-SBA-1775), resulting in the potential for significant but feasibly mitigated impacts. CA-SBA-3923 would be avoided. **Mitigation Measure CR-1** would require that a Phase 2 significance evaluation be conducted at Site CA-SBA-1775 to address its NRHP/CRHR eligibility. If the site is found to be eligible for the NRHP/CRHR, then it should either be avoided or a Phase 3 data recovery excavation should be conducted. Additionally, **Mitigation Measure CR-1** would require that preconstruction meetings be conducted to inform construction personnel about protocols should artifacts be uncovered during construction, and monitoring by a qualified archaeologist during any ground disturbing construction activities. Implementation of **Mitigation Measure CR-1** would ensure that impacts on any resources listed in the NRHP or CRHR would be less than significant.

Geology and Soils

Construction related impacts on geology and soils were evaluated by determining the potential for the proposed project to alter the topography beyond that resulting from natural erosion and depositional processes; trigger or accelerate erosion; and trigger or accelerate landslides. Operational impacts were evaluated by determining if an earthquake could damage project structures; if ground motion could cause liquefaction, settlement, or surface cracks that would damage project structures; and if people or property would be exposed to a greater than average risk of tsunamis or seiches. Construction related impacts associated with altering topography would be less than significant because easement widths would vary depending on topography. On steep slopes and where steep side slopes are present adjacent to the pipeline alignment, the easement would be narrower than in flatter terrain. This methodology would only result in a temporary alteration of the topography, which would be restored upon project completion. As the topography would not be altered beyond natural processes, impacts would be less than significant, and mitigation would not be required.

Proposed project construction would potentially trigger or accelerate substantial erosion. Although pipeline corridor revegetation would occur subsequent to construction, thus minimizing the potential for long-term soil

erosion, the potential for substantial short-term soil erosion that could cause increased sediment runoff into the West Fork of Glen Annie and Glen Annie creeks would remain until the disturbed soils are stabilized, and impacts would be significant but mitigable. Implementation of **Mitigation Measure GEO-2**, requiring erosion control measures such as a Stormwater Pollution Prevention Plan (SWPPP), energy dissipation measures installed at groundwater dewatering discharge points, sedimentation basins, straw bale/filter fabric barriers, erosion control matting, and water bars and/or rice wattles, would reduce the potential for short-term erosion such that residual impacts would be less than significant.

Construction activities have the potential to trigger or accelerate shallow landslides in areas where the pipeline alignment traverses steep topography, especially before the vegetation can be re-established. Such shallow landslides could expose the pipeline, but would not likely result in structural failure. Deep-seated landslides are not anticipated as no areas of gross overall instability appear to be present along the pipeline, and construction would be completed in accordance with recommendations of a final geotechnical report and grading/excavation requirements of the California Building Code. Therefore, impacts are considered less than significant and, mitigation would not be required.

Construction of the proposed project would potentially disturb paleontological resources of unusual scientific value. Portions of the proposed alignment are underlain by both the Vaqueros and Rincon formations, which can contain vertebrate marine fossils such as whale, porpoise, seal, or sea lion. Trenching for pipeline construction could encounter and disturb these marine vertebrate fossils, resulting in significant but feasibly mitigated impacts. Impacts would be reduced through the implementation of the following mitigation measures: **Mitigation Measure GEO-4.1**, requiring a pre-construction workshop with a County-qualified paleontologist; **Mitigation Measure GEO-4.2**, requiring paleontological monitoring during excavation activities within the Vaqueros and Rincon formations; and **Mitigation Measure GEO-4.3**, requiring that a specific protocol be followed should vertebrate fossils be found, including notification and recovery procedures, possible avoidance, and continued monitoring. These mitigation measures would ensure that residual impacts on paleontological resources would be less than significant.

Operational activities would not result in significant impacts due to ground rupture, ground shaking, or tsunamis or seiches. Surface fault rupture is not anticipated along the pipeline alignment because the site does not lie over a known active fault or within an Alquist-Priolo fault rupture zone. Seismic hazards are, however, common to the Santa Barbara region and could result in differential settlement and lateral spreading that could cause pipeline damage; liquefaction is not likely to occur. The pipeline would be constructed in accordance with site-specific recommendations of a final geotechnical report and in accordance with provisions of the California Building Code, including compacted trench backfill around the pipeline to minimize ground movement surrounding the pipeline. Such construction methods would minimize potential damage and reduce potential seismic related impacts. The project site is located approximately 3.5 miles (5.6 kilometers) from the Pacific Ocean, at a minimum elevation of approximately 300 feet (91 meters) above sea level, and tsunami impacts would not occur during project operations. The pipeline alignment is located a minimum of 20 feet (6 meters) higher than the adjacent Glen Annie Reservoir, at any given point, and would be buried beneath a minimum of 5 feet (1.5 meters) of fill. Therefore, a potential seiche in Glen Annie Reservoir would have no impact on the proposed pipeline. As ground rupture and ground shaking would not damage project structures, and project operations would not expose people or property to a greater risk of tsunamis or seiches, operational impacts on geology and soils would be less than significant, and mitigation would not be required.

Hazards and Hazardous Materials

Impacts on hazards and hazardous materials were evaluated by determining the potential for the proposed project to create a hazard through the routine transport, use, or disposal of hazardous materials or upset and

1 accident involving the release of hazardous material; upset and accidents associated with operations and/or
2 maintenance; and presence of soil or groundwater contamination.

3 Accidental spills or leaks of pollutants such as fuels, lubricants, and hydraulic fluid during equipment
4 operation, refueling, or maintenance have the potential to enter West Fork of Glen Annie and Glen Annie
5 creeks. Other potential construction related contaminants include solid and sanitary wastes, concrete truck
6 washout, construction chemicals, and construction debris. Any of these contaminants would have the
7 potential to impair surface water quality if they reach surface water in the creeks. Impacts of small spills
8 would be adverse, short-term, and less than significant because small spills are likely to remain within the
9 work area with little or no material reaching flowing water and construction at the creek crossings would be
10 during the dry season when creek flow would be low to none. Larger spills that enter either creek could have
11 short-term, significant but mitigable impacts on water quality. Adherence to **Mitigation Measure HAZ-1**,
12 requiring implementation of a construction related SWPPP that includes a description of Best Management
13 Practices (BMPs), such as spill prevention measures, spill containment equipment, and monitoring
14 requirements, would ensure that residual impacts associated the release of hazardous materials would be less
15 than significant.

16 The proposed project would not create a significant hazard to the public or the environment through
17 reasonably foreseeable upset and accident conditions associated with operations and/or maintenance. Impacts
18 of accidental spills or leaks of pollutants such as fuels, lubricants, and hydraulic fluid during equipment
19 operation would be adverse, short-term, and less than significant as such spills would generally be minor and
20 localized, enabling clean-up prior to such substances entering West Fork Glen Annie and Glen Annie creeks.
21 Therefore, mitigation would not be required.

22 Construction of the proposed project would not create a significant hazard to the public or the environment
23 due to the presence of soil or groundwater contamination. No industrial or commercial facilities, which might
24 have resulted in soil and/or groundwater contamination, are present in the vicinity of the proposed alignment.
25 Therefore, the potential for soil and/or groundwater contamination is low, and impacts are considered less
26 than significant. Mitigation would not be required.

27 **Hydrology and Water Quality**

28 Impacts on hydrology and water quality were evaluated by determining the potential for the proposed project
29 to violate any water quality standards or waste discharge requirements; deplete groundwater supplies or
30 interfere with groundwater recharge or flow; or alter the existing drainage pattern of the site. Construction
31 and operation of the proposed project would potentially violate (or cause the violation of) water quality
32 standards by resulting in an impairment of water quality, particularly due to construction activities at and
33 adjacent to creek crossings. Construction would potentially result in erosion-induced runoff of sediment to
34 these adjacent waterways. In addition, accidental spills or leaks of pollutants such as fuels, lubricants, and
35 hydraulic fluid, or contaminants such as solid and sanitary wastes, concrete truck washout, construction
36 chemicals, and construction debris during equipment operation, refueling, or maintenance have the potential
37 to enter adjacent creeks. Any of these contaminants would potentially impair the quality of surface water
38 runoff, resulting in significant but feasibly mitigated impacts. Adherence to the previously discussed
39 **Mitigation Measures GEO-2** (requiring implementation of a construction related SWPPP) and **HAZ-1**
40 (requiring erosion control measures) would reduce the residual impacts on water quality standards to less than
41 significant.

42 Construction and operation would not substantially deplete groundwater supplies or interfere substantially
43 with groundwater recharge or flow as water use for project construction would be restricted primarily to dust
44 control. Groundwater within the underlying bedrock formations would not be used for the project; rather,
45 water would be supplied by COMB. In addition, proposed pipeline operations would provide a more reliable

1 source of water from Lake Cachuma, particularly during the summer and fall, which would decrease reliance
2 on groundwater supplies from coastal Santa Barbara groundwater basins. Therefore, impacts would be less
3 than significant, and mitigation would not be required.

4 Proposed project construction would not substantially alter the existing drainage pattern of the site or area.
5 The pipeline would be installed using an open trench construction method across the two drainages. This
6 would cause a temporary alteration of the drainage pattern through temporary diversion of creek flow, if any
7 surface flow is present during construction. Stream channel topography, surface flow within the creek, and
8 topography of the pipeline corridor would be restored to normal conditions subsequent to construction,
9 resulting in no permanent alteration of drainage patterns. In addition, surface runoff would not be increased,
10 as paving would not occur as part of the project. Therefore, impacts would be less than significant, and
11 mitigation would not be required.

12 **Land Use**

13 Impacts on land use were evaluated by determining the potential for the proposed project to create structures
14 and/or land uses incompatible with existing land use; disrupt or divide the physical arrangement of an
15 established community; and conflict with any applicable land use plan, applicable habitat conservation plan,
16 or natural community conservation plan.

17 The existing land use designation for lands within the project area is AG-II-100 (Vacant/Agriculture II, 100-
18 acre minimum lot size) and AC (Agriculture Commercial), both of which designate agricultural uses.
19 Proposed project construction and operation would occur on both private and public lands. When crossing
20 private land, the pipeline would be placed within a permanent easement obtained from the landowner. Both a
21 temporary construction and permanent easement would be required. Easements are legal agreements that
22 provide the non-property owner the right to make specific use of land owned by another entity. The right to
23 construct an underground pipeline is a common utility easement. An easement would be granted by the
24 affected private landowners to COMB in order to allow construction of the proposed pipeline across their
25 property. As the easement would ensure the conditional use of private property, impacts on existing land uses
26 would be less than significant, and mitigation would not be required.

27 Construction of the proposed project would not disrupt or divide any established communities because no
28 communities are located within the project area. The only residential structures within the project vicinity are
29 two ranch houses located at least 250 feet (99 meters) from the proposed pipeline alignment. Neither ranch
30 house would be located within the temporary construction easement or the staging areas; therefore, they
31 would not be disrupted by project construction, and there would be no impacts.

32 Construction and operation of the proposed project would not result in inconsistencies with plans and policies
33 contained in the Santa Barbara County Comprehensive Plan. Without mitigation, some inconsistencies would
34 exist with regards to vegetation removal, grading activities, and noise generation; however, implementation of
35 the resource specific mitigation measures included in the various resource sections (particularly Biological
36 Resources, Cultural Resources, Geology and Soils, and Noise) would ensure compliance with plans and
37 policies. Therefore, impacts would be less than significant, and no further mitigation would be required.

38 **Noise**

39 Impacts on noise were evaluated by determining the potential for the proposed project to generate short-term
40 noise levels affecting sensitive receptors; generate long-term noise levels affecting sensitive receptors; and
41 increase the existing noise levels of adjacent areas. Sensitive receptors in the project area include two
42 residential structures located more than 250 feet (76 meters) from the proposed pipeline alignment. Short-
43 term noise levels in the immediate vicinity of the construction area would increase during proposed project

construction activities, potentially affecting sensitive receptors. These short-term noise impacts associated with the operation of construction equipment would exceed the short-term 65 dB(A) CNEL exterior noise threshold at the nearby residences, a significant but feasibly mitigated impact. The following mitigation measures would be required to reduce such impacts: **Mitigation Measure NOISE-1.1**, requiring that noise generating construction activity within 800 feet (244 meters) of the residences be limited to the hours of 7 a.m. to 5 p.m. Monday through Saturday, with no construction occurring on state Holidays; **Mitigation Measure NOISE-1.2**, requiring that sensitive receptors be notified 48 hours in advance of any construction activities; and **Mitigation Measure NOISE-1.3**, requiring that stockpiling and vehicle staging areas be located as far as practical from sensitive noise receptors. Implementation of these mitigation measures would reduce the short-term impacts on sensitive receptors such that residual impacts would be less than significant.

Proposed project operation would not produce long-term exterior or interior noise levels that would affect sensitive receptors. Operational activities would not substantially increase traffic trips on adjacent roadways; therefore, corresponding roadway noise levels would not substantially increase. Routine pipeline maintenance would generate sporadic, short-term sources of noise; however, such short-term noise sources would not contribute substantially to the long-term noise levels that would affect sensitive receptors. As long-term noise levels would not increase such that exterior and interior noise levels would exceed 65 dB(A) CNEL and 45 dB(A) CNEL, impacts would be less than significant.

Operation of a second pipeline would not cause ambient noise levels to increase substantially (i.e., by 3 dB(A) or more) above the existing conditions experienced in the project area. The main source of existing noise in the project area is roadway noise generated on Glen Annie Road, and, as previously discussed, proposed project operation would not generate substantial traffic trips along Glen Annie Road. Short-term sources of noise generated by routine pipeline maintenance activities would not result in a substantial contribution to ambient noise levels because these sources would be infrequent. As proposed project operations would not substantially increase the existing noise levels of adjacent areas, impacts would be less than significant.

Transportation/Circulation

Impacts on transportation and circulation were evaluated by determining the potential for the proposed project to increase the volume to capacity (V/C) ratio at local intersections; utilize a substantial portion of an intersection's capacity where the intersection is currently operating at acceptable levels of service; increase traffic on a roadway that has design features that could result in a potential safety problem; and exceed a level of service standard established by the county Congestion Management Agency for designated roads or highways.

Proposed project construction and operation would not substantially increase intersection V/C ratios within the project vicinity. Project construction would result in a short-term increase in traffic (i.e., truck trips) within the project vicinity during construction activities. The proposed construction schedule for these activities is approximately eight months; mobilization of equipment and site clearing would take approximately two months and would overlap with pipeline installation (seven months). Proposed pipeline operations would require daily truck trips to support the increased operational flexibility, reliability, and conveyance capacity of the SCC to accommodate peak demand levels and to allow maintenance of the pipeline. All intersections impacted by project construction and operation activities operate at Level of Service (LOS) B or better. Construction activities would be temporary and the increase in vehicle trips would be minimal relative to the existing LOS A to B at the affected intersections. Truck deliveries and employee vehicular trips associated with project operations would not affect existing LOS or increase V/C ratios at any intersections within the Project vicinity. Therefore, impacts would be less than significant.

Construction and operation of the Preferred Alternative pipeline would not generate additional vehicular trips that would adversely affect intersection capacities in the project vicinity. Projected future project area

1 intersection LOS values are rated at LOS C or better, assuming full buildout of the City of Goleta General
2 Plan. The addition of project-generated trips at any project area intersection would be nominal and would not
3 decrease the projected future LOS to LOS D. Therefore, project-generated trip impacts on intersection
4 operations would be less than significant.

5 Construction truck traffic would access the site via the U.S. 101/Glen Annie Road interchange, and proceed
6 north along Glen Annie Road to the private access road. North of the Glen Annie Road/Cathedral Oaks Road
7 intersection, Glen Annie Road narrows and consists of an asphalt surface that is in poor condition; portions of
8 this roadway segment have extensive cracking and subsidence. Accordingly, transport of heavy construction
9 equipment/materials along this roadway segment could further exacerbate existing inadequate roadway
10 conditions, a significant but feasibly mitigated impact. **Mitigation Measure TRANS-3** would require that
11 damage caused during construction to the Glen Annie Road segment located north of the Glen Annie
12 Road/Cathedral Oaks Road intersection during construction be repaired. Upon implementation of this
13 mitigation measure, impacts would be reduced to less than significant.

14 The following intersections in the project vicinity are identified by the Santa Barbara County Association of
15 Governments (SBCAG) as Congestion Management Plan (CMP) intersections: U.S. 101 SB Ramps/Glen
16 Annie/Storke Road intersection; and U.S. 101 NB Ramps/Glen Annie Road intersection. All CMP
17 intersections are forecast to operate at LOS C or better with project-added traffic. The project would not
18 increase traffic volumes and/or congestion at any CMP intersections by the threshold values identified by
19 SBCAG; therefore, impacts would be less than significant.

20 ***Indian Trust Assets***

21 Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for federally-recognized
22 Indian tribes or individual Indians. The closest ITA is the Santa Ynez Reservation, located approximately 15
23 miles (24 kilometers) northwest of the project site. Therefore, the footprint of the proposed facilities and
24 associated construction would not affect ITAs.

25 ***Other Resource Issues***

26 ***Agricultural Resources***

27 Construction of the Preferred Alternative pipeline would temporarily displace a small portion of an avocado
28 orchard located near the SPTT. Upon completion of all construction activities, the topsoil within the avocado
29 orchard would be replaced and restored to pre-project conditions. The avocado trees removed during
30 construction could then be replanted by the landowner using the compensation negotiated with COMB when
31 the construction easement was obtained. As no agricultural areas would be permanently removed or
32 disrupted, impacts on agricultural resources under the Preferred Alternative would be less than significant.

33 ***Mineral Resources***

34 The Preferred Alternative pipeline alignment would be located within an area that has not been mapped with
35 respect to the potential for mineral resources. There are no oil or gas fields in the vicinity of the project site.
36 However, due to the low potential for unknown mineral resources to exist within the project area, impacts
37 would be less than significant.

38 ***Public Services***

39 The Preferred Alternative would not result in increased demands or otherwise affect police protection or
40 schools. Construction activities would increase the potential for fires in areas with flammable vegetation.

This potential would increase the need for fire protection during construction activities. However, implementation of the Fire Protection Plan during construction activities would ensure compliance with County Fire Department requirements for construction activities in high-fire hazard areas. Therefore, impacts on public services would be less than significant.

Utilities/Service Systems

The Preferred Alternative would not result in an increased demand for wastewater services. Preferred Alternative construction would result in an increase in the amount of waste requiring landfilling. However, native vegetation removed from the pipeline corridor would be stockpiled and spread over the corridor as mulch during restoration (**Mitigation Measures BIO-1.2 and BIO-4a**). Furthermore, implementation of the project solid waste reduction measures would ensure that the Preferred Alternative's short-term construction impacts on solid waste would be less than significant. Preferred Alternative pipeline construction and operations would not generate increased demands for water consumption. However, the Preferred Alternative could cause an interruption of water services to the surrounding area for a short period during the connection of the new pipeline to the existing pipeline and CDMWTP; however, due to the short-term nature of this interruption and use of water stored in the water system reservoirs to cover the outage, impacts on water services would be less than significant.

Recreation

Preferred Alternative pipeline operations would not result in increased demands for recreation facilities. As no existing recreational facilities would be affected by the Preferred Alternative, no impacts on recreation would occur.

Socioeconomics

The Preferred Alternative would reduce the risk of economic impacts from failure of the existing pipeline. The Preferred Alternative would result in temporary construction jobs and purchases of equipment, materials, and supplies needed to build the second parallel pipeline, resulting in beneficial impacts. No agricultural areas would be permanently removed or disrupted, and Williamson Act contracts that provide for reductions in property tax payments for agricultural lands and compatible uses could remain in place. Socioeconomic impacts would be less than significant.

ES.4 CUMULATIVE IMPACTS

Reasonably foreseeable development that would contribute to cumulative impacts includes buildout of the Santa Barbara County and City of Goleta, including residential, commercial, and industrial projects.

Aesthetics/Visual Resources

Related cumulative projects include future development of larger expanses of undeveloped, natural lands on the periphery of the City of Goleta. The conversion of undeveloped, natural areas to residential, commercial, and/or industrial development under reasonably foreseeable cumulative buildout would likely result in significant impacts on important visual resources.

Existing views of the proposed project area from public view corridors are extremely limited, and vehicles would not be capable of discerning any changes to the project area. Construction activities would, however, temporarily alter the visual character of the project site. Implementation of **Mitigation Measures AES-2, BIO-1b, and BIO-4a** would maintain the existing visual character of the project site, reducing this adverse contribution so that residual impacts would be less than significant. The project would not introduce new

sources of light and glare during either construction or operation. Therefore, the project's contribution to cumulative effects would result in a less than significant cumulative impact.

Air Quality

Santa Barbara County currently attains all ambient air quality standards except the State ozone (O₃) and particulate matter less than 10 microns in diameter (PM₁₀) standards. These nonattainment conditions for ambient O₃ and PM₁₀ within the project region are therefore cumulatively significant. Reasonably foreseeable future projects that would overlap in time with the project would contribute to these significant cumulative impacts. Proposed project construction would exacerbate the existing O₃ and PM₁₀ nonattainment conditions within the County; however, construction activities would be required to implement standard APCD dust control measures and construction emissions are included in the County air attainment planning process. As a result, proposed construction activities would produce less than significant cumulative impacts.

Emissions of O₃ precursors and PM₁₀ due to operation of the proposed project, in combination with emissions from future sources and approved projects in the region, would exacerbate the existing ozone nonattainment status within the County. However, emissions from operation of the project would not exceed the operational daily thresholds of 25 pounds of NO_x and ROG for motor vehicle trips. As a result, operation of the project would produce less than significant cumulative air quality impacts.

Biological Resources

Several of the reasonably foreseeable future projects within the unincorporated County areas could have impacts on biological resources such as sensitive plant species, native grasses, oak trees, and riparian habitat. Assuming that all significant impacts of these projects are mitigated through the environmental review and permitting processes for each project, their cumulative impacts would be less than significant. Any losses of oak woodland, however, would be cumulatively significant and unavoidable.

The proposed project would have significant impacts to special status species, special status natural vegetation communities, migratory bird breeding, local biological communities through introduction of invasive species, and oak trees protected by local ordinance, prior to mitigation that could contribute substantially to cumulative effects. With implementation of the mitigation measures described in Section ES.3, residual impacts of the proposed project would be less than significant, and the project's contribution to cumulative effects would result in a less than significant cumulative impact for all but the loss of oak woodland. The project's contribution to loss of oak woodland habitat would be cumulatively significant and unavoidable.

Cultural Resources

Reasonably foreseeable development would include ground disturbing activities during construction that could potentially affect prehistoric and historic archaeological sites, and historic structures, resulting in a cumulatively significant impact. Standard conditions would be applied as necessary to each project to minimize these effects, resulting in a less than significant cumulative impact.

Implementation of **Mitigation Measure CR-1** would minimize the project's potential to disturb archaeological resources during construction. Therefore, the project's contribution to cumulative effects would result in a less than significant cumulative impact.

Geology and Soils

Numerous approved and probable future projects within the Goleta Slough watershed would contribute to erosion-induced sedimentation of local creeks and the slough. The sediment load contribution of these

projects could result in cumulatively significant but feasibly mitigated impacts on water quality. The Implementation of BMPs associated with probable future related project SWPPPs would reduce cumulative regional impacts of erosion on stormwater quality to less than significant. Additionally, related approved and probable future construction projects in the project vicinity would be subject to geohazard impacts due to seismically induced ground failure and unstable slopes. Due to the localized nature of the impacts, cumulative impacts would not occur. Standard geotechnical investigations and resultant engineered construction designs would address any specific geotechnical constraints that could impair development-related structural stability, ensuring public safety.

Project construction would result in short-term exposure of onsite soils, which are highly prone to wind and water erosion. Implementation of a SWPPP and associated construction BMPs (**Mitigation Measure GEO-2**) would ensure that project-specific residual impacts of erosion on water quality would be less than significant. Therefore, the project's contribution to cumulative effects would result in a less than significant cumulative impact. With implementation of proper geotechnical engineering, less than significant impacts would occur in association with construction and operation of the proposed project due to potential seismically induced ground failure and potentially unstable slopes. The proposed project's contribution to cumulative effects related to geological resources would result in a less than significant cumulative impact.

Reasonably foreseeable development could potentially affect paleontological resources. Impacts would be addressed for each discretionary project during plan review, and standard conditions would be applied as necessary to minimize these effects, resulting in a less than significant cumulative impact.

Ground disturbing activities associated with the proposed project could result in significant adverse effects, therefore contributing substantially to cumulative effects on paleontological resources prior to mitigation. However, implementation of **Mitigation Measures GEO-4.1, GEO-4.2, and GEO-4.3** would minimize the project's potential for disturbing paleontological resources. Therefore, the project's contribution to cumulative effects would result in a less than significant cumulative impact.

Hazards and Hazardous Materials

Storage and use of hazardous materials at approved and reasonably foreseeable commercial and industrial project sites in the project vicinity, in addition to lower concentrations at residential projects, would have the potential to result in a significant cumulative impact.

Compliance with applicable federal, state, and local regulations during project construction and operation would ensure that the use and storage of hazardous materials would be undertaken in a safe manner. In addition, implementation of **Mitigation Measure HAZ-1** would minimize the project's contribution to potential releases of hazardous materials due to use of these substances with less than significant residual impacts, such that the project's contribution to cumulative effects result in a less than significant cumulative impact.

Hydrology and Water Quality

Numerous approved and reasonably foreseeable projects within the Goleta Slough watershed would contribute runoff and pollutants. The pollutant load contribution of these projects could result in cumulatively significant but feasibly mitigated impacts on water quality. Implementation of BMPs associated with probable future related project SWPPPs would reduce cumulative regional impacts on stormwater quality to less than significant. Project-related impacts of small pollutant spills would be less than significant because small spills are likely to remain within the work area, with little or no material reaching flowing water. Larger spills that enter either creek could have significant but feasibly mitigated (**Mitigation Measures GEO-2 and HAZ-1**) impacts on water quality. Project-specific residual impacts on water quality would be

1 less than significant, and the project's contribution to cumulative effects would result in a less than significant
2 cumulative impact.

3 Several reasonably foreseeable projects would primarily be served by the GWD. The County of Santa
4 Barbara Board of Supervisors has determined that service through the GWD does not have the potential to
5 cause or contribute to groundwater basin overdraft due to the GWD's compliance with the Wright Judgment.
6 Water use for project construction would be restricted primarily to dust control and would be supplied by the
7 GWD. Therefore, the project's contribution to cumulative effects would result in a less than significant
8 cumulative impact.

9 The cumulative impacts of reasonably foreseeable projects on drainage and flooding within the Goleta Slough
10 watershed would be significant but feasibly mitigated with implementation of onsite detention and retardation
11 infrastructure. Surface runoff would not be increased as a result of the project, as paving would not occur.
12 Therefore, drainage and flooding impacts would be less than significant. Due to a lack of increased paving,
13 the project's contribution to cumulative effects would result in a less than significant cumulative impact.

14 **Land Use**

15 Reasonably foreseeable development would have the potential to introduce incompatible development relative
16 to surrounding existing land uses; however, such incompatibilities would be resolved on a case-by-case basis
17 through the use of landscape buffers, setbacks, and appropriate architectural design. Additionally, reasonably
18 foreseeable development would not disrupt or divide any existing communities, and standard conditions
19 would be applied on a project specific basis to reduce any potential inconsistencies with local plans and
20 policies. Thus, cumulative impacts would be less than significant.

21 The proposed project would not result in incompatibilities with existing land uses, or disrupt or divide any
22 established communities because no communities are located within the project area. Implementation of
23 resource-specific mitigation measures would and policies. Project residual impacts on land use would,
24 therefore, be less than significant and would result in a less than significant cumulative impact.

25 **Noise**

26 Reasonably foreseeable development would result in short-term noise impacts throughout the project vicinity
27 during construction activities. However, all construction activities taking would be subject to standard
28 measures and conditions regulating construction daily noise levels. Reasonably foreseeable projects would
29 also contribute to increased ambient noise levels in the region through the increase of roadway noise,
30 affecting any nearby sensitive receptors. However, roadway noise would be conditioned as necessary by
31 incorporation of noise reduction measures, reducing cumulative impacts to less than significant.

32 Noise from construction activities would contribute substantially to cumulative effects of past, present, and
33 future projects prior to mitigation. Short-term sources of noise generated by routine pipeline maintenance
34 activities would not result in a substantial contribution to ambient noise levels. As project operations would
35 not generate substantial traffic trips along adjacent roadways, roadway noise would not increase substantially.
36 The proposed project's incremental short-term construction noise residual impacts would be reduced to less
37 than significant with implementation of **Mitigation Measures NOISE-1.1** through **NOISE-1.3**. Therefore,
38 the proposed project's contribution to cumulative effects would result in a less than significant cumulative
39 impact.

Transportation/Circulation

Increased traffic volumes associated with reasonably foreseeable development would substantially impact V/C ratios and/or LOS within the cumulative transportation area of analysis, and would potentially degrade the LOS at some intersections to unacceptable levels. Reasonably foreseeable development would increase regional daily and peak hour trips, which would add traffic to some roadways that have inadequate design features, creating potential safety problems. These problems would be addressed for individual projects during their approval process and would be mitigated so that cumulative impacts would be less than significant.

Project-related vehicular trips would be minimal and would not affect V/C ratios or existing LOS at any intersections and/or roadway segments within the project vicinity. Construction-related traffic could increase the potential for safety problems to a level that would result in a cumulatively considerable contribution to cumulative impacts. Implementation of **Mitigation Measure TRANS-3** would minimize potential safety impacts so that residual impacts would be less than significant. Therefore, the project's contribution to cumulative traffic impacts would result in a less than significant cumulative impact.

Other Resource Issues

Mineral Resources

Reasonably foreseeable projects would not contribute to cumulatively significant impacts on mineral resources. The primary mineral resource in the cumulative project area consists of gravel mining pits in the foothills; however, no anticipated projects would affect these pits. The proposed project would be located within an area that has not been mapped with respect to the potential for mineral resources, such as Portland cement concrete aggregate or other mineral commodities. Similarly, there are no oil or gas fields in the vicinity of the project site. Therefore, the project's contribution to cumulative effects on mineral resources would result in a less than significant cumulative impact.

Public Services

Reasonably foreseeable projects would result in significant but feasibly mitigated impacts on fire protection, police protection, and schools in the project area. These impacts would be mitigated to less than significant through the local permitting and approval process. The proposed project would not contribute to population growth in the area and would, therefore, not result in impacts on police protection and schools. While the proposed project would increase the demand for onsite fire protection services during construction, implementing the proposed Fire Protection Plan requirements would minimize potential project impacts on fire protection services. Therefore, the project's contribution to cumulative effects on public services would result in a less than significant cumulative impact.

Utilities/Service Systems

Reasonably foreseeable projects would result in increased demands on utilities/service systems in the project area. These impacts would be mitigated to less than significant through the local permitting and approval process. The proposed project would not increase wastewater or water demands in the area. Implementation of the project solid waste reduction measures, requiring recycling of construction materials, and use of recycled materials during construction, would minimize the project's short-term construction impacts on solid waste. Therefore, the project's contribution to cumulative effects on utilities and service systems would result in a less than significant cumulative impact.

Recreation

Reasonably foreseeable projects would result in an increased demand for recreational facilities. These demands would be addressed in the permitting and approval process for each project so that cumulative impacts would be less than significant. The proposed project would not contribute to population growth in the area, and therefore, would have no impacts on recreation in the vicinity. Thus, the project would not contribute to cumulative effects on recreation.

Socioeconomics

The cumulative projects would also benefit the Santa Barbara County economy through construction labor and purchases and in some cases, long-term employment related to ongoing operations. The socioeconomic impacts of the cumulative projects would be less than significant. The Preferred Alternative would benefit the local economy, primarily due to construction labor and purchases but also by reducing the risk of pipeline failure and the related adverse economic effects. The socioeconomic impacts of the Preferred Alternative would be less than significant, and the Preferred Alternative would result in a less than significant cumulative impact to socioeconomics.

ES.5 ENVIRONMENTAL JUSTICE

Impacts on environmental justice were evaluated by determining the potential for the proposed project to result in substantial adverse effects on minorities. Construction activities would remove a portion of the avocado orchard, and this could have a minor effect on the number of minority workers employed to tend the orchard during pipeline construction. However, subsequent to construction, the orchard would be replanted and would provide the same level of employment as before construction. Implementation of **Mitigation Measures NOISE-1.1** through **NOISE 1.3** would ensure that impacts on the adjacent ranch residences located at least 250 feet (76 meters) from the pipeline route would be minimized during construction. Therefore, the Preferred Alternative would not result in disproportionately high and adverse effects on minority and low-income populations, and impacts would be less than significant.

ES.6 ALTERNATIVES COMPARISON

A comparison of impacts for each alternative compared to those of the Preferred Alternative is presented in Table ES-1.

Table ES-1. Comparison of Alternatives

Type of Impact	MAGNITUDE OF IMPACT IN COMPARISON TO PROPOSED PROJECT				
	Preferred Alternative	Alternative A	Alternative B	No Project Alternative	No Action Alternative
AESTHETIC/VISUAL RESOURCES					
AES-1: Change existing scenic vistas during construction or operation.	III	III (=)	III (=)	III (-)	III (-)
AES-2: Degrade existing visual character or quality of the site and its surroundings through the processes of grading and vegetation clearing.	II	II (=)	II (=)	III (-)	III (-)
AES-3: Create substantial sources of light or glare.	III	III (=)	III (=)	III (-)	III (-)
AIR QUALITY					
AQ-1: Conflict with or obstruct implementation of an applicable air quality plan.	III	III (=)	III (=)	III (-)	III (-)
AQ-2: Exceed any ambient air quality standard or contribute substantially to an existing or projected air quality standard violation.	III	III (+)	III (+)	III (-)	III (-)

Table ES-1. Comparison of Alternatives (continued)

<i>Type of Impact</i>	MAGNITUDE OF IMPACT IN COMPARISON TO PROPOSED PROJECT				
	<i>Preferred Alternative</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project Alternative</i>	<i>No Action Alternative</i>
AESTHETIC/VISUAL RESOURCES					
AQ-3: Result in a net increase of any criteria pollutant for which the project region is in nonattainment.	III	III (+)	III (+)	III (-)	III (-)
AQ-4: Expose sensitive receptors to substantial pollutant concentrations.	III	III (=)	III (=)	III (-)	III (-)
AQ-5: Create objectionable odors that affect a substantial number of people.	III	III (=)	III (=)	III (-)	III (-)
BIOLOGICAL RESOURCES					
BIO-1: Result in the loss of individuals or habitat for special status plants and wildlife.	II	II (+)	II (-)	II (-)	I (+)
BIO-2: Result in a temporary loss of riparian woodland, oak woodland, and seasonal wetlands.	I	I (-)	I (+)	I (-)	I (+)
BIO-3: Adversely affect wildlife migration or breeding habitat for migratory birds and wildlife.	II	II (=)	II (=)	III (-)	I (+)
BIO-4a: Disrupt local plant or wildlife communities.	III	III (+)	III (-)	III (-)	I (+)
BIO-4b: Disrupt local plant communities through the introduction or spread of invasive species.	II	II (=)	II (=)	III (-)	I (+)
BIO-4c: Disrupt local aquatic communities through the introduction or spread of non-native species.	III	III (=)	III (=)	III (-)	I (+)
BIO-5: Removal of oak trees.	II	II (-)	II (+)	III (-)	I (+)
CULTURAL RESOURCES					
CR-1: Result in the disturbance of a resource listed in or eligible for listing in the NRHP, the CRHR, or otherwise considered a unique or important archaeological resource under CEQA.	II	II (=)	II (-)	III (-)	I (+)
GEOLOGY AND SOILS					
GEO-1: Potential for construction to alter the topography beyond that resulting from natural erosion and depositional processes.	III	III (=)	I (+)	III (-)	I (+)
GEO-2: Potential for construction to trigger or accelerate substantial erosion.	II	II (+)	II (+)	II (-)	II (-)
GEO-3: Potential for construction to trigger or accelerate shallow landslides.	III	III (+)	III (-)	III (-)	III (-)
GEO-4: Result in the disturbance of paleontological resources of unusual scientific value.	II	II (=)	II (=)	III (-)	I (+)
GEO-5: Potential for ground rupture due to an earthquake to cause damage to structures during operations.	III	III (=)	III (=)	III (=)	III (=)
GEO-6: Damage resulting from earthquake-induced ground shaking during operations.	III	III (=)	III (=)	III (=)	III (=)
GEO-7: Exposure of people or property to a greater than average risk of tsunamis or seiches.	IV	IV (=)	IV (=)	IV (=)	IV (=)
HAZARDS AND HAZARDOUS MATERIALS					
HAZ-1: Create a hazard through the routine transport, use, or disposal of hazardous materials upset and accident involving the release of hazardous material into the environment.	II	II (=)	II (=)	II (-)	II (-)
HAZ-2: Create hazard through upset and accident conditions associated with operations and/or maintenance.	III	III (=)	III (=)	III (=)	III (=)
HAZ-3: Create a hazard due to the presence of soil or groundwater contamination.	III	III (=)	III (=)	III (-)	III (-)
HYDROLOGY AND WATER QUALITY					
HYDRO/WQ-1: Violate water quality standards.	II	II (=)	II (+)	II (-)	I (+)
HYDRO/WQ-2: Deplete groundwater supplies or interfere with groundwater recharge or flow.	III	III (=)	III (=)	III (-)	III (-)
HYDRO/WQ-3: Alter the existing drainage pattern of the site or area or increase the rate or amount of surface runoff.	III	III (=)	III (=)	III (-)	II (+)

Table ES-1. Comparison of Alternatives (continued)

<i>Type of Impact</i>	MAGNITUDE OF IMPACT IN COMPARISON TO PROPOSED PROJECT				
	<i>Preferred Alternative</i>	<i>Alternative A</i>	<i>Alternative B</i>	<i>No Project Alternative</i>	<i>No Action Alternative</i>
LAND USE					
LU-1: Result in incompatibilities with existing land uses.	III	III (-)	III (+)	III (-)	III (-)
LU-2: Disrupt or divide any established communities.	IV	IV (=)	IV (=)	IV (=)	IV (=)
LU-3: Result in inconsistencies with land use and conservation plans and policies contained in the Santa Barbara County Comprehensive Plan.	III	III (=)	III (=)	III (-)	III (-)
NOISE					
NOISE-1: Short-term increases in existing ambient noise levels during construction activities.	II	II (=)	II (=)	II (-)	II (-)
NOISE-2: Generate long-term exterior or interior noise levels that would affect sensitive receptors during operations.	III	III (=)	III (=)	III (=)	III (=)
NOISE-3: Increase ambient noise levels of adjacent areas during operations.	III	III (=)	III (=)	III (=)	III (=)
TRANSPORTATION/CIRCULATION					
TRANS-1.1: Increase intersection v/c ratios within the project vicinity during construction activities.	III	III (=)	III (=)	III (-)	III (-)
TRANS-1.2: Increase intersection v/c ratios within the project vicinity during operations.	III	III (=)	III (=)	III (-)	III (-)
TRANS-2: Generate additional vehicular trips that would adversely affect intersection capacities in the project vicinity.	III	III (=)	III (=)	III (-)	III (-)
TRANS-3: Increase traffic on a roadway that could result in a potential safety problem due to existing design features.	II	II (=)	II (=)	II (-)	II (-)
Key: + More adverse impacts than proposed project = Similar to proposed project - Fewer adverse impacts than proposed project					

1 ES.7 OTHER REQUIRED SECTIONS

2 Unavoidable Significant Impacts

3 Project construction would result in the removal of 3.36 acres (1.36 ha) of coast live oak woodland. As the
4 removal of coast live oak woodland would not be immediately remedied through mitigation, impacts would
5 be significant and unavoidable.

6 Significant Irreversible Impacts

7 The project would require the use of non-renewable resources for the physical construction of the water
8 supply pipeline. However, the project does not represent an uncommon construction project that uses an
9 extraordinary amount of raw materials in comparison to other infrastructure/maintenance projects of similar
10 scope and magnitude. Resources committed to this project include fossil fuels, capital, labor, and
11 construction materials such as rock, concrete, steel, gravel, and soils. Fossil fuels and energy would be
12 consumed in the form of diesel, oil, and gasoline used for equipment and vehicles during construction and
13 operation activities. During operations, diesel, oil, and gasoline would be used during routine pipeline
14 maintenance. Non-recoverable materials and energy would be used during construction and operations, but
15 the amounts needed would be easily accommodated by existing supplies. The irretrievable commitment of
16 resources required by the proposed project is justified by the objectives of the project.

1 **Growth Inducement**

2 The project would not have a growth-inducing impact on surrounding areas. Although the project would
3 construct a new water supply pipeline to serve the CDMWTP, this would not stimulate significant economic
4 or population growth, remove obstacles to population growth, or necessitate the construction of new
5 community facilities that would lead to additional growth in the surrounding area.

6 **ES.8 IMPACTS AND MITIGATION MEASURES**

7 Table ES-2 summarizes the environmental impacts and mitigation measures identified in the EIS/EIR.

Table ES-2. Summary of Impacts and Mitigations

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
SIGNIFICANT AND UNAVOIDABLE				
Biological Resources	Preferred Alternative A Alternative B	BIO-2: Construction would result in a long-term loss of oak woodland.	BIO-2.2: Measures for restoration of oak woodland in the Revegetation Plan (see Section 2.3.2) shall include planting individual coast live oak trees at suitable sites and the following specifications. Coast live oak tree 6 inches (15 centimeters) or greater in diameter at breast height (DBH) removed for the project shall be replaced by establishing 10 planted trees meeting minimum performance criteria five years after planting for each tree removed. The performance criteria shall include a period of two years without supplemental watering, a healthy vigorous appearance, minimum height of 6 feet (1.8 meters), and a minimum diameter 1 foot (0.3 meter) above the ground of 2 inches (5 centimeters). In most cases, it will take more than five years for trees to meet these criteria. Oak tree plantings shall be appropriately spaced to promote survival past the monitoring period. See Mitigation Measures BIO-1.4 and BIO-2.1	Significant and unavoidable
	No Action	BIO-1: Construction activities would result in the loss of individuals or habitat for special status plants and wildlife.		Significant and unavoidable
Cultural Resources	No Action	CR-1: Construction would adversely affect a resource listed in or eligible for listing in the NRHP, the CRHR, or otherwise considered a unique or important archaeological resource under CEQA.	No mitigation is feasible for impacts of a water release from facility failure. Mitigation Measure CR-1 would apply to repair work adjacent to a known cultural resource site.	Significant and unavoidable
Geology and Soils	No Action	GEO-2: Construction would potentially trigger or accelerate substantial erosion.	See Mitigation Measures GEO-2, BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a . However, no mitigation is feasible for downstream soil erosion and deposition from a water release into either creek due to facility failure.	Significant and unavoidable
Hydrology and Water Quality	No Action	HYDRO/WQ-1: Construction and operation would potentially violate (or cause the violation of) water quality standards.	No mitigation is feasible for temporary impacts to water quality in West Fork or Glen Annie Creek from a water release due to facility failure.	Significant and unavoidable
Utilities/Service Systems	No Action	Water supply would be disrupted to South Coast.	No mitigation is feasible for loss of water supply while facilities are repaired due to structural failure.	Significant and unavoidable
SIGNIFICANT BUT FEASIBLY MITIGATED				
Aesthetics/Visual Resources	Preferred Alternative A Alternative B	AES-2: Construction activities would temporarily degrade the existing visual character of the project site.	See Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a . AES-2: Covered receptacles shall be provided onsite prior to commencement of grading or construction activities to prevent construction and/or employee trash from blowing offsite. The applicant or designee shall retain a clean-up crew to ensure that trash and all excess construction debris is collected daily or more frequently, as directed by compliance monitors, and placed in provided receptacles throughout construction.	Less than significant
Biological Resources	Preferred Alternative A Alternative B	BIO-1: Construction activities would result in the loss of individuals or habitat for special status plants and wildlife.	BIO-1.1: Santa Barbara honeysuckle plants shall be avoided to the greatest extent feasible during construction. Locations of this species within the construction corridor shall be clearly marked on the project plans and in the field by a qualified biologist prior to construction. The qualified biologist shall work with the resident engineer and construction contractor to determine which of these areas cannot be avoided. For the areas that cannot be avoided, cover of Santa Barbara honeysuckle shall be recorded using line-intercept sampling and will form the restoration criterion. BIO-1.2: The Project Revegetation Plan shall include specific measures for restoring Santa Barbara honeysuckle to pre-project cover.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
SIGNIFICANT BUT FEASIBLY MITIGATED (CONTINUED)				
Biological Resources		BIO-1: (cont.)	BIO-1.3: A Special Status Species Protection Plan shall be prepared and implemented to minimize or avoid impacts to special status biological resources, including aquatic habitats, during pipeline construction. Habitat and species protection measures shall include, at a minimum: 1. Construction shall be scheduled to avoid the breeding season of special status species. For example, schedule pipeline construction (or at a minimum, crossing of drainages that support special status aquatic species) to avoid the breeding season for the California red-legged frog (November 1 through May 30) and steelhead migration and spawning (February 1 through March 31) or to occur while water is not present; 2. Work shall be scheduled to avoid the high flow seasons (October through April) if trenching is used to cross the two seasonal drainages to avoid potential impacts to downstream resources, including breeding habitat for the California red-legged frog and steelhead; 3. A USFWS-approved California red-legged frog biologist shall conduct pre-construction California red-legged frog surveys following USFWS protocols in all suitable habitat crossed by the pipeline right-of-way (the West Fork and main stem of Glen Annie Creek) to determine the presence or absence of this species within about 500 feet (152 meters) of the construction area; 4. A qualified biologist with the appropriate permits shall be present during construction in habitats that support special status species; 5. The project biologist and the project engineer shall clearly designate “sensitive resource zones” on the project maps and construction plans. Sensitive resource zones are defined as areas where construction would be limited in space, time, or methods to minimize or avoid impacts to special status species or their habitat; 6. A USFWS-approved California red-legged frog biologist shall be present during construction in locations known to support California red-legged frogs to monitor for this species. The biologist shall inspect the work area (especially areas with ponded water, if present) for the presence of the species and shall be authorized to temporarily stop work if immediate threats to the species are identified during monitoring. Any disturbances to occupied habitat or red-legged frogs shall be in conformance with the terms and conditions of the project Biological Opinion from the USFWS; 7. All machinery shall be stored and fuelled in designated locations at least 100 feet (30.5 meters) away from any sensitive habitats or in areas approved by the project biologist. Heavy equipment and construction activities shall be restricted to the defined construction corridor. Construction vehicles and personnel shall use existing access roads; 8. A qualified biologist shall conduct pre-construction surveys of the stand of eucalyptus trees for roosting monarch butterflies in the appropriate season. Surveys shall be conducted during the fall and winter (October through December) to verify the presence or absence of autumnal or wintering roost sites. If autumnal or wintering roost sites are identified, the biologist shall work with the resident engineer to either avoid removal of these trees or schedule construction to occur outside of the monarch roosting season when the species would not be present; and 9. Any other requirements stipulated by the USFWS and/or NMFS as part of Section 7 Consultation under the ESA shall be implemented.	Less than significant
Biological Resources		BIO-1: (cont.)	BIO-1.4: Glen Annie Creek, including West Fork, bed and banks shall be restored to pre-project conditions to the greatest extent feasible. This shall include disposing of material displaced by the pipe and bedding outside the creek corridor but not over existing topsoil, replacing boulders and cobbles in the stream bed, and contouring to restore the stream bed gradient and bank structure. Biological monitors shall ensure that creek beds and banks are restored correctly and shall work with the construction contractor directly or through the resident engineer.	Less than significant
Biological Resources	Preferred Alternative A Alternative B No Project No Action	BIO-2: Construction would result in a temporary loss of riparian woodland and seasonal wetlands.	BIO-2.1: Measures for restoration of riparian woodland shall be included in the Revegetation Plan (see Section 2.3.2). All riparian woodland removed shall be replaced at a 2:1 ratio, or as mandated in project permits. For each acre of riparian woodland that can be restored onsite, an additional acre shall be restored offsite. All permanently impacted riparian woodland shall be restored offsite at a 2:1 ratio.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
SIGNIFICANT BUT FEASIBLY MITIGATED (CONTINUED)				
	Preferred Alternative A Alternative B No Project	BIO-3: Construction activities could adversely affect wildlife migration or breeding habitat for migratory birds and wildlife.	See Mitigation Measures BIO-1.2, BIO-1.3, BIO-2.1, and BIO-2.2. BIO-3: The following shall be incorporated into the Special Status Species Protection Plan (Mitigation Measure BIO-1.3) to avoid or reduce impacts to migratory and resident breeding birds: 1. A qualified biologist shall conduct pre-construction bird surveys during the nesting season in areas that would require the direct removal of coastal scrub and chaparral vegetation, native and non-native trees, or other areas where suitable nesting habitat for resident or migratory bird species may occur. The surveys shall focus on breeding behavior and nesting locations in the proposed work area and immediately adjacent to that area. Based on the results of the surveys, recommended buffer areas between construction activities and observed nesting habitat shall be provided to the resident engineer if the work were scheduled to occur near those locations while nesting is occurring (February 15 through August 31); 2. A qualified biologist shall be present during removal of vegetation to ensure that breeding wildlife and nesting bird species are not harmed. The biologist shall be able to redirect or temporarily stop work if threats to the species are identified during monitoring; and 3. Riparian vegetation and oak trees scheduled to be removed for construction shall be removed before the nesting season (April 15) to further avoid impacts to nesting birds. For trees outside the area to be trenched, removal should be by cutting at ground level to leave the roots in place to facilitate restoration.	Less than significant
Biological Resources	Preferred Alternative A Alternative B	BIO-4b: Construction and operations activities could disrupt local plant communities through the introduction or spread of invasive species.	BIO-4b.1: Areas of invasive exotic plant infestation shall be identified and mapped within 200 feet (61 meters) of the alignment prior to construction. All such areas within the construction corridor shall be marked on the construction plans and clearly flagged in the field. BIO-4b.2: Prior to construction, Cape ivy and other weed species shall be controlled. For Cape ivy, control shall consist of herbicide treatment of growing stems where such spraying would not damage adjacent native plants and removing portions of the plants growing within native vegetation that cannot be sprayed. Cape ivy that has been removed from native vegetation shall be hauled off-site to a landfill. Treatment shall encompass a corridor a minimum of 200 feet (61 meters) wide centered on the pipeline alignment. Treatment shall continue a minimum of three times per year, but up to five times per year until all of the performance criteria in the Revegetation Plan have been met. BIO-4b.3: Unless access is refused by the property owner, the area of invasive exotic plant species infestation (primarily black mustard and Veldt grass) in the vicinity of Ellwood Reservoir shall be treated to reduce invasive exotic plant species growth and encourage non-native annual grasses and native species to recolonize the area. Treatment shall be attempted for two years prior to construction, if feasible. Areas of very dense black mustard may be sprayed aerially or by using a tractor mounted system for efficiency, but areas near native vegetation must be treated by hand. Veldt grass shall be treated by hand as many herbaceous native species co-occur with this species. Treating before construction will greatly reduce the amount of viable seed that could be spread by construction or that could come up following construction. BIO-4b.4: Extreme caution shall be taken in using equipment, including passenger vehicles and pickups, in areas identified as having invasive exotic plant species infestations. The undercarriage of all vehicles and equipment shall be washed prior to moving to another portion of the project area, including other areas with infestation of different or the same invasive exotic plant species, or moving off the project site. All construction personnel boots must be cleaned to remove invasive exotic plant species propagules (e.g., seeds) when moving from invasive exotic plant species infested areas to other areas of the pipeline or leaving the project site. BIO-4b.5: The Revegetation Plan shall include an invasive exotic plant species control component to address invasive exotic plant species removal within the native and naturalized habitats. The Plan shall also establish performance criteria for distribution and density of invasive exotic plant species infestations.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
SIGNIFICANT BUT FEASIBLY MITIGATED (CONTINUED)				
Biological Resources	Preferred Alternative A Alternative B	BIO-4b (continued)	BIO-4b.6: A weed manual shall be prepared prior to operation and maintenance activities that shall include photographs of the different invasive exotic plant species that are present along the pipeline route. The weed manual shall be distributed to technicians performing maintenance on the structures. They will be instructed to look for invasive exotic plant species infestations along the access roads and at structures. Invasive exotic plant species infestations identified shall be treated or removed. BIO-4b.7: A biologist shall inspect unpaved access roads for the project annually for invasive exotic plant species as part of regular pipeline maintenance activities. If invasive exotic species are found, they shall be removed using the methods provided in the Revegetation Plan, or currently accepted methods. In addition, vehicles shall be washed or inspected by COMB after driving through areas with identified invasive exotic plant species infestations prior to using the vehicles elsewhere to prevent the spread of those invasive exotic plant species to other areas.	Less than significant
Biological Resources	Preferred Alternative A Alternative B	BIO-5: Removal of oak trees during construction would conflict with local policies.	BIO-5: Oak trees shall be avoided to the maximum extent feasible. Protections shall include financial incentives and penalties, and creation of exclusion zones. Trees that may be removed and those that must be protected shall be clearly shown on project plans and marked in the field. The construction plans and specifications shall include financial compensation to the construction contractor for avoiding oak trees that would be permitted to be removed and financial penalties for removing trees that are designated for protection. Financial compensation shall minimally be the estimated cost of mitigating loss of that tree (planting, monitoring, maintenance, and reporting to attain 10 trees that meet performance criteria for each tree removed). Financial penalties shall be minimally two times the compensation amount. Exclusion zones shall be created within the nominal construction easement to protect groups of trees where feasible.	Less than significant
Cultural Resources	Preferred Alternative A	CR-1: Construction would adversely affect a resource listed in the NRHP, or otherwise considered a unique or important archaeological resource under CEQA.	CR-1: Prior to construction, a Phase 2 significance evaluation shall be conducted at the archaeological site. Evaluation shall be designed to address the NRHP/CRHR eligibility of the site, in compliance with state and federal guidelines. If the site is found to be eligible for the NRHP/CRHR, then avoidance, through project redesign, shall be recommended. If avoidance is not feasible, then a Phase 3 data recovery excavation shall be conducted by a qualified archaeologist and Native American observer. Preconstruction meetings shall be conducted in order to inform construction personnel about common types of artifacts that may be uncovered during construction, the importance of cultural resources to archaeologists and Native Americans, and the reporting requirements and responsibilities of construction personnel. In addition, all ground disturbing construction activities on and adjacent to significant sites shall be monitored by a qualified archaeologist and Native American observer. In the unlikely event that unexpected archaeological resources are discovered during construction, all construction activities shall be halted in the area until the significance of the finding is evaluated by a qualified archaeologist.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
SIGNIFICANT BUT FEASIBLY MITIGATED (CONTINUED)				
Geology and Soils	Preferred Alternative A Alternative B No Project	GEO-2: Construction would potentially trigger or accelerate substantial erosion.	GEO-2: The following erosion control protocol shall be followed in association with pipeline construction: a. Prior to any work beginning, a Stormwater Pollution Prevention Plan (SWPPP) for construction shall be prepared and submitted to the Regional Water Quality Control Board in compliance with the statewide General Construction Activity Stormwater Permit. This plan shall be designed for a 10-year, 8-hour duration storm event. Where possible, erosion control measures shall be installed prior to work beginning. Standard erosion and sediment control features as described in the Erosional Sediment Control Field Manual (California RWQCB 1999) shall be utilized during and immediately after grading to minimize short-term impacts associated with erosion and off-site siltation of West Fork and Glen Annie creeks. b. Prior to construction-related discharges, energy dissipation measures shall be installed at groundwater dewatering discharge points into West Fork and Glen Annie creeks to prevent erosion. c. Sedimentation basins (may be straw bales lined with filter fabric) shall be used for dewatering discharge points to prevent excess downstream sedimentation. These basins shall be constructed prior to dewatering and regularly maintained during construction, including after storm events, to remain in good working order. d. Straw bale/filter fabric barriers, backed by wire fencing for strength, shall be installed around spoil piles to contain sediment from runoff. These barriers shall be installed prior to any stockpiling during the rainy season or immediately after stockpiling during the dry season, and shall be regularly maintained, including during major rainfall events, until the stockpiles are completely removed. e. Subsequent to pipeline construction, erosion control matting shall be placed on disturbed slopes greater than 5:1 (20 percent), over seeding and mulching. f. Straw bale and/or filter fabric barriers shall be installed at the base of disturbed slopes, for a minimum of two months following slope completion (or until the end of the rainy season, whichever is longer), to reduce short-term erosion impacts prior to plant growth. g. During construction and on all disturbed slopes, water bars, filter fabric fencing, and/or rice wattles shall be placed at 50-foot (15-meter) intervals on slopes greater than 5:1 (20 percent). GEO-4.1: A presentation by a County-qualified paleontologist explaining the potential for encountering paleontological resources during construction shall be included as an element of the project pre-construction meeting. Construction workers and other project personnel shall be educated regarding the appearance of local paleontological resources, the proper notification channels in the event vertebrate fossils are encountered, as well as penalties for the illicit disturbance of such fossils. GEO-4.2: A County-qualified paleontological monitor shall be present during excavation activities within the Vaqueros and Rincon formations. GEO-4.3: In the event that vertebrate fossils are found by the monitor or construction personnel, the following actions shall be taken: a. Follow appropriate notification procedures; b. Assess the find and determine recovery procedures; c. Provide for construction avoidance until the fossils are assessed and recovered, if appropriate; and d. Continue paleontological monitoring while fossil assessment and/or recovery are being completed.	Less than significant
Geology and Soils	Preferred Alternative A Alternative B	GEO-4: Construction would potentially disturb or otherwise adversely affect paleontological resources of unusual scientific value.		Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
SIGNIFICANT BUT FEASIBLY MITIGATED (CONTINUED)				
Hazards and Hazardous Materials	Preferred Alternative A Alternative B No Project No Action	HAZ-1: Construction would potentially create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials or reasonably foreseeable upset and accident involving the release of hazardous material into the environment.	HAZ-1: A project-specific Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and submitted to the RWQCB in compliance with the Statewide General Construction Activity Stormwater Permit, to prevent adverse impacts to nearby West Fork of Glen Annie and Glen Annie creeks associated with construction related incidental spills. This plan shall include, but not be limited to, a description of BMPs, including spill prevention measures, spill containment equipment, and monitoring requirements. The following pollution prevention measures shall be followed in association with pipeline construction: a. If rain occurs during or within three days after concrete is poured for any pipeline structures, plastic sheets or tarps shall be spread and secured over the concrete in such a manner to prevent rain from coming in contact with the concrete; b. Concrete trucks shall be washed out in a designated area where the material cannot run off into the stream or percolate into the groundwater. This area shall be specified on all applicable construction plans and be in place before any concrete is poured; c. Upon entering the site and regularly thereafter, equipment shall be inspected and maintained prior to working in or immediately adjacent to West Fork of Glen Annie or Glen Annie creeks. Any leaks or hoses/fittings in poor condition shall be repaired before the equipment begins work; and d. A Hazardous Materials Business Plan shall be prepared prior to equipment use on the site and followed for project construction. This plan shall include, but not necessarily be limited to: 1. Specific bermed equipment maintenance and refueling areas; 2. Bermed and lined hazardous material storage areas on site that are covered during the rainy season; 3. Hazardous material spill cleanup equipment on site (e.g., sorbent pads, shovels, and bags to place contaminated soil in); and 4. Workers trained in location and use of cleanup equipment.	Less than significant
Hydrology and Water Quality	Preferred Alternative A Alternative B No Project No Action	HYDRO/WQ-1: Construction and operation would potentially violate (or cause the violation of) water quality standards.	See Mitigation Measures GEO-2 and HAZ-1 .	Less than significant
Noise	Preferred Alternative A Alternative B No Project No Action	NOISE-1: Construction activities would result in substantial, short-term increases in existing ambient noise levels over 65 dBA CNEL within the project vicinity.	NOISE-1.1: Construction activity within 800 feet (244 meters) of the residences shall be limited to the hours of 7 a.m. to 5 p.m., Monday through Saturday. No construction shall occur on state Holidays (e.g., Thanksgiving, Christmas, 4th of July, Labor Day). Construction equipment maintenance shall be limited to the same hours. Non-noise generating construction activities are not subject to these restrictions. NOISE-1.2: COMB shall notify the sensitive noise receptors 48 hours in advance of the commencement of any and all construction activities. The construction manager's (or representative's) telephone number shall also be provided with the notification so that concerns can be communicated. NOISE-1.3: Stockpiling and vehicle staging areas shall be located as far as practical from sensitive noise receptors. Every effort shall be made to create the greatest distance between noise sources and sensitive receptors during construction activities.	Less than significant
Transportation and Circulation	Preferred Alternative A Alternative B No Action	TRANS-3: Transport of construction equipment and materials on Glen Annie Road would increase traffic on a roadway that could result in a potential safety problem due to existing design features (i.e., inadequate pavement structure).	TRANS-3: Damage caused by the Project to Glen Annie Road segment located north of the Glen Annie Road/Cathedral Oaks Road intersection shall be repaired.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
LESS THAN SIGNIFICANT				
Aesthetics/ Visual Resources	Preferred Alternative A Alternative B No Project No Action	AE-1: Construction and operation would not substantially obstruct views of important visual resources including native vegetation and open space as experienced from public roadways.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	AQ-1: Construction and operation would not conflict with or obstruct implementation of an applicable air quality plan.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	AQ-2: Construction and operation would not exceed any ambient air quality standard or contribute substantially to an existing or projected air quality standard violation.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	AQ-3: Construction and operation would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	AQ-5: Construction and operation would not create objectionable odors that affect a substantial number of people.	None required.	Less than significant
Biological Resources	Preferred Alternative A Alternative B No Action	BIO-4a: Construction activities would not substantially disrupt local plant or wildlife communities.	BIO-4a: The Revegetation Plan shall include a seed mix appropriate for coastal scrub and chaparral areas as well as non-native grassland and other areas to be revegetated. Performance criteria for each plant community shall be included in the Revegetation Plan. Due to the relatively short distance of the project alignment and the similarity of habitats crossed by the project, one diverse seed mix may be developed for the entire route. This seed mix shall be applied to all areas where vegetation was removed.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	BIO-4c: Pipeline construction and operations would not disrupt local aquatic communities through the introduction or spread of non-native species.	None required.	Less than significant
Geology and Soils	Preferred Alternative A Alternative B No Project	GEO-1: Construction would not substantially alter the topography beyond that resulting from natural erosion and depositional processes.	None required.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
LESS THAN SIGNIFICANT				
	Preferred Alternative A Alternative B	GEO-3: Construction could potentially trigger or accelerate shallow landslides.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	GEO-5: During operations, the proposed alignment would not be subject to ground rupture due to an earthquake and attendant damage to structures, limiting their use due to safety considerations or physical condition.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	GEO-6: The proposed pipeline would potentially be subject to earthquake-induced ground motion (shaking) during operations with a low potential for differential settlement or surface cracks at the site and attendant damage to proposed structures that could result in a substantial loss of use for more than 60 days.	None required.	Less than significant
Hazards and Hazardous Materials	Preferred Alternative A Alternative B No Project No Action	HAZ-2: Operations and/or maintenance would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	HAZ-3: Construction would not create a significant hazard to the public or the environment due to the presence of soil or groundwater contamination.	None required.	Less than significant
Hydrology and Water Quality	Preferred Alternative A Alternative B No Project No Action	HYDRO/WQ-2: Construction and operation would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge or flow to the extent that it would not support existing land uses that rely on groundwater or planned uses for which permits have been granted.	None required.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
LESS THAN SIGNIFICANT				
	Preferred Alternative A Alternative B No Project	HYDRO/WQ-3: Construction would not substantially alter the existing drainage pattern of the site or area, including 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.	None required.	Less than significant
Land Use	Preferred Alternative A Alternative B No Project	LU-1: The proposed pipeline alignment would not result in incompatibilities with existing land uses.	None required.	Less than significant
	Preferred Alternative A Alternative B	LU-3: The proposed pipeline alignment would be consistent with all applicable land use and conservation plans and policies contained in the Santa Barbara County Comprehensive Plan after implementation of resource specific mitigation measures.	None required.	Less than significant
Noise	Preferred Alternative A Alternative B No Project No Action	NOISE-2: Operation would not generate long-term exterior or interior noise levels that would affect sensitive receptors.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	NOISE-3: Proposed pipeline operations would not substantially increase ambient noise levels of adjacent areas.	None required.	Less than significant
Transportation and Circulation	Preferred Alternative A Alternative B No Project	TRANS-1.1: Construction would not substantially increase intersection volume/capacity ratios within the project vicinity.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	TRANS-1.2: Operations would not substantially increase intersection volume/capacity ratios within the Project area.	None required.	Less than significant

Table ES-2. Summary of Impacts and Mitigations (continued)

Resource	Alternatives	Description of Impact	Mitigation Measures	Residual Impact
LESS THAN SIGNIFICANT				
	Preferred Alternative A Alternative B No Project No Action	TRANS-2: Construction and operation would not generate additional vehicular trips that would adversely affect intersection capacities in the project vicinity.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	TRANS-4: Level of service standards for CMP intersections in the project area would not be exceeded.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	Adverse effects.	None required.	Less than significant
	Preferred Alternative A Alternative B No Project No Action	Adverse effects.	None required.	Less than significant
Mineral Resources, Public Services, Socio-economics Agricultural Resources	Preferred Alternative A Alternative B No Project No Action	Adverse effects.	None required.	Less than significant
Utilities/ Service Systems	Preferred Alternative A Alternative B No Project	Adverse effects.	None required.	Less than significant
NO IMPACT				
Aesthetics/ Visual Resources	Preferred Alternative A Alternative B	AE-3: The proposed pipeline alignment would not introduce new glare sources that would substantially degrade existing visual conditions.	None required.	No impact
Geology and Soils	Preferred Alternative A Alternative B No Project No Action	GEO-7: Operation would not expose people or property to a greater than average risk of tsunamis or seiches.	None required.	No impact
Land Use	Preferred Alternative A Alternative B No Action	LU-2: Construction would not disrupt or divide any established communities.	None required.	No impact

Table ES-2. Summary of Impacts and Mitigations (continued)

<i>Resource</i>	<i>Alternatives</i>	<i>Description of Impact</i>	<i>Mitigation Measures</i>		<i>Residual Impact</i>
			NO IMPACT		
Recreation	Preferred Alternative A Alternative B No Project No Action	Adverse effects.	None required.		No impact
Agricultural Resources	No Project	Adverse effects.	None required.		No impact

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APPENDICES

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1.0 INTRODUCTION

1.1 BACKGROUND

The South Coast Conduit (SCC) and the Tecolote Tunnel were constructed in the 1950s by the U.S. Bureau of Reclamation (Reclamation) as part of the Cachuma Project. The Cachuma Project provides for the storage of surface water from the Santa Ynez River watershed and a terminal point for State Water Project (SWP) water at Lake Cachuma for the following South Coast communities: Goleta, Santa Barbara, Montecito, Summerland, and Carpinteria.

The SCC water distribution system transports approximately 80 percent of the South Coast's water supply and provides municipal, industrial, and irrigation water to the Goleta Water District, City of Santa Barbara, Montecito Water District, and Carpinteria Valley Water District. Reclamation owns all SCC facilities; the Cachuma Operation and Maintenance Board (COMB) manages these facilities under a Transfer of Operations and Maintenance (O&M) Contract with Reclamation. COMB is a California Joint Powers Agency formed in 1956 pursuant to an agreement with Reclamation. The agreement transferred to the Cachuma Member Units the responsibility to operate, repair, and maintain all Cachuma Project facilities, except Bradbury Dam which Reclamation has continued to operate. The Cachuma Member Units include Carpinteria Valley Water District, Goleta Water District, City of Santa Barbara, Montecito Water District, and Santa Ynez River Water Conservation District-Improvement District No. 1. COMB is responsible for diversion of water to the South Coast through the Tecolote Tunnel and O&M of the SCC pipeline, flow control valves, meters, and instrumentation at control stations and turnouts along the SCC and at four regulating reservoirs. COMB coordinates closely with Reclamation and Member Units' staff to ensure that water supplies meet daily demands.

The SCC operates at capacity for extended periods of time, and during peak demands it is not able to provide the amount of water needed. The original design capacity of the pipeline was approximately 50 million gallons per day (MGD), but this capacity has been reduced to about 41 MGD by installation of a weir at the Glen Anne turnout in the mid 1960s and at the Corona Del Mar Water Treatment Plant (CDMWTP) in the early 1970s, and installation of the South Coast Conduit pump station (SCCPS) at the Cater Water Treatment Plant in 1980. The capacity of Tecolote Tunnel is approximately 65 MGD.

1.2 PROJECT PURPOSE AND NEED

The purpose of the project is to increase the operational flexibility, reliability, and the conveyance capacity of the SCC between the South Portal of the Tecolote Tunnel (SPTT) and the CDMWTP to accommodate peak demand levels and to allow maintenance of the pipeline. As limitations and age of the original equipment, significant system modifications, and increased demands constrain the ability of the SCC to function at the system's original design capacity, COMB is forced to rely on water stored in Lauro, Ortega, and Carpinteria reservoirs to meet regional water needs. In addition, no redundant supply or pipeline exists to convey Cachuma Project water or SWP water to the South Coast if the Upper Reach of the SCC is out of service due to scheduled and/or unexpected repairs. As the Upper Reach of the SCC has the largest demand deficit and is located upstream from the sources of demand, the proposed improvements would allow more water flow farther along the pipeline to improve the level of service and reliability. The proposed project would increase reliability and provide COMB the ability to perform regularly scheduled inspections and maintenance to one pipeline while the second pipeline is operational. Operational flexibility would increase due to the ability to provide higher flow rates (up to the 65 MGD tunnel capacity) to CDMWTP and increased flow rates to facilities downstream of the CDMWTP during times of peak demand. The total amount of water delivered per year, however, would not increase.

1.3 RELATIONSHIP TO OTHER DOCUMENTS

This joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) is intended to fulfill the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] 21000 *et seq.*) and the National Environmental Policy Act (NEPA) (42 U.S.C. §§ 4321-4370d). This document has also been prepared to address requirements of the following statutes:

- National Historic Preservation Act (NHPA), 16 U.S.C. §§ 470-470x-6;
- Clean Water Act (CWA), 33 U.S.C. §§ 1251-1387;
- Clean Air Act (CAA), as amended, 42 U.S.C. §§ 7401-7671p, including 1990 General Conformity Rule;
- Executive Order (EO) 12898 – Federal Actions to Address Environmental Justice in Minority Populations and Low-income Populations, 11 February 1994;
- EO 13045 – Protection of Children from Environmental Health Risks and Safety Risks, 23 April 1997;
- Endangered Species Act (ESA), 16 U.S.C. §§ 1531-1544;
- Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6901 *et seq.*, as amended;
- Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 42 U.S.C. § 9601 *et seq.*, as amended;
- EO 13101 – Greening the Government Through Waste Prevention, Recycling, and Federal Acquisition;
- EO 13123 – Greening the Government Through Efficient Energy Management; and
- EO 13148 – Greening the Government Through Leadership in Environmental Management.

COMB is the state lead agency for CEQA compliance, and Reclamation is the lead agency for NEPA compliance.

1.4 PUBLIC INVOLVEMENT

Reclamation and COMB conducted a joint public scoping meeting on May 17, 2007, at the COMB office. During this meeting, the agencies presented information on the project and solicited public input on topics to be addressed in the EIS/EIR. No issues were raised by the public.

A public meeting will be held during the public review period of this report. The hearing is expected to occur in summer 2008. The Final EIS/EIR will address comments received from the public and from public agencies during the public review period.

1 1.5 REGULATORY REQUIREMENTS

2 Permits and approvals will be required from a number of agencies as summarized in Table 1-1.

Table 1-1. Permits/Approvals Required

<i>Agency</i>	<i>Permit/Approval</i>
U.S. Army Corps of Engineers (USACE)	Section 404 of the Clean Water Act (CWA) permit
U.S. Fish and Wildlife Service (USFWS)	Section 7 of the Endangered Species Act consultation
U.S. Bureau of Reclamation	MP620 permit for additions and alternations
State Historic Preservation Office	Section 106 of the National Historic Preservation Act review
Regional Water Quality Control Board (RWQCB)	Section 401 of the CWA certification; General Permit for Storm Water Discharges Associated with Construction Activity (CWA Section 402)
California Department of Fish and Game (CDFG)	Streambed Alteration Agreement
Santa Barbara Air Pollution Control District	Authority for enforcing dust control measures
Santa Barbara County	Finding of consistency with the General Plan under California Government Code 65402

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2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The project site is located in Glen Annie Canyon, north of the City of Goleta, in Santa Barbara County, California. The project site encompasses the area surrounding the existing SCC between the SPTT and the CDMWTP (Figure 2-1). The alternative routes being considered are described below.

2.2 PROJECT COMPONENTS

The project would construct a second 48-inch diameter water supply pipeline with appurtenant facilities. The existing SCC pipeline would remain operational; abandonment and demolition of the existing pipeline would not occur. The federal action would be approval of the proposed facilities by Reclamation through a MP620 permit for additions or alterations.

2.2.1 Pipeline

The pipeline would be welded steel pipe (WSP), ductile iron pipe (DIP), or concrete pressure pipe (CPP) with an inside diameter of 48 inches. The pipe would be buried with a nominal five feet of cover. At the two stream crossings, cover would be approximately eight feet to avoid pipeline damage due to scour. One short segment would be placed above ground on a nearly vertical rock cliff face adjacent to Glen Annie Reservoir for the non-parallel pipeline route. On private lands, the pipe would be placed within a permanent easement. In addition, a temporary construction easement adjacent to the permanent easement that extends the width of the permanent easement would be used to accommodate the equipment, trench, and construction activities. COMB would enter into an easement with the adjacent landowners that would authorize the construction and operation of the proposed pipeline across their property, ensuring the conditional use of private lands. During this process, COMB would negotiate with the respective landowner regarding the payment of appropriate fees to offset the loss of existing avocado trees, ensuring sufficient funding to replant the orchard subsequent to construction. On federal lands, no easements would be required. The width of the construction area (permanent plus temporary construction easements on private land) would vary, depending on terrain and environmental constraints, and would generally be approximately 100 feet (30 meters). In areas with topographic or other constraints, the width could be as narrow as 50 feet (15 meters). Additional work areas, called staging areas, would be provided along the pipeline route for equipment, supplies (e.g., pipe), and vehicle parking; staging areas would be located within the temporary construction easements.

2.2.2 Appurtenant facilities

A number of appurtenant facilities would also be required for the new pipeline.

South Portal. The existing SPTT would need to be replaced due to structural degradation and modifications necessary to divert the water into two pipelines (Figure 2-2). Because the SCC must remain operational, the new SPTT structure would be constructed and then connected to the tunnel and pipelines during a short period of time. The pad and wasteway overflow elevation for the new SPTT would be placed at the hydraulic grade line (HGL) for the tunnel in order to maintain tunnel capacity and operational characteristics. Magnetic flowmeters would be installed at this location, or at CDMWTP, to provide improved flow measurement accuracy. Slide gates or butterfly valves would also be installed to allow one of the pipelines to be shut down for inspection and maintenance.

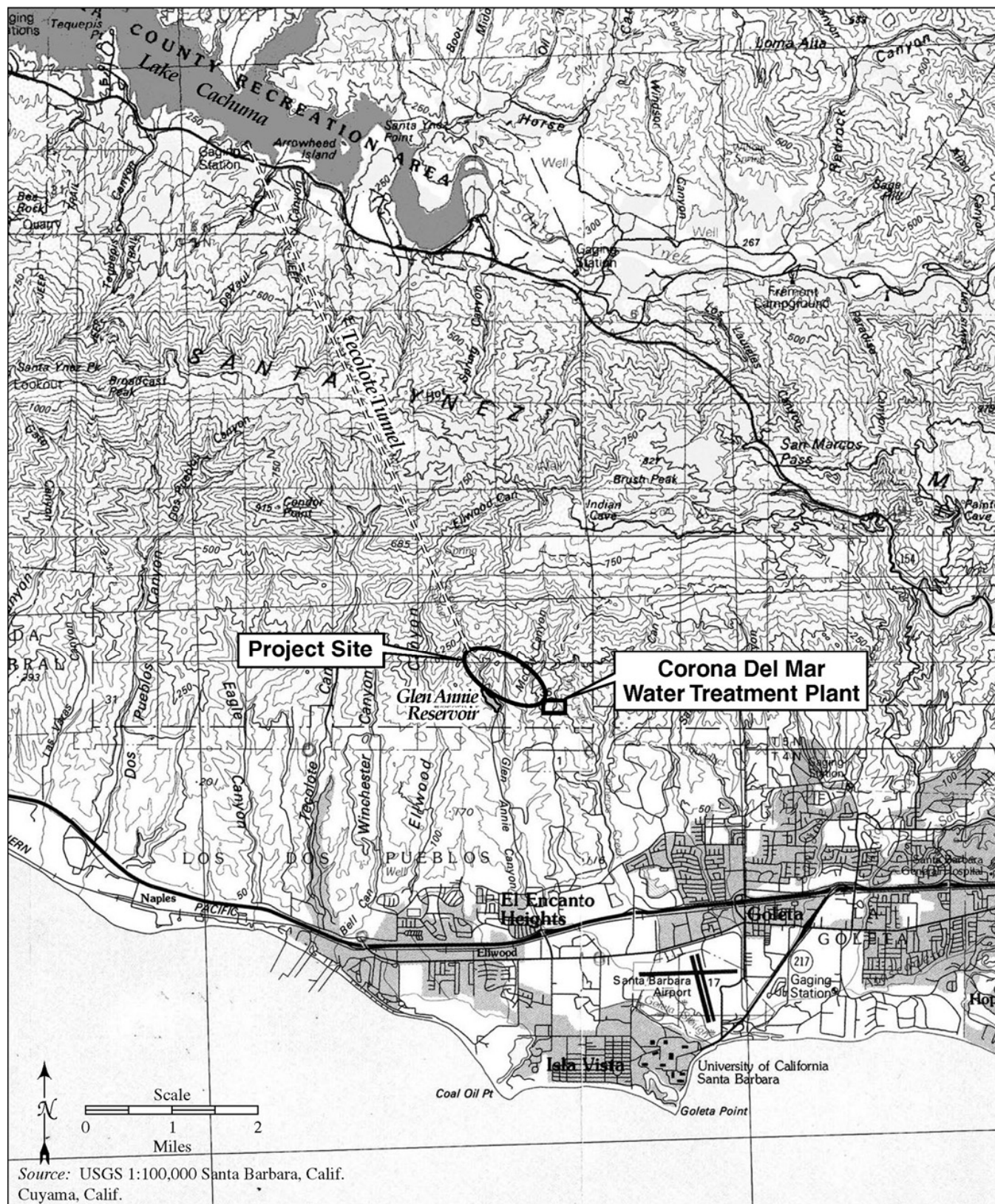


Figure 2-1. Regional Location Map

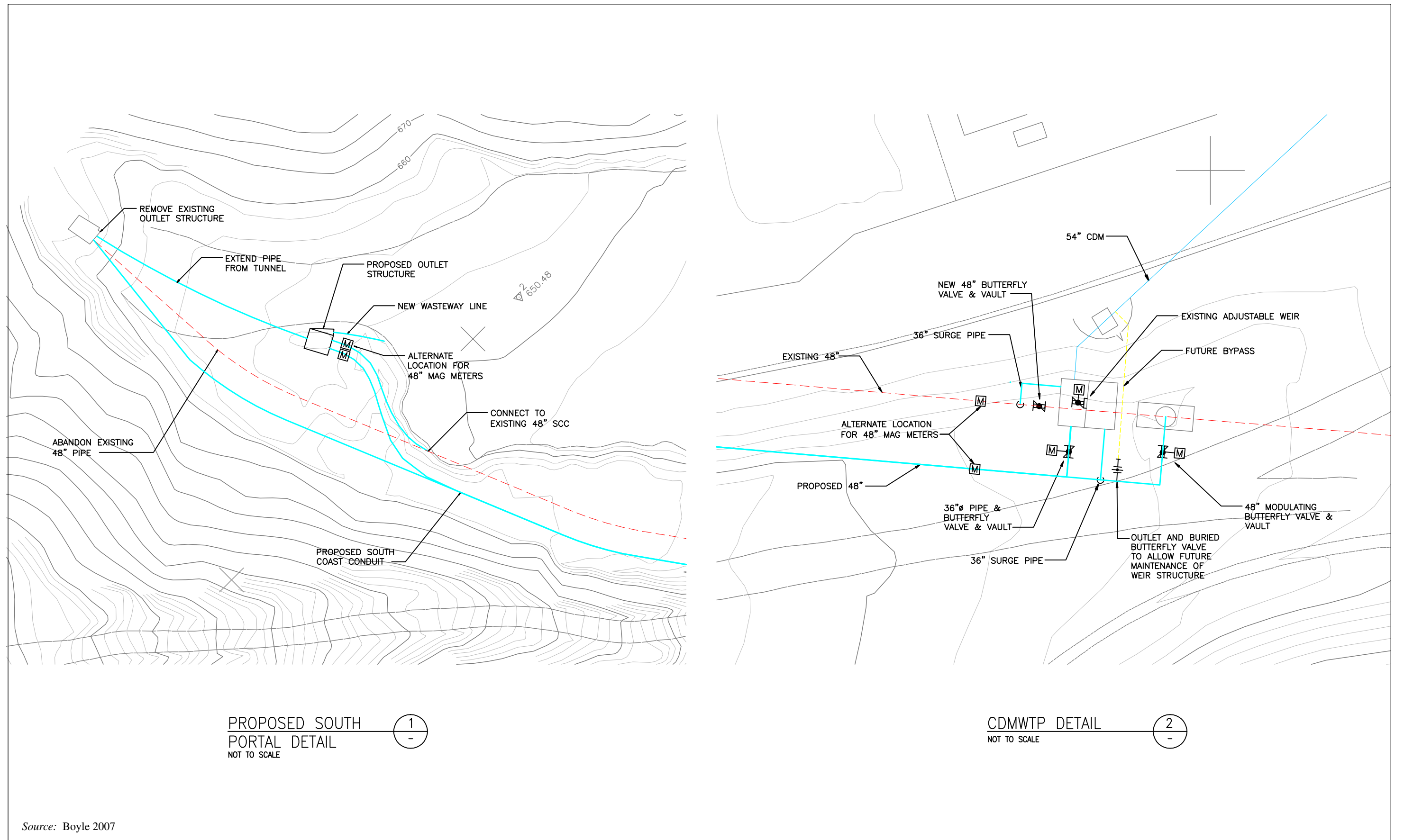


Figure 2-2. Conceptual Structural Tie-Ins

Color

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Air Release and Blowoff Valves. Air release valves are required at high points along the pipeline, and blowoff valves are required at low points. Approximately five air release valves and three blowoff valves would be necessary for the new pipeline. Air release valves allow the pipeline to be drained for inspection and maintenance and to remove air in the pipeline when it is refilled. The valves are placed in vaults (manholes) for protection and access. Although blowoff valves are located in low areas, usually adjacent to drainages, water released from the valves would be directed into upland areas so that it would not flow into existing drainages (West Fork of Glen Annie Creek, an unnamed tributary of Glen Annie Reservoir, and Glen Annie Creek). The release rate would be controlled to prevent scour and erosion at the release point.

Glen Anne Turnout. The new pipeline would need to be connected to the existing Goleta West Conduit (GWC) through the existing or a new turnout. For the Preferred Alternative, a new 18-inch (46-centimeter) diameter, 375-foot (114-meter) long intertie pipeline would be constructed adjacent to the existing pipeline from the Glen Anne turnout northwestward to the Preferred Alternative pipeline (see Figure 2-3). For pipeline alignment Alternative A (parallel pipeline) an intertie at the Glen Anne Structure would be constructed along with improvements to the turnout structure that maintain the HGL to the GWC. Four options have been evaluated for the Alternative B (nonparallel pipeline) (Figure 2-4).

- *Option 1 – Pipeline.* In concept, this option would involve connecting the proposed Alternative B pipeline into the Glen Anne Turnout upstream of the weir that regulates the HGL to the GWC. This option would utilize the existing chlorination facility at the turnout. A possible connection point would be the area of the existing venturi flowmeter. The venturi may be removed to provide room for a tee connection. The venturi could be removed because of the new magnetic flowmeters installed at the South Portal or CDMWTP would provide the flow measurements. Additional valves and vaults may be necessary for proper operations. Three methods may be utilized to match the HGL at the connection to the second barrel of the SCC:
 - Build a low head BPS capable of flow rates to meet the Goleta Water District demand. A relatively low total dynamic head (TDH) pump system would be required;
 - Install a control valve/pressure transmitter downstream of the GWC connection to maintain an HGL in the SCC and GWC equivalent to the Glen Anne weir; or
 - Install a new weir/overflow structure located adjacent to the existing Corona Del Mar turnout.
- *Option 2 – Second Glen Anne Turnout.* This concept would allow the intertie of the Alternative B pipeline to the GWC without the expense and effort of a supplemental pipeline to the existing Glen Anne Structure. A new chlorination facility would be constructed at the intertie. This option would also require matching the HGL at the connection to the second barrel of the SCC, as described above for Option 1.
- *Option 3 – New Transmission Pipe.* Option 3 is a solution which allows for treated water from the CDMWTP to be transported in the GWC. A pumping station at Ellwood reservoir would be required as well as a new pipeline to the GWC, which would parallel the Alternative B pipeline alignment as much as possible. An approximate pumping head of less than 250 feet (76 meters) would be typically required.
- *Option 4 – New Intertie from the Tecolote Tunnel.* This option would transmit water directly from the Tecolote Tunnel to the GWC, parallel to the Alternative B alignment. Under this option, a new chlorination facility at the tunnel portal and a new pipeline to the GWC would be required. Option 4 would not require any pumping; however, a method for facilitating pressure reduction to avoid backflow at the Glen Anne Turnout could be required.

Corona Del Mar Turnout. The proposed second pipeline of the SCC would terminate at the existing CDMWTP weir structure (Figure 2-2). The CDMWTP turnout would be modified to increase capacity and

reliability. A magnetic flowmeter would potentially be constructed upstream of the connection to the existing 36-inch-diameter outlet in the weir structure. Isolation of the pipeline would be accomplished with a motorized butterfly valve placed in a vault adjacent to the weir structure. To protect the pipeline from surge, a 36-inch-diameter pipe would also connect to the structure, downstream from the weir and higher in elevation. A bypass would also be constructed, with 48-inch-diameter modulating valve in a vault, which would allow downstream water delivery during necessary weir maintenance. The existing vent structure at Station 78+00 could be removed if a vacuum release valve were installed immediately downstream of the turnout.

Fiber-Optic Cable. A conduit for fiber-optic cable would be installed within the pipeline trench allowing reliable pipeline monitoring.

2.3 CONSTRUCTION

2.3.1 Construction Methods

The pipeline would be installed using an open trench construction method that consists of the following steps: (1) clearing, grubbing, and grading, (2) excavation of the trench, (3) delivery of pipe segments and bedding material, (4) placement of the pipe segments along the trench, (5) installing the pipe in the trench, (6) backfilling the trench and installing the fiber-optic cable, (7) testing the pipe for leaks, and (8) cleanup and restoration of the corridor. The area to be trenched as well as adjacent work areas would be cleared of vegetation and rocks, as needed, and graded. Vegetation would be cleared to ground level, and roots of woody vegetation would be removed from the area to be trenched but not from the adjacent work area except those removed by grading. Where feasible, woody vegetation would be removed by cutting at ground level rather than by grading. The amount of grading in adjacent areas would depend primarily on topography because the work space needs to be fairly level. Native vegetation removed would be stockpiled and spread over the corridor as mulch during restoration to provide a seed source. Where present, topsoil would be salvaged from the area to be excavated, stockpiled separate from the remainder of the excavated material (so that it is not mixed with subsoils), and replaced over the backfill to aid in revegetation. Where excavated subsoil would be stockpiled on undisturbed topsoil within the construction easement, straw or another marker would be placed in a layer sufficiently thick to relocate when spoil piles are removed so that final grading would restore the original grade and drainage patterns to the extent feasible. On steep slopes, water bars or other measures would be installed for erosion control.

Pipe and bedding material (sand) would be delivered to the site by truck. For 48-inch pipe in 20- to 40-foot lengths, 52 tractor-trailer truck trips would be needed to deliver the pipe from outside the local area (probably San Bernardino). An estimated 8,100 cubic yards (cy) of bedding material would be required for placement under and around the pipe. This material would be delivered to the site in dump trucks from local sand and gravel pits. An estimated 1,100 truck trips would be needed if native excavated material is not suitable.

A temporary construction easement would be provided for storage of excavated material, topsoil, pipe segments, and vehicle access. The width of this easement would vary depending on topography. On steep slopes and where steep side slopes are present adjacent to the pipeline alignment, the easement would be narrower than in flatter terrain.

Staging and extra work space areas would be provided in flatter areas that lack oak trees and other dense woody native vegetation. These would be located near constrained width areas where feasible to accommodate the storage of excavated materials and supplies that would not fit in the narrow easement.

A tracked excavator would be used for trenching and lifting the pipe sections into the trench. The trench would be a minimum of 9.5 feet (2.9 meters) deep to allow a nominal 5 feet (1.5 meters) of cover over the top



Figure 2-3. Proposed Pipeline Alternative Alignments

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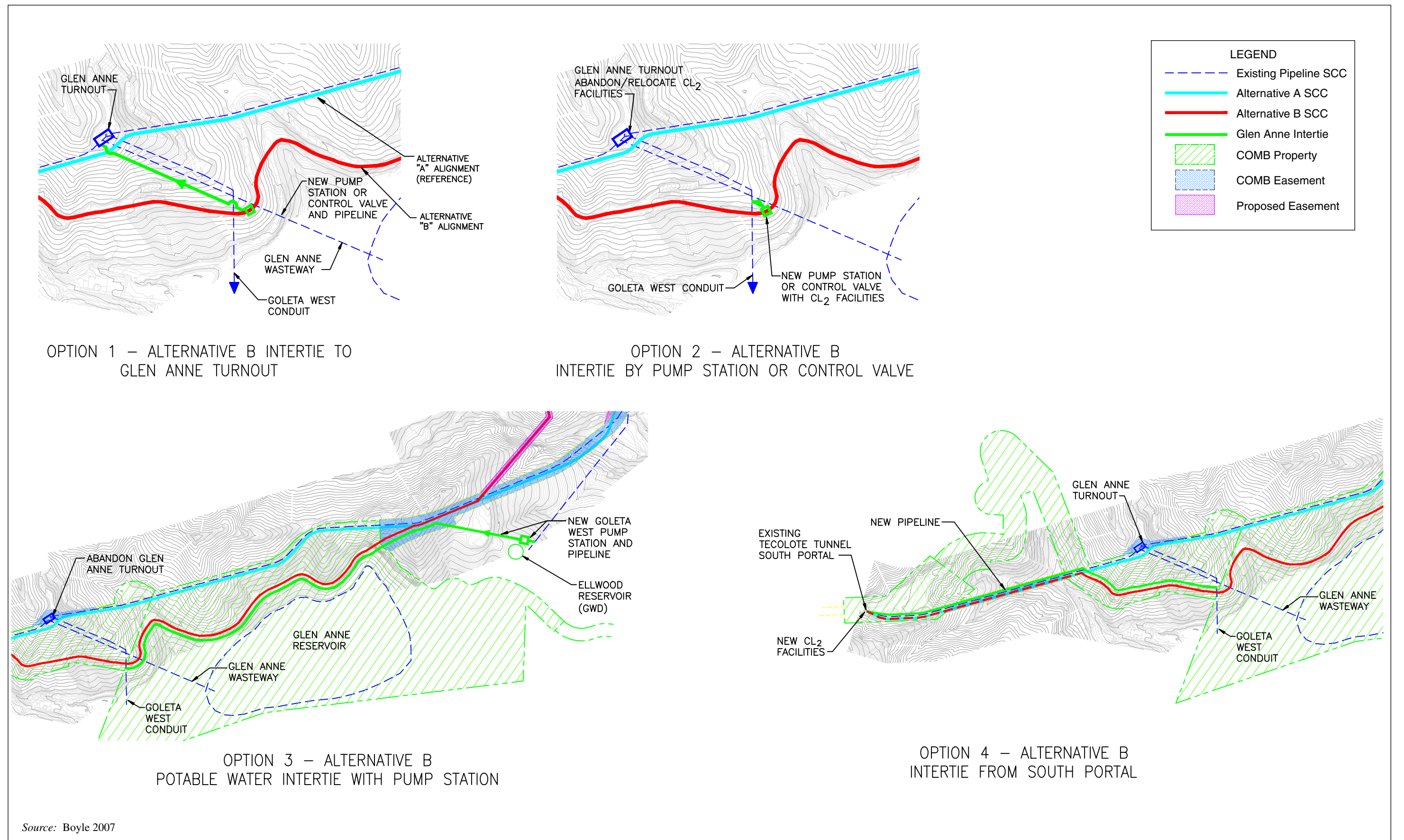


Figure 2-4. Proposed Glen Anne Alternative B Intertie Options

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of the pipe. The sides of the trench would be sloped for safety where the work area is wide enough. In narrow work areas, the trench would have nearly vertical walls with temporary shoring for worker safety. A loader would be used to place the sand bedding in the trench. The pipe sections would be welded in the trench. Underground utility lines crossed by the proposed pipeline would be excavated with small equipment or by hand to maintain their integrity. The pipeline would pass under existing underground utilities with a minimum clearance of 12 inches (30 centimeters) wherever practicable. Advance notice of this activity would be given to utility owners.

Concrete structures would be precast concrete, but their bases will be placed on-site and the vaults could be poured in place on site. Vaults would include air release and blowoff valves. At minimum, one concrete truck trip would be required per structure.

At the stream crossings, the pipeline would be buried with a minimum of 8 feet (2.4 meters) of cover. The pipe would also be encased in concrete. Blowoff valves would be installed adjacent to the three drainage crossings. These would include valves to gradually release water into nearby upland areas to reduce the potential for erosion and runoff of soil or water to the stream. Energy dissipation (to be built in or temporarily used) may also be incorporated. Flow in creeks would be diverted during work through the use of temporary culverts, placed in the flow line and secured with sandbags. If any dewatering would be needed, best management practices (BMPs) would be used to minimize downstream siltation.

During backfilling, bedding material would be placed around the pipe followed by replacement of the material excavated. The backfill would be compacted to prevent pipeline movement and erosion that could expose or damage the pipeline. Excess subsoil material displaced by the pipe and bedding material would be used to crown the backfill (prior to placement of topsoil), to compensate for settling, or hauled offsite to an approved local disposal site. It would not be spread over existing topsoil. Rock that is not suitable for backfilling would be hauled to an approved disposal site.

The pipeline would be cleaned and tested for leaks after backfilling. This testing would be accomplished by filling the pipeline with water and maintaining a test pressure for at least 24 hours. Leaks would be detected by pressure drop then located visually. The water would also clean the line and would be drained at the blowoff valves. If the stream crossings are constructed separately, each would be tested separately from the pipeline.

Equipment to be used during construction includes an excavator, loader, welder, 10-wheeler truck, water truck, and dozer. Other vehicles that would be on site include contractor, inspector, and engineer pickup trucks as well as worker vehicles.

2.3.2 Environmental Controls

The following environmental controls would be included for construction of the proposed alternative pipeline alignments (i.e., Preferred Alternative, Alternative A (Parallel) Pipeline, and Alternative B (Non-Parallel) Pipeline).

2.3.2.1 County Standard Dust Control Measures

The project construction contractor would implement the following County standard fugitive dust control measures during all proposed ground disturbance activities (SBCAPCD 2007c):

1. Use water trucks or sprinkler systems to keep all areas of vehicle movement damp enough to prevent dust from leaving the construction area. At a minimum, this would include wetting down such areas in the later morning and after work is completed for the day and whenever wind exceeds 15 miles (24 kilometers) per hour.

2. Minimize the amount of disturbed area and speeds of on-site vehicles.
3. Install gravel pads at all access points to prevent tracking of soil onto public roads.
4. Soil stockpiled for more than two days shall be covered, kept moist, or treated with soil binders to prevent dust generation. Trucks transporting fill material to and from the site shall be tarped from the point of origin.
5. After completion of clearing, grading, earthmoving, or excavation, treat the disturbed areas by watering, revegetation, or by spreading soil binders until they are paved or otherwise developed to prevent dust generation.
6. The contractor or builder shall designate personnel to monitor the dust control program and to order increased watering, as necessary, to prevent the transport of dust off-site. Their duties shall include holiday and weekend periods when work may not be in progress.

These dust control requirements would be included on the final grading and construction plans.

2.3.2.2 Fire Control

The project construction contractor shall prepare and implement a Fire Prevention Plan. This Plan shall be prepared in consultation with COMB and shall be approved by the Santa Barbara County Fire Department. The Plan shall address the following:

1. Smoking only in enclosed vehicles or areas cleared of vegetation.
2. No open fires permitted.
3. Vehicle operation and parking limited to the cleared work area.
4. Portable tools with internal combustion engines equipped with spark arrestors.
5. Construction crews trained in fire prevention and response.
6. All vehicles in the work area equipped with a minimum 2 lb fire extinguisher.
7. Procedures for reporting wildfires, including radio and telecommunication protocols.
8. Compliance with California's Fire Laws.

The Fire Prevention Plan requirement would be included in the construction contract bid documents.

The contractor shall acquire a permit for welding, grinding, cutting, and brazing from the Santa Barbara County Fire Department. Compliance with the requirements of the permit is mandatory.

2.3.2.3 Solid Waste Reduction Measures

The construction contractor would adhere to the following requirements during construction activities:

1. Demolition and/or excess construction materials would be separated onsite for reuse/recycling or proper disposal. Steel and concrete would be recycled. During grading and construction, separate bins for recycling of construction materials would be provided onsite.
2. Materials with recycled content would be used in project construction.

These requirements would be printed on the final grading and construction plans. COMB would submit a description of the amounts and types of recycled materials to be used in project construction to the County Public Works Department.

2.3.2.4 Site Restoration

All disturbed soils that are not within roadways or covered with facilities would be stabilized with vegetation appropriate for the location upon completion of construction. This includes implementation of a Revegetation Plan (see Section 3.3) that includes, at a minimum:

1. A description of the resources that would be removed (including number, location, species, and size for all tree stems);
2. Seeding requirements and number of container plants by location to approximate pre-project cover;
3. Seed application methodology;
4. Seeding/planting schedule;
5. Monitoring and maintenance requirements;
6. Weed control methods and frequency;
7. Erosion control methods;
8. Photopoints at selected vantage points to be taken annually;
9. Performance criteria and remedial actions to be taken if criteria are not being met; and
10. Reporting requirements to document progress of revegetation.

2.3.3 Access

Existing roads and the pipeline corridor would be used for access during construction. No new roads would be constructed for the project.

2.3.4 Schedule

The proposed project from notice to proceed to restoration of the corridor is estimated to take 11 months (Figure 2-5). Mobilization of equipment and site clearing would take approximately two months and would overlap with pipeline installation (seven months). Pipeline testing would take up to one month, and finish grading and planting would take two months. Work could start in 2009. Due to terrain and erosion potential, backfilling should be complete prior to rains or contractor should be prepared to stabilize disturbed soils and stockpiles from erosion prior to any forecast rain.

	2006				2007				2008				2009				2010
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Concept Design Refinement																	
Environmental																	
Preliminary Design																	
Permits																	
Easements																	
Final Design																	
Contractor Prequalifications																	
Advertise For Bid																	
Construction Phase																	

Figure 2-5. South Coast Conduit Project Schedule

2.4 OPERATIONS AND MAINTENANCE

The new pipeline, as well as the existing pipeline, would be operated and maintained by COMB.

2.4.1 Operation

The two pipelines would be operated so that water is delivered in one when demand is less than 41 MGD and in both when demand exceeds 41 MGD. Flow into the two pipelines at the South Portal would be regulated automatically with manual override operation.

2.4.2 Maintenance

The new pipeline would be maintained by periodic checks of the cathodic protection system, visual surveillance of the corridor where accessible for leaks, annual testing of the blowoff valves, and annual internal inspections. For internal inspections, the pipeline would be drained so that the inside could be visually inspected. Testing of the blowoff valves would involve gradually opening and closing the valve to make sure that it works properly. The water would be released into adjacent upland areas so that it would not flow into the adjacent drainage. This operation would be conducted in a manner to prevent erosion and transport of sediment into the drainage. The permanent easement for the pipeline (nominally 80 feet [24 meters] wide) would be maintained clear of trees that become large. These trees would be removed using hand tools before they become large.

2.5 PROJECT ALTERNATIVES

NEPA (40 C.F.R. 1502.14[a]) and CEQA Guidelines (15126.6) require that an EIS and an EIR examine alternatives to a project in order to explore a reasonable range of alternatives that meet most of the basic project objectives, while reducing the severity of significant environmental impacts. The EIS/EIR will compare merits of the alternatives and determine an environmentally superior alternative. The five alternatives that were selected to be carried forward for detailed analysis in the EIS/EIR include the Preferred Alternative, Alternative A (parallel) pipeline, Alternative B (non-parallel) pipeline, the No Project Alternative, and the No Action Alternative.

The three pipeline alignment alternatives all have the same start and end points as well as varying amounts of common alignment (Figure 2-3). The pipe size and appurtenant structures would be the same for each as would general construction methods. The Preferred Alternative would be constructed adjacent (parallel) to the existing SCC pipeline for approximately 1,385 feet (422 meters) from the SPTT to an existing road, along that road to the east end of Glen Annie Reservoir, and then parallel to or near the existing SCC pipeline to the Corona Del Mar turnout. The Alternative A pipeline would be constructed adjacent to the existing pipeline alignment for its entire length. The Alternative B pipeline alignment would follow essentially the same route as the Preferred Alternative from the SPTT to Ellwood Reservoir and then diverge to the north side of the existing pipeline to the Corona Del Mar turnout. The three pipeline alignments would require crossings at the West Fork and the main stem of Glen Annie Creek. The West Fork crossing would be the same for all three alternatives while the main stem crossing would be approximately the same for the Preferred Alternative and Alternative A while the Alternative B crossing would be located about 325 feet (99 meters) upstream in an area with very steep banks.

Construction of the Preferred Alternative, Alternative A, and Alternative B pipeline alignments would connect to SCC structures at the South Portal, Glen Anne Turnout, and CDMWTP. A new South Portal diversion/wasteway structure would be constructed to divert water into each pipeline (Figure 2-2). Magnetic flowmeters would be installed at the South Portal (or CDMWTP) to provide improved flowrate measurement

accuracy. In order to shut down one of the pipelines for maintenance tasks, the structure would include slide gates (or butterfly valves). Modifications to the CDMWTP turnout structure would also be required to control flows. The existing vent structure would potentially be demolished because the turnout structure functions as a hydraulic control structure; however, a vacuum release valve (or vent) would need to be provided downstream of the CDMWTP turnout.

The Preferred Alternative alignment would be connected to the Glen Anne Turnout structure via an interconnection pipeline into the Glen Anne Turnout upstream of the weir that regulates the HGL to the GWC. The interconnection pipeline would be routed within the Alternative A alignment (refer to Section 2.2.2 for additional details). Alternative A (parallel) pipeline would require construction of an intertie at the Glen Anne Turnout structure with improvements to the turnout structure that maintain the HGL to the GWC.

As discussed in Section 2.2.2, several options would be evaluated for connecting the Alternative B (non-parallel) pipeline to the Glen Anne Turnout structure, including connecting the proposed Alternative B pipeline to the Glen Anne Turnout upstream of the weir that regulates the HGL to the GWC, constructing an intertie of the Alternative B pipeline to the GWC without constructing a supplemental pipeline to the existing Glen Anne Structure, and transporting treated water from the CDMWTP to the GWC (Figure 2-3).

The No Project Alternative would include construction of site improvements, regular (annual) maintenance, and operational activities that could occur with issuance of federal permits at stream crossings. Regular maintenance activities include inspection of the air release valves and blowoff valves for operability, annual inspection of the right-of-way for encroachments, and maintenance of the Glen Anne and Corona Del Mar turnout structures and Glen Anne meter. As the SPTT, Glen Anne and Corona Del Mar turnout structures, and Glen Anne meter are substantially corroded, these structures would need to be replaced as part of site improvements. Additionally, existing downstream degradation of all stream crossings would require substantial improvements to protect the pipeline and reduce the potential for replacement. Buildout of site improvements under this alternative would include stream crossing work that would require a Section 404 permit from the U.S. Army Corps of Engineers (USACE). Reclamation approval would be needed for construction of the site improvements (MP620 permit for additions and alterations). Under this alternative, long shutdowns would be required to accommodate the reasonably foreseeable site improvements. Construction of site improvements required under the No Project Alternative would only occur in the event the project is not approved and after evaluation under a separate environmental review process.

The No Action Alternative would include no site improvements, but regular (annual) maintenance and operational activities would continue to occur as in the past. These include inspection of the air release valves and blowoff valves for operability and annual inspection of the right-of-way for encroachments. The poor condition of the concrete in the SPTT due to hydrogen sulfide gas within the water would ultimately cause this structure to fail. The consequences of that failure would include an uncontrolled release of water at a rate of 40+ MGD for a minimum of 6 hours and possibly up to 10 hours. The water would flow down slope through the avocado orchard and into West Fork of Glen Annie Creek causing severe erosion and damage or removal of vegetation and wildlife habitat. The two residential structures between the SPTT and Glen Annie Reservoir would be damaged. The water and much of the eroded soil would be contained within Glen Annie Reservoir. The remainder of the eroded soil would be deposited between the SPTT and Glen Annie Reservoir where water velocity slows enough for deposition. The entire SCC would be out of service (i.e., no water deliveries from Lake Cachuma to the South Coast) for the two to four weeks needed to repair the SPTT. The Goleta Water District, Santa Barbara City, Carpinteria Valley Water District, and Montecito Water District would be out of water within two weeks of structure failure, thereby disrupting water service to 200,000 residents of the South Coast.

Erosion of the creek bed or damage to the pipeline and its coating caused by erosion could result in pipeline failure at either the West Fork of Glen Annie Creek or the main stem of Glen Annie Creek. Failure of the

- 1 pipeline at the West Fork crossing would have effects similar to those described for failure of the SPTT.
- 2 Failure of the pipeline at the main stem crossing would have the same type of effects, but a citrus orchard
- 3 could be affected and the erosive effects of the released water would occur downstream to Goleta Slough and
- 4 the Pacific Ocean.

- 5 Glen Anne and Corona Del Mar turnout structures and Glen Anne meter would not be upgraded/replaced to
- 6 improve operations.

3.0 ENVIRONMENTAL SETTING AND PROJECT IMPACTS

1 KEY ISSUES

2 This EIS/EIR discusses all environmental resources potentially impacted by the project as required by NEPA
3 and CEQA. Impacts on the following environmental issue areas were determined by Reclamation and COMB
4 as warranting detailed evaluation in this EIS/EIR:

- 5 • Aesthetics/Visual Resources;
- 6 • Air Quality;
- 7 • Biological Resources;
- 8 • Cultural Resources;
- 9 • Geology and Soils;
- 10 • Hazards and Hazardous Materials;
- 11 • Hydrology and Water Quality;
- 12 • Land Use;
- 13 • Noise;
- 14 • Transportation/Circulation;
- 15 • Indian Trust Asses (ITA); and
- 16 • Environmental Justice.

17 These environmental resource impact assessments are discussed in the following sections. In cases where the
18 potential for significant adverse environmental effects are identified, mitigation measures are proposed to avoid,
19 minimize, and/or provide compensatory replacement of the resources that would be negatively impacted.

20 In addition to these primary environmental concerns, the EIS/EIR addresses those potential impacts on
21 environmental issue areas considered to be adverse, but less than significant, as required under NEPA and CEQA
22 Guidelines Section 15126. These issue areas are agricultural resources, mineral resources, public services,
23 utilities/service systems, recreation, and socioeconomics.

24 3.1 AESTHETICS/VISUAL RESOURCES

25 The following discussion focuses on the visual resources of the project site, including its undeveloped
26 character, its relationship to surrounding areas, the degree of night lighting and glare in the vicinity, and the
27 surrounding architectural style and character.

28 3.1.1 Environmental Setting

29 The County Visual Aesthetic Impact Guidelines (*Santa Barbara County Thresholds Manual* 1995) provide
30 guidance in determining the importance of visual resources. Key factors in characterizing the importance of
31 visual resources associated with a project parcel include the following:

- 32 • *Physical attributes* such as undulating topography; character and type of vegetation (native or
33 non-native); proximity to or presence of water bodies such as ponds, lakes, creeks, or streams;

and extent of open space. The presence of these attributes enhances the visual importance of the project parcel.

- *Relative visibility* including the importance of the visual resource is directly related to how conspicuous the project parcel and associated physical attributes are as viewed from public viewpoints.
- *Relative uniqueness* such as the rarity of a particular type of view due to its natural character or the loss of similar types of visual resources from previous development increases the potential importance of the visual resource.

The guidelines state that in terms of visibility, four types of geographic areas are especially important: coastal and mountainous areas; the urban fringe; and travel corridors.

3.1.1.1 Visual Character of the Site and Surroundings

The project site is located in the foothills of Santa Barbara County, within Glen Annie Canyon. The project site is characterized as open land that contains a variety of important scenic resources including undulating topography, extensive chaparral and riparian vegetation, and oak woodlands. The West Fork and main stem of Glen Annie Creek traverse the project site. Agricultural lands (i.e., orchards) exist at the northern end of the pipeline route, near the SPTT and the main stem of Glen Annie Creek. The contiguous natural area provides for a visually attractive dense vegetation cover.

3.1.1.2 Project Site Views from Public Roadways

The project site has limited visibility from nearby public roadways and view corridors, including U.S. Highway 101 (U.S. 101), Cathedral Oaks Road, and Glen Annie Road. Due to undulating topography and extensive vegetation coverage, views of the proposed pipeline alignments would be extremely limited. As the proposed alignments traverse areas of gentler slopes along the southeastern portion of the project site, partial views of the site are visible from public roadways.

U.S. 101: This highway is located over 2.4 miles (3.9 kilometers) south of the project site. The Santa Barbara County Comprehensive Plan designates U.S. 101 as a scenic corridor between Gaviota Beach and the South Coast Urban Complex. Because the project site falls to the east of the South Coast Urban Complex boundary, U.S. 101 is not designated as a scenic corridor in this area. Vehicles traveling along U.S. 101 experience distance background views of the project site; the Santa Ynez Mountains are visible beyond the project site from this vantage point. Views from U.S. 101 are relatively ephemeral (lasting no more than approximately 10 seconds).

Glen Annie Road: Glen Annie Road is a two-lane local road that travels north from its intersection with Cathedral Oaks Road up the Glen Annie Canyon for approximately 1.75 miles (2.8 kilometers). Intervening topography and vegetation obscure project site views when traveling on Glen Annie Road. Additionally, the Glen Annie Road terminus is located south of the project site; Glen Annie Road does not travel directly adjacent to the proposed project and alternative alignments.

Cathedral Oaks Road: Due to intervening development and landscaping, foreground views of the project site are obscured from Cathedral Oaks Road (located 2 miles {3.2 kilometers} south of the project site); distant background views of the project site are only partially visible from this roadway. Views from vehicles traveling along Cathedral are relatively ephemeral (lasting no more than approximately 10 seconds).

1 In addition, views of uninterrupted chaparral and oak woodland habitat and the Santa Ynez backdrop are
2 important scenic resources experienced from the private access road that continues along the pipeline route
3 from the terminus of Glen Annie Road.

4 In summary, the project site has several important physical attributes, including undulating topography,
5 extensive chaparral and riparian habitat, and oak woodland vegetation. The natural character of the project
6 site is a dominant visual characteristic. Therefore, the combination of these physical features enhances the
7 physical quality of the project site. However, due to the surrounding Glen Annie Canyon topography (i.e.,
8 intervening canyons and ridgelines), views of the project site and its physical attributes are very limited.

9 **3.1.1.3 Night Lighting and Glare**

10 The absence of development, together with the adjacent agricultural lands, results in a relatively low degree of
11 nighttime lighting and glare. The private access road and Glen Annie Road are not illuminated by street
12 lights, minimizing the overall amount of nighttime glare. Existing ranch structures located west of the project
13 site are illuminated by exterior night lighting. Nighttime glare is also generated to the south by the CDMWTP.
14 However, as adjacent development is surrounded by an expansive amount of undeveloped area that diffuses
15 nighttime light, the existing ranch structures and CDMWTP do not collectively emit substantial amounts of
16 nighttime glare.

17 **3.1.1.4 Surrounding Architectural and Landscaping Character**

18 The existing ranch structures are characteristic of contemporary California Ranch architectural styles.
19 Development associated with the CDMWTP to the south is characteristic of industrial architecture (i.e., water
20 treatment facilities).

21 **3.1.2 Regulatory Setting**

22 The Santa Barbara County Comprehensive Plan Land Use Element contains two visual resources policies
23 applicable to the proposed project. Policy 1 requires that all commercial, industrial, and planned
24 developments be required to submit a landscaping plan to the County for approval. Additionally, Policy 2
25 requires that in areas designated as rural on the land use plan maps, the height, scale, and design of structures
26 be compatible with the character of the surrounding natural environment, except where technical requirements
27 dictate otherwise. Structures shall be subordinate in appearance to natural landforms; shall be designed to
28 follow the natural contours of the landscape; and shall be sited so as not to intrude into the skyline as seen
29 from public viewing places.

30 **3.1.3 Impacts and Mitigation**

31 **3.1.3.1 Methodology**

32 The County of Santa Barbara has established Visual Resources Guidelines to provide a framework for
33 assessing potential project impacts on aesthetics. Assessment of visual resources is based on evaluation of the
34 physical attributes of the site, its relative visibility, and its relative uniqueness. The potential impact for a
35 project to affect onsite and surrounding visual character and qualities is based on the assessment of the visual
36 character of project features compared to the project setting. Determining compliance with local and state
37 policies regarding visual resources is also an important part of visual impact assessment.

The Santa Barbara County Comprehensive Plan Open Space Element identifies the following visual resources as providing significant aesthetic value:

- Scenic roadway corridors;
- Park and recreational areas;
- Views of coastal bluffs, streams, lakes, estuaries, rivers, watersheds, mountains, and cultural resources sites; and
- Scenic areas.

3.1.3.2 Significance Criteria

The assessment of aesthetic impacts involves qualitative analysis that is inherently subjective in nature. Different viewers may have varying opinions and reactions to changes in a viewshed or the appearance of new buildings and structures. This evaluation compares the existing visual characteristics of the project study area against the potential changes in visual characteristics that could result from implementation of the proposed project.

Consistent with the CEQA Guidelines *Appendix G* Environmental Checklist Form, the proposed project would result in a significant visual impact if it would result in one or more of the following conditions:

AES-1: Obstruct an important visual resource or view;

AES-2: Substantially degrade the existing visual character or quality of the site and its surroundings; or

AES-3: Create new source of substantial light or glare which would adversely affect day or nighttime views in the area.

3.1.3.3 Preferred Alternative

Impact AES-1: *Construction and operation of the Preferred Alternative pipeline alignment would not substantially obstruct views of important visual resources including native vegetation and open space as experienced from public roadways.*

The Preferred Alternative would result in the construction of a second 48-inch diameter water supply pipeline with appurtenant facilities. Existing support structures (i.e., SPTT, Glen Anne Turnout, and Corona del Mar Turnout) would be upgraded to support pipeline operations; no new structures would be constructed. As described in Section 3.1.1, existing views of the Preferred Alternative alignment area from public view corridors, including U.S. 101 and Cathedral Oaks Road, are extremely limited due to intervening topography and dense vegetation. While the majority of the project route is not visible from public roadways, proposed pipeline alignments adjacent to the CDMWTP located on gently sloping areas would be partially visible from public view corridors. However, the distance of these corridors from the project site (i.e., more than 2.4 miles [3.9 kilometers] for U.S. 101 and 2 miles [3.2 kilometers] for Cathedral Oaks Road), as well as the difference in elevation between the roadways and project site, result in extremely limited background views of the project site. Additionally, views from U.S. 101 and Cathedral Oaks Road would be ephemeral (lasting no more than 10 seconds); therefore, vehicles traveling on these roadways would not be capable of discerning any changes to the project area. Furthermore, subsequent to construction, the pipeline corridor would be revegetated (Section 2.3.2). As views of important visual resources would not be substantially altered as a result of construction or operation of the Preferred Alternative, impacts would be *less than significant*.

Mitigation Measures

As impacts on visual resources would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AES-2: Preferred Alternative construction activities would temporarily degrade the existing visual character of the project site.

Construction of the Preferred Alternative pipeline alignment would result in substantial clearing, grubbing, and grading, as well as excavation of the pipeline trench. Vegetation would be cleared to ground level, and roots of woody vegetation would be removed from the area to be trenched. The amount of grading required would depend primarily on the topography because the work space needs to be fairly level. To the extent feasible, native vegetation removed would be stockpiled and spread over the corridor as mulch during restoration to provide a seed source. Topsoil would be salvaged from the area to be excavated, stockpiled separate from the remainder of the excavated material, and replaced over the backfill to aid in revegetation. After final grading and topsoil replacement in areas of native or naturalized vegetation, a Revegetation Plan (see Section 2.3.2 and **Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a**) would be implemented to restore these areas to pre-project conditions, as described in Section 3.3 (Biological Resources).

Additionally, the project would potentially result in improper litter disposal during construction that would create undesirable visual conditions inconsistent the existing visual character. Improper disposal of refuse or waste construction materials during project site construction activities would potentially result in construction materials and/or refuse blowing offsite. This would adversely affect the aesthetic qualities of the site and surrounding properties.

Short-term impacts resulting from construction-related activities would temporarily alter the visual character of the project site and its surroundings. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a**, requiring restoration of vegetation coverage to pre-project conditions, would minimize impacts on the existing visual character of the project site. The following measure would address potential impacts on visual resources associated with improper litter disposal during construction activities.

AES-2 Covered receptacles shall be provided onsite prior to commencement of grading or construction activities to prevent construction and/or employee trash from blowing offsite. The applicant or designee shall retain a clean-up crew to ensure that trash and all excess construction debris is collected daily or more frequently, as directed by compliance monitors, and placed in provided receptacles throughout construction.

Plan Requirements: The applicant shall designate and provide to COMB the name and phone number of a contact person(s) to monitor trash/waste and organize a clean-up crew. Additional covered receptacles shall be provided as determined necessary by COMB. This requirement shall be noted on all the final construction plans. Trash control shall occur throughout all grading and construction activities, and debris clearance shall occur prior to pipeline operations. **Timing:** COMB shall review and approve final construction plans prior to commencement of construction activities.

MONITORING: COMB monitors shall periodically inspect clean-up efforts during construction and shall identify the frequency of clean-up necessary.

Residual Impacts

Implementation of **Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a** would ensure that residual impacts on the existing visual character of the site and its surroundings would be *less than significant*. **Mitigation Measure AES-2**, identifying and implementing construction clean-up procedures, would reduce the potential for short-term litter disposal impacts during construction to *less than significant*.

Impact AES-3: *The Preferred Alternative pipeline alignment would not introduce new glare sources that would substantially degrade existing visual conditions.*

The Preferred Alternative pipeline would not introduce new sources of light or glare to an area that currently has minimal nighttime lighting. Preferred Alternative construction activities would occur during daylight hours; therefore, no additional lighting would be required. Upon completion of project construction, sources of light and glare would be similar to existing conditions because the Preferred Alternative would not include any new lighting fixtures. The new water supply pipeline would be underground and would not require any illumination during daytime or nighttime hours. Therefore, the Preferred Alternative would not introduce new night lighting, representing no change in the level of night light illumination when compared to what is presently generated over the project site. *No impacts* on visual resources would occur.

Mitigation Measures

As there would be no impact on light and glare, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.1.3.4 Alternative A (Parallel Pipeline)

Impact AES-1: *Construction and operation of the Alternative A pipeline alignment would not substantially obstruct views of important visual resources including native vegetation and open space as experienced from public roadways.*

Impacts resulting from Alternative A would be the same as those previously described for the Preferred Alternative. As views of important visual resources would not be substantially altered as a result of Alternative A construction or operations, impacts would be *less than significant*.

Mitigation Measures

As impacts on visual resources would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AES-2: *Alternative A construction activities would temporarily degrade the existing visual character of the project site.*

Alternative A construction activities (i.e., clearing, grubbing, grading, and excavation) would be similar to those described for the Preferred Alternative. Short-term impacts resulting from construction-related activities would temporarily alter the visual character of the project site and its surroundings. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measures BIO-1.2** and **BIO-4a**, requiring preparation and implementation of a Revegetation Plan that would restore vegetation coverage to pre-project conditions, and **Mitigation Measure AES-2**, identifying and implementing construction clean-up procedures, would minimize impacts on the existing visual character of the project site.

Residual Impacts

Implementation of **Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a** (Revegetation Plan) would ensure that residual impacts on the existing visual character of the site and its surroundings would be *less than significant*. **Mitigation Measure AES-2**, identifying and implementing construction clean-up procedures, would reduce the potential for short-term litter disposal impacts during construction to *less than significant*.

Impact AES-3: *The Alternative A pipeline alignment would not introduce new glare sources that would substantially degrade existing visual conditions.*

Similar to the Preferred Alternative, the proposed Alternative A pipeline would not introduce new sources of light or glare to an area that currently has minimal nighttime lighting. Therefore, Alternative A would not introduce new night lighting, representing no change in the level of night light illumination when compared to what is presently generated over the project site. *No impacts* on visual resources would occur.

Mitigation Measures

As there would be no impact on light and glare, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.1.3.5 *Alternative B (Non-Parallel Pipeline)*

Impact AES-1: *Construction and operation of the Alternative B pipeline alignment would not substantially obstruct views of important visual resources including native vegetation and open space as experienced from public roadways.*

Impacts resulting from Alternative B would be the same as those previously described for the Preferred Alternative. As views of important visual resources would not be substantially altered as a result of Alternative B construction or operations, impacts would be *less than significant*.

Mitigation Measures

As impacts on visual resources would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AES-2: Alternative B construction activities would temporarily degrade the existing visual character of the project site.

Alternative B construction activities (i.e., clearing, grubbing, grading, and excavation) would be similar to those described for the Preferred Alternative. Short-term impacts resulting from construction-related activities would temporarily alter the visual character of the project site and its surroundings. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a**, requiring preparation and implementation of a Revegetation Plan that would be restore vegetation coverage to pre-project conditions, and **Mitigation Measure AES-2**, identifying and implementing construction clean-up procedures, would minimize impacts on the existing visual character of the project site.

Residual Impacts

Implementation of **Mitigation Measures BIO-1.2, BIO-2.1, BIO-2.2, and BIO-4a** (Revegetation Plan) would ensure that residual impacts on the existing visual character of the site and its surroundings would be *less than significant*. **Mitigation Measure AES-2**, identifying and implementing construction clean-up procedures, would reduce the potential for short-term litter disposal impacts during construction to *less than significant*.

Impact AES-3: The Alternative B pipeline alignment would not introduce new glare sources that would substantially degrade existing visual conditions.

Similar to the Preferred Alternative, the proposed Alternative B pipeline would not introduce new sources of light or glare to an area that currently has minimal nighttime lighting. Therefore, Alternative B would not introduce new night lighting, representing no change in the level of night light illumination when compared to what is presently generated over the project site. *No impacts* on visual resources would occur.

Mitigation Measures

As there would be no impact on light and glare, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.1.3.6 No Project Alternative

The No Project Alternative would include construction of site improvements, regular (annual) maintenance, and operational activities that could occur with issuance of federal permits for creek crossings. Construction and operation of the No Project Alternative would not substantially change any existing scenic vistas.

Construction and maintenance activities would include replacement of the SPTT, Glen Anne and Corona Del Mar turnout structures, and Glen Anne meter. These activities would alter the visual character and quality of the project site and its surroundings; however, impacts would be temporary and *less than significant*. Additional maintenance activities would be similar to existing conditions and would include inspection of the air valves and blowoff valves for operability. As construction activities, including grading and vegetation clearing, associated with the No Project Alternative would be substantially less than the Preferred Alternative, these activities would not result in significant impacts. All maintenance and construction activities would occur during daylight hours and would not increase nighttime sources of light and glare. The No Project Alternative would have *less than significant* impacts on aesthetics/visual resources.

Mitigation Measures

As impacts on visual resources would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.1.3.7 No Action Alternative

Under the No Action Alternative, regular maintenance activities would continue as in the past, and no new construction would occur, resulting in no impact to aesthetics/visual resources. If the SPTT or pipeline at either creek crossing fails because the site improvements were not implemented, construction would be necessary to replace the failed structure(s) and to repair any environmental damage resulting from release of water. This would affect the visual character of the structure repair site over a considerably smaller area than for construction of the Preferred Alternative, but repair of the area damaged by the water release would be over a considerable area that includes a stream corridor. The area that could be damaged by a water release and require repair would be primarily in locations that have limited visibility to the public, particularly for the SPTT and West Fork of Glen Annie Creek. Damage and repairs in the upper portion of Glen Annie Creek would also be in areas with limited public visibility, and further downstream, visual effects would be similar to those from storm runoff events. Therefore, impacts would be *less than significant*. Most repair work would be conducted during daylight hours, although some work would be at night as needed for emergency repairs. The night work would be in areas of limited visibility and of short duration so that the increase in nighttime sources of light and glare would be minimal. Impacts of the No Action Alternative would be *less than significant*.

Mitigation Measures

As impacts on visual resources would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

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3.2 AIR QUALITY

Air quality at a given location can be described by the concentrations of various pollutants in the atmosphere. Pollutants are defined as two general types: (1) “criteria” pollutants and (2) toxic compounds. Criteria pollutants are pollutants for which national and state ambient air quality standards have been set. Toxic compounds, known as hazardous air pollutants (HAPs) by the federal government and as toxic air contaminants (TACs) by the State of California, include air pollutants that have been determined to present some level of cancer, acute, or chronic health risk to the general public. Units of concentration for both of these types of pollutants are generally expressed in parts per million (ppm) or micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). The pollutants of concern that are considered in this analysis include ozone (O_3), carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), particulate matter less than 10 microns in diameter (PM_{10}), and particulate matter less than 2.5 microns in diameter ($\text{PM}_{2.5}$).

Development of the proposed project would produce air quality impacts from both construction and operational source emissions. The following sections describe the existing air quality setting of the project area, criteria for determining the significance of impacts, the potential impacts associated with the project, and the mitigation measures proposed to reduce these impacts.

3.2.1 Environmental Setting

The existing setting for the air quality resource is described in terms of the climate/meteorology of the project area, background air quality conditions, existing baseline emissions of the area, and regulations that apply to the project.

3.2.1.1 Climate/Meteorology

The climate of the project area within southern Santa Barbara County is Mediterranean, characterized by warm, dry summers and mild, relatively damp winters. The major influence on the regional climate is the Eastern Pacific High, a strong persistent high-pressure area. Seasonal variations in the position and strength of this system are a key factor in producing weather changes in the area.

Temperature

Due to the moderating effect of the Pacific Ocean and lower elevation, temperatures are less extreme along the coastal sections of Santa Barbara County compared to inland location. Maximum temperatures during the summer months average in the 70s (degrees Fahrenheit) along the coast to the low 80s at the project site. Minimum summer temperatures average in the high 50s to low 60s over the project area. Maximum temperatures during the winter months average in the low 60s. Minimum winter temperatures average in the high 30s to low 40s over the project area, with occasional temperatures slightly below freezing during the coldest mornings of the year.

Wind Speed and Direction

The prevailing wind flow along the coast of Central California is from the northwest. However, due to the blocking effect of the Santa Ynez Mountains and deflection of these winds around Point Conception, daytime sea breezes are usually from the southeast to southwest along the southern Santa Barbara County coast. Light northerly land breezes usually occur at night at the project site.

Precipitation

Over 90 percent of the total annual precipitation in the project area occurs from November through April. Annual average precipitation is approximately 18 inches (46 centimeters) along the coast, 25 inches (63.5 centimeters) at the project site, and increases to 30+ inches (76+ centimeters) in the Santa Ynez Mountains.

Although the overwhelming majority of precipitation in the project area is produced by winter storm systems from the north Pacific, summer tropical moisture can also produce clouds and rainfall. However, precipitation from tropical air masses is rare and usually occurs only from July through September.

3.2.1.2 Background Ambient Air Quality

The U.S. Environmental Protection Agency (EPA) designates all areas of the United States as having air quality better than (attainment) or worse than (nonattainment) the National Ambient Air Quality Standards (NAAQS). The criteria for nonattainment designation varies by pollutant: (1) an area generally is in nonattainment for O₃ if its NAAQS has been exceeded more than three times in three years and (2) an area is in nonattainment for any other pollutant if its NAAQS has been exceeded more than once per year. Presently, Santa Barbara County attains all NAAQS, although not enough data are available to determine whether the County attains the national PM_{2.5} standards (Santa Barbara County Air Pollution Control District [APCD] 2006).

The California Air Resources Board (ARB) evaluates how the state attains the California Ambient Air Quality standards (CAAQS). An area is in nonattainment for a pollutant if its CAAQS has been exceeded more than once in three years. Presently, Santa Barbara County is in nonattainment of the CAAQS for O₃ and PM₁₀ and in attainment for NO₂, SO₂, CO, sulfates, hydrogen sulfide, and lead. Currently, not enough data are available to determine whether the County attains the state annual PM_{2.5} standard. The County is considered a “moderate” ozone nonattainment area by the ARB (APCD 2006).

Ozone concentrations are highest during the warmer months and coincide with the seasons of maximum solar radiation. Ozone is a secondary pollutant formed in the atmosphere by photochemical reactions of previously emitted pollutants, or precursors. These precursors are mainly oxides of nitrogen (NO_x) and volatile organic compounds (VOCs) (also known as reactive organic gases or compounds [ROCs and ROG]). The maximum effects of precursor emissions on O₃ concentrations usually occur several hours after they are emitted and many miles from the source. In 2006, one monitoring station exceeded the State 1-hour standard for O₃ in Santa Barbara County.

Inert pollutant concentrations (generally, pollutants other than O₃ and its precursors) tend to be the greatest during the winter and are a product of light wind conditions and surface-based temperature inversions. Maximum inert pollutant concentrations are usually found near an emission source. For example, the main sources of CO emissions are motor vehicles and the highest ambient CO concentrations are found near congested transportation arteries and intersections.

3.2.1.3 Baseline Emissions

Table 3.2-1 summarizes the daily stationary, area-wide, mobile, and natural source air emissions estimated for Santa Barbara County in the year 2005 (ARB 2006a). The County emissions inventory is periodically updated for planning purposes to (1) forecast future emissions inventories, (2) analyze emission control measures, and (3) use as input data for regional air quality modeling. The 2005 inventory represents the most recent estimate of daily emissions for the County. The data in Table 3.2-1 show that the largest contributors to air pollutants are on-road vehicles and other mobile sources such as aircraft, trains, sea-vessels, off-road vehicles, and farm equipment. These two categories account for approximately 38 percent of the ROG, 78

percent of the CO, 88 percent of the NO_x, 90 percent of the SO_x, and 23 percent of the PM₁₀ emitted from non-natural sources in the County.

Table 3.2-1. Estimate of Average Daily Emissions By Major Source Category for Santa Barbara County – Year 2005 (Tons)

<i>Source Category</i>	<i>ROG</i>	<i>CO</i>	<i>NO_x</i>	<i>SO_x</i>	<i>PM₁₀</i>
STATIONARY SOURCES					
Fuel Combustion	5.13	8.28	10.54	0.40	0.58
Waste Disposal	0.46	0.10	0.02	0.02	0.01
Cleaning and Surface Coatings	5.71	--	--	--	--
Petroleum Production & Marketing	4.73	0.36	0.09	0.21	0.03
Industrial Processes	0.22	0.51	0.06	3.30	0.88
Total Stationary Sources	16.24	9.26	10.71	3.93	1.50
AREA-WIDE SOURCES					
Solvent Evaporation	6.83	--	--	--	--
Miscellaneous Processes	4.49	31.23	2.00	0.02	19.32
Total Area-wide Sources	11.32	31.23	2.00	0.02	19.32
MOBILE SOURCES					
On-Road Vehicles	11.05	110.25	18.37	0.13	0.58
Other Mobile Sources	5.95	36.14	72.90	37.10	5.73
Total Mobile Sources	17.00	146.39	91.28	37.23	6.31
NATURAL SOURCES					
Total Natural Sources	60.49	12.07	0.37	0.11	1.22
Santa Barbara County Total	105.05	198.95	104.36	41.29	28.35
<i>Source: ARB 2006a</i>					

3.2.2 Regulatory Setting

The Federal Clean Air Act (CAA) and its subsequent amendments form the basis for the national air pollution control effort. The CAA established the NAAQS for “criteria pollutants” and delegated the regulation of air pollution control to the states. The criteria pollutants are O₃, CO, NO₂, SO₂, PM₁₀, PM_{2.5}, and lead (Pb). In states where the NAAQS were exceeded, the CAA required preparation of a State Implementation Plan (SIP), which detailed how states would meet the standards within specified time frames.

In California, the ARB is designated as the responsible agency for all air quality regulations. The ARB in turn delegates this responsibility to the local and regional air quality management districts. The APCD has the authority to regulate stationary sources of air pollution in Santa Barbara County. The following is a summary of the federal, state, and local air quality rules and regulations that apply to the project.

3.2.2.1 Federal Regulations

Section 176(c) of the CAA states that a federal agency cannot issue a permit for or support an activity unless the agency determines it will conform to the most recent USEPA-approved SIP. This means that projects using federal funds or requiring federal approval must not (1) cause or contribute to any new violation of a NAAQS, (2) increase the frequency or severity of any existing violation, or (3) delay the timely attainment of any standard, interim emission reduction, or other milestone.

Santa Barbara County currently attains all NAAQS, although the region is a maintenance area for the 1-hour O₃ NAAQS. As a result, a federal action would conform to the SIP if its annual emissions remain below 100 tons of VOCs or NO_x. These *de minimis* thresholds apply to both proposed construction and operational activities. If the proposed action exceeds one or more of the *de minimis* thresholds, a more rigorous conformity determination is the next step in the conformity evaluation process. Additionally, regardless of

the applicable *de minimis* level, conformity assessments are required for non-exempt “regionally significant” actions, which are defined as projects with direct and indirect emissions that exceed 10 percent of the applicable SIP emissions inventory, regardless of numerical value. SBCAPCD Rule 702 adopts the guidelines of the General Conformity Rule.

3.2.2.2 State Regulations

The CAA delegated to each state the authority to establish air quality rules and regulations. The adopted rules and regulations must be at least as restrictive as the federal requirements. The ARB has established the CAAQS, which are more restrictive than the NAAQS and include pollutants for which there are no federal standards (i.e., sulfates, hydrogen sulfide, vinyl chloride, and visibility reducing particles).

The California Clean Air Act of 1988, as amended in 1992 (CCAA), Health & Safety Code 40918-40920, outlined a program to attain the CAAQS for O₃, NO₂, SO₂, and CO by the earliest practical date. However, areas in nonattainment for PM₁₀, sulfates, lead, hydrogen sulfide, or visibility were not expressly required to develop an attainment plan under the CCAA. Since the CAAQS are more stringent than the NAAQS, attainment of the state standards requires emission reductions beyond what are needed to attain the NAAQS.

3.2.2.3 Santa Barbara County Air Pollution Control District Regulations

The APCD regulates stationary sources of air pollution and has general air quality regulatory authority in the County. The *APCD Rules and Regulations* establish emission limitations and control requirements for various sources, based upon their source type and magnitude of emissions (APCD 2007a). The following is a specific APCD rule that could apply to fugitive dust emitted during proposed construction activities.

APCD Rule 303 – Nuisance. This rule states that a person shall not discharge air contaminants from any source that cause injury, detriment, nuisance, or annoyance to any considerable number of persons, or that endanger the comfort, repose, health, or safety of any such persons or their business or property. The APCD considers emissions of air pollution to be a significant nuisance if five or more complaints are received from different individuals/households within 24 hours or 10 such complaints are received within 10 days.

Prior to 1999, the County exceeded the national 1-hour O₃ standard and in response to CAA requirements, the APCD prepared plans designed to bring the County into attainment of this standard. After the County reached this standard in 1999, the APCD submitted a plan (maintenance plan) to the ARB in November 2001 that demonstrated how they would maintain national 1-hour O₃ standard through the year 2015. This *2001 Clean Air Plan (2001 CAP)* was approved by both the USEPA and the ARB (SBCAPCD and Santa Barbara County Association of Governments [SBCAG] 2002). As part of the approval, EPA re-designated the County as in attainment for the national 1-hour and 8-hour O₃ standards in 2003. The *2001 CAP* also includes a three-year plan revision required by the CCAA to show how the County will work towards meeting the state 1-hour O₃ standard.

The APCD developed the *2004 Clean Air Plan (2004 CAP)* to update the attainment planning process for the state O₃ standard, as mandated by the CCAA. The *2004 CAP* was adopted by the APCD Board on December 16, 2004 and has been submitted to the ARB. The APCD recently completed the *2007 Clean Air Plan (2007 CAP)*, which updates the *2001 CAP* and demonstrates how the County will maintain the national 8-hour O₃ standard. The *2007 CAP* also provides a three-year update to the *2004 CAP*. The *2007 CAP* was adopted by the APCD Board on August 16, 2007.

3.2.3 Impacts and Mitigation

3.2.3.1 Methodology

The pollutants of primary concern that are considered in this EIS/EIR include ROC (VOC), NO_x, PM₁₀, and PM_{2.5}. Although there are no ambient air quality standards for ROC or NO_x, they are important as precursors to O₃ formation. The project would produce negligible amounts of toxic air contaminants. The project analysis follows the guidance and methodologies recommended in the APCD's *Scope and Content of Air Quality Sections in Environmental Documents* (APCD 2007b).

Equipment usage data needed to calculate emissions for proposed construction and operational activities were obtained from Reclamation (Reclamation 2007 and 2008). All earthmoving activities performed for project construction would implement County standard dust control measures, as identified in Section 2.3.2. Appendix B includes the data and assumptions used to estimate emissions for construction and operation of the project alternatives.

3.2.3.2 Significance Criteria

Consistent with the CEQA Guidelines *Appendix G* Environmental Checklist Form, the proposed project would result in a significant air quality impact if it would result in one or more of the following conditions:

AQ-1: Conflict with or obstruct implementation of an applicable air quality plan;

AQ-2: Exceed an ambient air quality standard or contribute substantially to an existing or projected air quality standard violation;

AQ-3: Result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors);

AQ-4: Expose sensitive receptors to substantial pollutant concentrations; or

AQ-5: Create objectionable odors that affect a substantial number of people.

3.2.3.3 Preferred Alternative

Impact AQ-1: Construction and operation of the Preferred Alternative would not conflict with or obstruct implementation of an applicable air quality plan.

The Preferred Alternative would produce air emissions of nonattainment pollutants from diesel-powered mobile equipment and fugitive dust (PM₁₀) during construction activities. Proposed operations would produce minor amounts of nonattainment pollutants due to pipeline maintenance and inspection activities. The *2004 and 2007 Clean Air Plans* include emission reduction measures that are designed to bring the County into attainment and maintenance of the state and national ambient air quality standards. To be consistent with these policies and the policies of past air quality plans, proposed earthmoving activities would implement County standard dust control measures (Section 2.3.2) as part of the project. These measures are based upon policies adopted in the *Santa Barbara County 1979 Air Quality Attainment Plan*. Compliance with these measures would ensure that the Preferred Alternative would not conflict with or obstruct implementation of an applicable air quality plan and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-2: Construction and operation of the Preferred Alternative would not exceed any ambient air quality standard or contribute substantially to an existing or projected air quality standard violation.

Construction of the Preferred Alternative would produce combusive emissions due to the use of diesel-powered mobile equipment. Additionally, earth-moving activities could produce uncontrolled fugitive dust emissions at a rate of about 55 pounds of PM₁₀ per day per acre of disturbed land (EPA 1995). Construction of the pipeline would only require a few pieces of construction equipment. Due to the mobile and intermittent nature of these sources, their combusive emissions would not contribute to substantial ambient impacts at any location. Implementation of County standard dust control measures (Section 2.3.2) typically reduces fugitive dust emissions from uncontrolled levels by at least 50 percent. This control level would ensure that earthmoving activities from construction of the Preferred Alternative would not contribute to an exceedance of a PM₁₀ or PM_{2.5} ambient air quality standard.

Operational activities would require the occasional use of earthmoving equipment and light-duty on-road trucks and would produce nominal amounts of emissions. Therefore, emissions from Preferred Alternative operational activities would not exceed any ambient air quality standard or contribute substantially to an existing or project air quality standard violation and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-3: Construction and operation of the Preferred Alternative would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard.

The APCD has not developed quantitative thresholds to determine the significance of construction emissions under CEQA. For this purpose, the analysis used the annual conformity thresholds that are applicable to the project region: 100 tons of VOCs and NO_x. To estimate construction emissions, factors were obtained from (1) the ARB OFFROAD2007 emissions model for construction equipment (ARB 2006b), (2) special studies for fugitive dust (EPA 1995), and (3) the ARB EMFAC2007 emissions model for on-road vehicles (ARB 2006c).

Table 3.2-2 provides an estimation of the total emissions that would occur from construction of the Preferred Alternative. These data show that construction would result in emissions that are substantially below the applicable conformity thresholds. As a result, construction of the Preferred Alternative would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard. Impacts would be *less than significant*.

Table 3.2-2. Total Emissions due to Construction of the South Coast Conduit/Upper Reach Reliability Project - Preferred Alternative

Source	Total Emission (Tons)			
	VOC	CO	NO _x	PM ₁₀
Construction Equipment	0.30	1.27	5.18	0.16
Fugitive Dust	---	---	---	8.80
Total Emissions – Tons	0.30	1.27	5.18	8.96
Conformity Thresholds – Annual Tons	100	NA	100	NA

Note: All emissions are expected to occur within calendar year 2009. NA = not applicable.

Operational activities associated with the Preferred Alternative would include pipeline maintenance and inspection. These activities would require the occasional use of earthmoving equipment and light-duty on-road trucks. The APCD has developed the following daily emission thresholds to determine the significance of operational emissions for CEQA or NEPA purposes: (1) for all source types, 240 pounds of VOCs and NO_x and 80 pounds of PM₁₀; and (2) for on-road vehicles sources, 25 pounds of VOCs and NO_x. To estimate operational emissions, factors were obtained from (1) the ARB OFFROAD2007 emissions model for construction equipment, and (2) the ARB EMFAC2007 emissions model for on-road vehicles.

Table 3.2-3 provides an estimation of the daily emissions that would occur from operation of the Preferred Alternative. These data indicate that operations would result in emissions that are substantially below the APCD daily significance thresholds. Table 3.2-3 also shows that annual operational emissions would be substantially below the applicable conformity thresholds. As a result, operation of the Preferred Alternative would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard. Impacts would be *less than significant*.

Table 3.2-3. Emissions due to Operational Activities for the South Coast Conduit/Upper Reach Reliability Project – Preferred Alternative

Emissions Period/Equipment Type	VOC	CO	NO _x	PM ₁₀
DAILY EMISSIONS	POUNDS PER DAY			
Earth-moving Equipment	0.93	3.27	6.46	0.64
Light-Duty Trucks	0.03	0.57	0.07	0.01
Total Daily Emissions – All Sources	0.96	3.84	6.53	0.65
APCD Thresholds – All Sources	240	NA	240	80
APCD Thresholds – Vehicular Sources	25	NA	25	NA
ANNUAL EMISSIONS	TONS PER YEAR			
Earth-moving Equipment	0.00	0.01	0.02	0.00
Light-Duty Trucks	0.00	0.03	0.00	0.00
Total Annual Emissions	0.00	0.04	0.02	0.00
Conformity Thresholds	100	NA	100	NA

Note: Total emissions values may not add up due to rounding errors. NA = not applicable.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-4: Construction and operation of the Preferred Alternative would not expose sensitive receptors to substantial pollutant concentrations.

The impact of air emissions to sensitive members of the population is a special concern. Sensitive receptor groups include children and infants, pregnant women, the elderly, and the acutely and chronically ill. The locations of these groups include residences, schools, playgrounds, daycare centers, and hospitals. Due to the rural nature of the project site, the only sensitive receptors that currently occur in proximity to the Preferred Alternative pipeline route are two residences. Since these residences are located at least 250 feet (76 meters) away from the Preferred Alternative construction activities, proposed construction emissions would substantially disperse by the time they reach these locations. Due to a minimal amount of maintenance and inspection activities, operational emissions would nominally impact these locations. As a result, construction and operation of the Preferred Alternative would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-5: Construction and operation of the Preferred Alternative would not create objectionable odors that affect a substantial number of people.

Construction and operation of the Preferred Alternative would increase air pollutants mainly due to the combustion of diesel fuel. Some individuals may sense that diesel combustion emissions are objectionable in nature, although quantifying the odorous impacts of these emissions to the public is difficult. The mobile nature of the proposed diesel-powered sources and the extensive distance between these sources and the public would allow for adequate dispersion of their emissions to below objectionable odor levels. As a result, construction and operation of the Preferred Alternative would not create objectionable odors that affect a substantial number of people. Impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.2.3.4 Alternative A (Parallel Pipeline)

Impact AQ-1: Construction and operation of Alternative A would not conflict with or obstruct implementation of an applicable air quality plan.

Alternative A would produce air emissions of nonattainment pollutants from diesel-powered mobile equipment and fugitive dust (PM₁₀) during construction activities, as described for the Preferred Alternative. Operations of Alternative A would produce minor amounts of nonattainment pollutants due to pipeline maintenance and inspection activities, as identified for the Preferred Alternative. Implementation of County

standard dust control measures (Section 2.3.2) would ensure that Alternative A would not conflict with or obstruct implementation of an applicable air quality plan, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-2: Construction and operation of Alternative A would not exceed any ambient air quality standard or contribute substantially to an existing or projected air quality standard violation.

Construction of the Alternative A pipeline would produce combustive emissions due to the use of diesel-powered mobile equipment and fugitive dust as described for the Preferred Alternative. The pipeline route, however, would be slightly shorter than for the Preferred Alternative. Due to the mobile and intermittent nature of these sources, their combustive emissions would not contribute to substantial ambient impacts at any location. Implementation of County standard dust control measures (Section 2.3.2) would ensure that earthmoving activities from construction of Alternative A would not contribute to an exceedance of a PM₁₀ or PM_{2.5} ambient air quality standard.

Operational activities would require the occasional use of earthmoving equipment and light-duty on-road trucks and would produce nominal amounts of emissions. Therefore, emissions from Alternative A operational activities would not exceed any ambient air quality standard or contribute substantially to an existing or project air quality standard violation, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-3: Construction and operation of Alternative A would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard.

The APCD has not developed quantitative thresholds to determine the significance of construction emissions under CEQA as described for the Preferred Alternative, and construction emissions were calculated in the same manner. Table 3.2-4 provides an estimation of the total emissions that would occur from construction of Alternative A. These data indicate that construction would result in emissions that are substantially below the applicable conformity thresholds. As a result, construction of Alternative A would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard, and impacts would be *less than significant*.

Table 3.2-4. Total Emissions due to Construction of the South Coast Conduit/Upper Reach Reliability Project - Alternative A

Source	Total Emission (Tons)			
	VOC	CO	NOx	PM10
Construction Equipment	0.40	1.54	6.27	0.20
Fugitive Dust	---	---	---	8.80
Total Emissions – Tons	0.40	1.54	6.27	9.90
Conformity Thresholds – Annual Tons	100	NA	100	NA

Note: All emissions are expected to occur within calendar year 2009. NA = not applicable.

Operational activities and emissions associated with Alternative A would be nearly identical to those estimated for the Preferred Alternative. Table 3.2-5 shows that operations from Alternative A would result in emissions that are substantially below the APCD daily significance thresholds and the annual conformity thresholds. As a result, operation of Alternative A would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard, and impacts would be *less than significant*.

Table 3.2-5. Emissions due to Operational Activities for the South Coast Conduit/Upper Reach Reliability Project – Alternative A or B

Emissions Period/Equipment Type	VOC	CO	NOx	PM10
DAILY EMISSIONS				
	POUNDS PER DAY			
Earth-moving Equipment	1.11	3.93	7.76	0.78
Light-Duty Trucks	0.03	0.57	0.07	0.01
Total Daily Emissions – All Sources	1.15	4.49	7.83	0.78
APCD Thresholds – All Sources	240	NA	240	80
APCD Thresholds – Vehicular Sources	25	NA	25	NA
ANNUAL EMISSIONS				
	TONS PER YEAR			
Earth-moving Equipment	0.00	0.01	0.02	0.00
Light-Duty Trucks	0.00	0.03	0.00	0.00
Total Annual Emissions	0.00	0.04	0.02	0.00
Conformity Thresholds	100	NA	100	NA

Note: Total emissions values may not add up due to rounding errors. NA = not applicable.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-4: Construction and operation of Alternative A would not expose sensitive receptors to substantial pollutant concentrations.

The impact of air emissions to sensitive members of the population is a special concern as described for the Preferred Alternative. Since the nearest residences are located at least 500 feet (152 meters) away from the proposed Alternative A construction activities, proposed construction emissions would substantially disperse by the time they reach these locations. Due to a minimal amount of maintenance and inspection activities, operational emissions also would nominally impact these locations. As a result, construction and operation of Alternative A would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-5: Construction and operation of Alternative A would not create objectionable odors that affect a substantial number of people.

Construction and operation of Alternative A would increase air pollutants mainly due to the combustion of diesel fuel, and effects would be the same as described for the Preferred Alternative. As a result, construction and operation of Alternative A would not create objectionable odors that affect a substantial number of people, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.2.3.5 Alternative B (Non-Parallel Pipeline)

Impact AQ-1: Construction and operation of Alternative B would not conflict with or obstruct implementation of an applicable air quality plan.

Alternative B would produce air emissions of nonattainment pollutants from diesel-powered mobile equipment and fugitive dust (PM₁₀) during construction activities, as described for the Preferred Alternative. Alternative B operations would produce minor amounts of nonattainment pollutants due to pipeline maintenance and inspection activities, as identified for the Preferred Alternative. Implementation of County standard dust control measures (Section 2.3.2) would ensure that Alternative B would not conflict with or obstruct implementation of an applicable air quality plan. Impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-2: Construction and operation of Alternative B would not exceed any ambient air quality standard or contribute substantially to an existing or projected air quality standard violation.

Construction of the Alternative B pipeline would produce combustive emissions due to the use of diesel-powered mobile equipment and fugitive dust as described for the Preferred Alternative. Although the length of the Alternative B pipeline would be about the same as for the Preferred Alternative, more grading would be required at the crossing of Glen Annie Creek due to steep terrain. Due to the mobile and intermittent nature of these sources, their combustive emissions would not contribute to substantial ambient impacts at any

location. Implementation of County standard dust control measures (Section 2.3.2) would ensure that earthmoving activities from construction of Alternative B would not contribute to an exceedance of a PM₁₀ or PM_{2.5} ambient air quality standard.

Operational activities would require the occasional use of earthmoving equipment and light-duty on-road trucks and would produce nominal amounts of emissions. Therefore, emissions from operation of Alternative B would not exceed any ambient air quality standard or contribute substantially to an existing or project air quality standard violation, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-3: Construction and operation of Alternative B would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard.

The APCD has not developed quantitative thresholds to determine the significance of construction emissions under CEQA as described for the Preferred Alternative, and construction emissions were calculated in the same manner. Table 3.2-6 provides an estimation of the total emissions that would occur from construction of Alternative B. These data show that construction would result in emissions that are substantially below the applicable conformity thresholds. As a result, construction of Alternative B would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard. Therefore, impacts on air quality would be *less than significant*.

Table 3.2-6. Total Emissions due to Construction of the South Coast Conduit/Upper Reach Reliability Project - Alternative B

Source	Total Emission (Tons)			
	VOC	CO	NO _x	PM ₁₀
Construction Equipment	0.47	1.75	7.40	0.24
Fugitive Dust	---	---	---	10.56
Total Emissions – Tons	0.47	1.75	7.40	10.80
Conformity Thresholds – Annual Tons	100	NA	100	NA

Note: All emissions are expected to occur within calendar year 2009. NA = not applicable.

Operational activities and emissions associated with Alternative B would be identical to those estimated for Alternative A (Table 3.2-5). These data show that operations would result in emissions that are substantially below the APCD daily significance thresholds and the annual applicable conformity thresholds. As a result, Alternative B operations would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-4: Construction and operation of Alternative B would not expose sensitive receptors to substantial pollutant concentrations.

The impact of air emissions to sensitive members of the population is a special concern as described for the Preferred Alternative. The nearest residences would be the same distance from the Alternative B pipeline route as from the Preferred Alternative route. Due to a minimal amount of maintenance and inspection activities, operational emissions would nominally impact these locations. As a result, construction and operation of Alternative B would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-5: Construction and operation of Alternative B would not create objectionable odors that affect a substantial number of people.

Construction and operation of Alternative B would increase air pollutants mainly due to the combustion of diesel fuel, and effects would be the same as described for the Preferred Alternative. As a result, construction and operation of Alternative B would not create objectionable odors that affect a substantial number of people, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.2.3.6 No Project Alternative

Impact AQ-1: Construction and operation of the No Project Alternative would not conflict with or obstruct implementation of an applicable air quality plan.

The No Project Alternative would produce minor amount of air emissions of nonattainment pollutants from diesel-powered mobile equipment and fugitive dust (PM₁₀) during construction of site improvements. Operation of this alternative would produce minor amounts of nonattainment pollutants due to maintenance and inspection activities, as identified for the Preferred Alternative. Implementation of County standard dust control measures (Section 2.3.2) would ensure that the No Project Alternative would not conflict with or obstruct implementation of an applicable air quality plan. Impacts would be *less than significant*.

1 **Mitigation Measures**

2 As impacts would be less than significant, no mitigation is necessary.

3 **Residual Impacts**

4 The residual impact would be *less than significant*.

5 **Impact AQ-2: Construction and operation of the No Project Alternative would not exceed any ambient air**
6 **quality standard or contribute substantially to an existing or projected air quality standard violation.**

7 Site improvements associated with the No Project Alternative would produce minor amounts of combustive
8 emissions due to the use of diesel-powered mobile equipment and fugitive dust. Due to the mobile and
9 intermittent nature of these sources, their combustive emissions would not contribute to substantial ambient
10 impacts at any location. Implementation of County standard dust control measures (Section 2.3.2) would
11 ensure that site improvements under the alternative would not contribute to an exceedance of a PM₁₀ or PM_{2.5}
12 ambient air quality standard.

13 Operational activities would require the occasional use of earthmoving equipment and light-duty on-road
14 trucks and would produce nominal amounts of emissions. Therefore, emissions from operation of the No
15 Project Alternative would not exceed any ambient air quality standard or contribute substantially to an
16 existing or project air quality standard violation, and impacts would be *less than significant*.

17 **Mitigation Measures**

18 As impacts would be less than significant, no mitigation is necessary.

19 **Residual Impacts**

20 The residual impact would be *less than significant*.

21 **Impact AQ-3: Construction and operation of the No Project Alternative would not result in a net increase**
22 **of any criteria pollutant for which the project region is in nonattainment under an applicable national or**
23 **state ambient air quality standard.**

24 The APCD has not developed quantitative thresholds to determine the significance of construction emissions
25 under CEQA. The minor amount of emissions generated by site improvements would result in emissions that
26 are substantially below the applicable conformity thresholds. As a result, construction of this alternative
27 would not result in a net increase of any criteria pollutant for which the project region is in nonattainment
28 under an applicable national or state ambient air quality standard. Therefore, the impacts on air quality would
29 be *less than significant*.

30 Operational activities and emissions associated with the No Project Alternative would be nearly identical to
31 those estimated for the Preferred Alternative in Table 3.2-3. These data show that operations would result in
32 emissions that are substantially below the APCD daily significance thresholds and the annual applicable
33 conformity thresholds. As a result, operation of the No Project Alternative would not result in a net increase
34 of any criteria pollutant for which the project region is in nonattainment under an applicable national or state
35 ambient air quality standard, and impacts would be *less than significant*.

36 **Mitigation Measures**

37 As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-4: Construction and operation of the No Project Alternative would not expose sensitive receptors to substantial pollutant concentrations.

The impact of air emissions to sensitive members of the population is a special concern as described for the Preferred Alternative. Construction and operation of the No Project Alternative would produce minimal amounts of emissions. Due to an adequate distance between these emissions and nearby residents, the alternative would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-5: Construction and operation of the No Project Alternative would not create objectionable odors that affect a substantial number of people.

Construction and operation of the No Project Alternative would increase air pollutants mainly due to the combustion of diesel fuel, and effects would be the same as described for the Preferred Alternative. As a result, construction and operation of the No Project Alternative would not create objectionable odors that affect a substantial number of people, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.2.3.7 No Action Alternative

Impact AQ-1: Construction and operation of the No Action Alternative would not conflict with or obstruct implementation of an applicable air quality plan.

Although no construction would occur for the No Action Alternative, minor amount of air emissions of nonattainment pollutants from diesel-powered mobile equipment and fugitive dust (PM₁₀) would be produced during repairs resulting from facility failure. Operation of this alternative would produce minor amounts of nonattainment pollutants due to maintenance and inspection activities, as identified for the Preferred Alternative. Implementation of County standard dust control measures (Section 2.3.2) would ensure that the No Action Alternative would not conflict with or obstruct implementation of an applicable air quality plan. Impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-2: Construction and operation of the No Action Alternative would not exceed any ambient air quality standard or contribute substantially to an existing or projected air quality standard violation.

Facility repairs associated with the No Action Alternative would produce minor amounts of combusive emissions due to the use of diesel-powered mobile equipment and fugitive dust. Due to the mobile and intermittent nature of these sources, their combusive emissions would not contribute to substantial ambient impacts at any location. Implementation of County standard dust control measures (Section 2.3.2) would ensure that site improvements under the alternative would not contribute to an exceedance of a PM₁₀ or PM_{2.5} ambient air quality standard.

Operational activities would require the occasional use of earthmoving equipment and light-duty on-road trucks and would produce nominal amounts of emissions. Therefore, emissions from operation of the No Action Alternative would not exceed any ambient air quality standard or contribute substantially to an existing or project air quality standard violation, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-3: Construction and operation of the No Action Alternative would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard.

The APCD has not developed quantitative thresholds to determine the significance of construction emissions under CEQA. The minor amount of emissions generated by facility repair would result in emissions that are substantially below the applicable conformity thresholds. As a result, construction of this alternative would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard. Therefore, the impacts on air quality would be *less than significant*.

Operational activities and emissions associated with the No Action Alternative would be nearly identical to those estimated for the Preferred Alternative in Table 3.2-3. These data show that operations would result in emissions that are substantially below the APCD daily significance thresholds and the annual applicable conformity thresholds. As a result, operation of the No Action Alternative would not result in a net increase of any criteria pollutant for which the project region is in nonattainment under an applicable national or state ambient air quality standard, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-4: Construction and operation of the No Action Alternative would not expose sensitive receptors to substantial pollutant concentrations.

The impact of air emissions to sensitive members of the population is a special concern as described for the Preferred Alternative. Construction for repairs of failed facilities and operation of the No Action Alternative would produce minimal amounts of emissions. Due to an adequate distance between these emissions and nearby residents, the alternative would not expose sensitive receptors to substantial pollutant concentrations, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact AQ-5: Construction and operation of the No Action Alternative would not create objectionable odors that affect a substantial number of people.

Construction activities for repairs of failed facilities and operation of the No Action Alternative would increase air pollutants mainly due to the combustion of diesel fuel as described for the Preferred Alternative. As a result, construction and operation of the No Action Alternative would not create objectionable odors that affect a substantial number of people, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

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3.3 BIOLOGICAL RESOURCES

3.3.1 Environmental Setting

The proposed project location is in the foothills of Goleta, California. The terrain generally consists of steep, south facing slopes that are typically densely vegetated and provide habitat for a variety of wildlife species and vegetation, as described below. The slopes are divided by two forks of Glen Annie Creek: the West Fork with Glen Annie Reservoir, and the main stem to the east.

Sources of information for this analysis include a biological constraints study (Padre 2005); a search of rare, threatened, endangered, and sensitive species (CNDDDB 2007); literature information for habitat preferences; expertise of preparers; and field surveys conducted by SAIC biologists in January, April, March, and August 2007.

3.3.1.1 Vegetation

Vegetation in the vicinity of the project is dominated by shrubs on slopes, intermixed grassland and shrubs on hilltops and low valleys, and riparian trees and shrubs along creeks. Agriculture (orchards) is present in some locations. Plant communities present along the proposed and alternative project alignments include coastal scrub, coast live oak woodland, chaparral, riparian woodland, non-native grassland, weed-dominated, eucalyptus woodland, orchard, and disturbed/developed (Figure 3.3-1).

Coastal scrub occurs on slopes with moderate soil development or on slopes that have been disturbed. Cover is generally fairly open, and this community sometimes mixes with adjacent habitats, particularly oak woodlands and grasslands. In one location, a dense stand of purple needle grass (*Nassella pulchra*) occurs intermixed with the coastal scrub. Dominant species include black sage (*Salvia mellifera*), purple sage (*Salvia leucophylla*), California sage (*Artemisia californica*), Santa Barbara honeysuckle (*Lonicera subspicata*), and coyote brush (*Baccharis pilularis*). The Santa Barbara honeysuckle is a California Native Plant Society (CNPS) List 1B species and is discussed in more detail under Special Status Species (Section 3.3.1.4).

Coast live oak woodland occurs in areas receiving more moisture or shade that have not been disturbed for some time. Common locations include near creeks, canyon slopes, and on north-facing slopes. Coast live oak trees (*Quercus agrifolia*) typically dominate the overstory, although bay laurel trees (*Umbellularia californica*) can co-dominate, especially in proximity to creeks. Understory vegetation is highly variable, ranging from dense brush to herbaceous cover to vines. Dense brush occurs in the understory near the transition to shrub-dominated communities (coastal scrub and chaparral). Generally, the oak trees are less dense in this transitional zone, permitting more light to penetrate the canopy. This makes these locations more suitable for the establishment of such species as California sage and coyote brush. Herbaceous plants comprise the most typical vegetation in the understory of oak woodlands with common species such as humming bird sage (*Salvia spathacea*) and western verbena (*Verbena lasiostachys*). However, poison oak (*Toxicodendron diversilobum*), a woody vine, is present as well. Plummer's baccharis (*Baccharis plummerae*) and Fish's milkwort (*Polygala cornuta* var. *fishae*), both on the California Native Plant Society (CNPS) List 4 (plants of limited distribution), were noted from oak woodlands at one or two locations along the project proposed and alternative routes (Padre 2005). At several locations the understory is limited to one species of vine, Cape ivy (*Senecio mikanioides*, recent name change to *Delairea odorata* [U.C. Berkeley 2007]). Cape ivy is considered to have a high level of negative ecological impact in California (Cal-IPC 2006), and it spreads easily by small sections of the plant (2 inches {5 centimeters} or less) after sitting on dry ground for a couple of months (Elkhorn Slough Nation Estuarine Research Reserve 2000).

Oak woodlands provide important habitat for a variety of wildlife species including birds, mammals, insects, and reptiles (Section 3.3.1.2). In addition, oak woodlands provide vertical habitat structure with different levels of canopy, a variety of dead wood and debris, and new foliage. Oak woodlands and individual oak trees are protected by the County of Santa Barbara.

Chaparral is the dominant vegetation on steep, rocky soils. The vegetation is very dense and over 5 feet (1.5 meters) tall. Common dominant species include chamise (*Adenostoma fasciculatum*), big pod ceanothus (*Ceanothus megacarpus*), bush mallow (*Malacothamnus fasciculatus*), sugar bush (*Rhus ovata*), and scrub oak (*Quercus berberidifolia*). Scrub oak can grow into a tree-like form, and dense patches of it are scattered within the vicinity of the proposed project and alternatives.

Riparian vegetation in the proposed project area is limited to a narrow linear corridor along Glen Annie Creek and the West Fork of Glen Annie Creek. Both creeks have a well-developed creek bed composed primarily of rocky substrate. Near the proposed and alternative pipeline alignment crossings, the West Fork of Glen Annie Creek is a small well-defined drainage. This location is upstream of Glen Annie Reservoir with an avocado orchard on the west side (see discussion of orchards below). Many coast live oak trees occur along the top of the bank. Bay laurel trees are scattered along the bank, and occasional sycamore trees are present. Very little understory was present at the time of the March 2007 field visit.

The main stem of Glen Annie Creek has a well-developed sycamore-bay laurel woodland with scattered areas dominated or co-dominated by willows (*Salix* spp.). The creek bed is characterized by large cobbles and boulders, suggesting frequent scour, and herbaceous vegetation was not present at the time of the March 2007 field visit.

Riparian woodland provides important habitat for a variety of native animal species including birds and insects and is usually classified as an Environmentally Sensitive Habitat Area (ESHA) by the County of Santa Barbara. In addition, removal of riparian habitat is restricted by the County of Santa Barbara and by the California Department of Fish and Game (CDFG).

Non-native grasslands are present in formerly cleared areas. Common species are generally non-native including ripgut brome (*Bromus diandrus*) and oats (*Avena* sp.). Native wildflowers are scattered in portions of the grasslands and include popcorn flower (*Plagiobothrys* sp. or *Cryptantha* sp.) and branching phacelia (*Phacelia ramosissima*). In addition, the checker mallow (*Sidalcea malvaeflora* ssp. *californica*), a County of Santa Barbara sensitive plant, has been noted in one location (Padre 2005). One site near Ellwood Reservoir supports a stand of veldt grass (*Ehrharta calycina*), an invasive exotic species.

Weed-dominated areas are concentrated in recently disturbed areas. Many are very small and are associated with other plant communities. One large field below the Ellwood Reservoir supports a dense stand of invasive exotic plant species, particularly black mustard (*Brassica nigra*). In other cases invasive exotic plant species are intermixed with native communities (see discussion of Cape ivy above).

A stand of eucalyptus woodland occurs along the paved project access road in the vicinity of Glen Annie Reservoir. The density and size of the trees allows sufficient light for many native species to survive in the understory including big pod ceanothus, coast live oak, and poison oak.

Two orchards occur within close proximity of the proposed and alternative pipeline routes. All routes would go through an avocado orchard near the SPTT. A citrus orchard is present south of the Alternative A alignment on the east side of the main stem of Glen Annie Creek (Figure 3.3-1). Disturbed and developed areas, including roads and existing facilities, occur scattered throughout the proposed project vicinity.

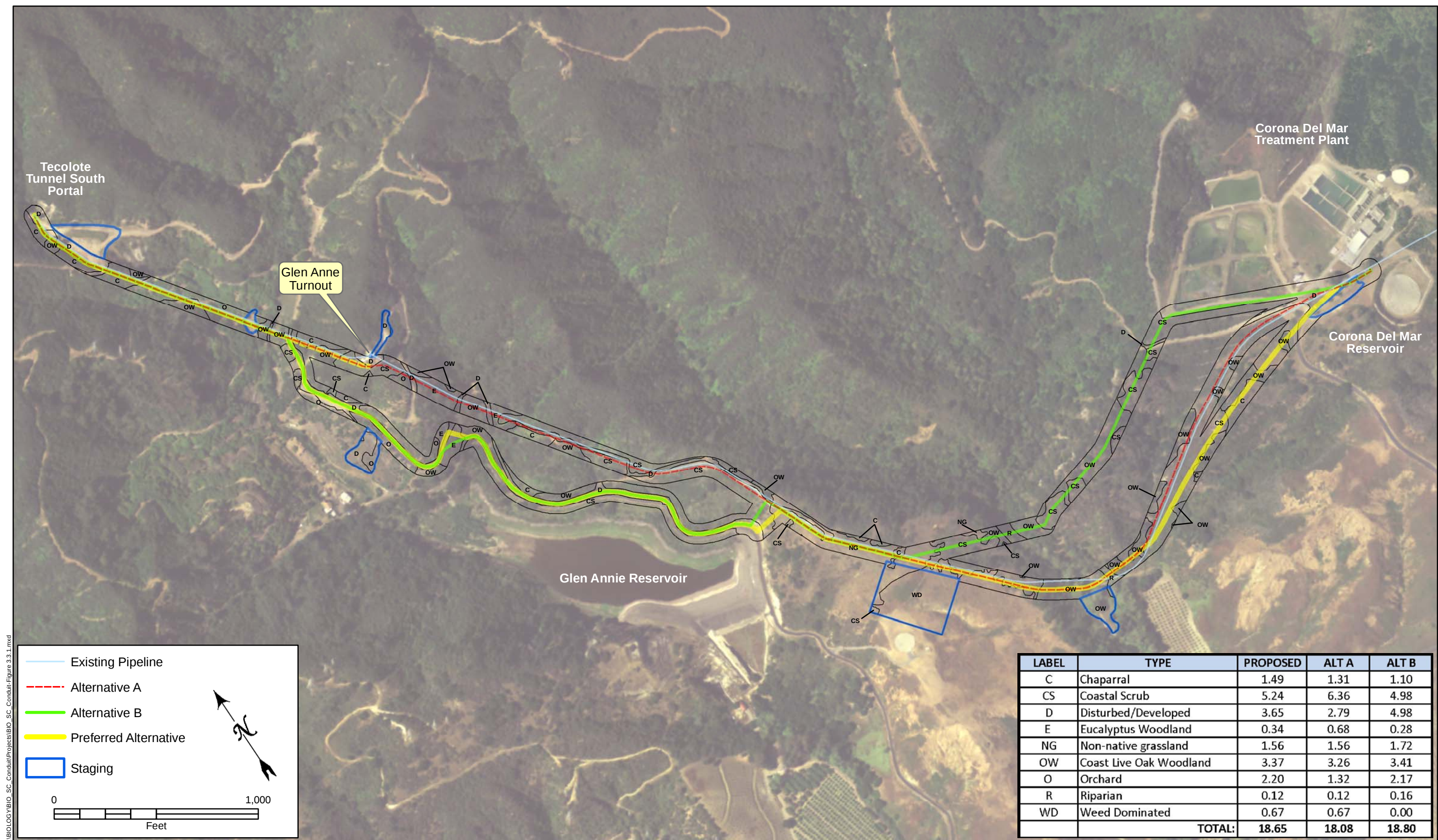


Figure 3.3-1. Vegetation Along Proposed Alternative Pipeline Alignments

3.3.1.2 Wildlife

The project area supports a diverse assemblage of wildlife species that use the varied habitats present. Oak woodlands, riparian corridors, orchards, and eucalyptus woodlands provide perching, nesting, and roosting habitat for a variety of birds including several raptor species.

Several species of birds are commonly associated with oak woodlands and other non-native trees, such as eucalyptus. Hutton's vireo (*Vireo huttoni*), house wren (*Troglodytes aedon*), oak titmouse (*Baeolophus inornatus*), acorn woodpecker (*Melanerpes formicivorus*), Nuttall's woodpecker (*Picoides nuttallii*), and hairy woodpecker (*Picoides villosus*) are common within the various oak woodland habitats along the proposed pipeline alignments. Several raptor species including red-tailed hawk (*Buteo jamaicensis*), red-shouldered hawk (*B. lineatus*), white-tailed kite (*Elanus leucurus*), and American kestrel (*Falco sparverius*), and several other species such as Cooper's hawk (*Accipiter cooperi*), great-horned owl (*Bubo virginianus*), and barn owl (*Tyto alba*) are expected to perch and potentially nest in oaks that offer good vantage spots for foraging. The Cooper's hawk was observed near the main stem Glen Annie Creek in 2005 (Padre 2005). The ferruginous hawk (*Buteo regalis*) could be present during the winter but is unlikely to breed in the project area.

Although the stands of eucalyptus trees within the proposed project area are introduced species, these trees offer valuable habitat for several avian species. The eucalyptus tree flowers and the insects found on the trees attract large numbers of migratory and resident birds such as ruby-crowned kinglet (*Regulus calendula*), yellow-rumped warbler (*Dendroica auduboni*), Townsend's warbler (*Dendroica townsendi*), dark-eyed junco (*Junco hyemalis*), and Anna's hummingbird (*Calypte anna*). These trees also provide suitable roosting and potential nest sites for larger birds including American crow (*Corvus brachyrhynchos*), red-tailed hawk, red-shouldered hawk, great-horned owl, and barn owl. No raptor nests, however, were observed in the trees in the project vicinity during the SAIC 2007 site surveys. These trees can also provide habitat for monarch butterflies (*Danaus plexippus*) which are discussed under Special Status Species (Section 3.3.1.4).

Avian species present in the chaparral and coastal scrub habitats include black phoebe (*Sayornis nigricans*), western kingbird (*Tyrannus verticalis*), Bewick's wren (*Thryomanes bewickii*), cliff swallow (*Petrochelidon pyrrhonota*), western scrub jay (*Aphelocoma coerulescens*), American goldfinch (*Carduelis tristis*), Anna's hummingbird, California quail (*Lophortyx californicus*), and northern mockingbird (*Mimus polyglottos*). The southern California rufous-crowned sparrow (*Aimophila ruficeps*) prefers rocky hillsides and steep brushy or grassy slopes. It is known from the coastal foothills west of Goleta. Although this species was not observed during 2005 field surveys, it may breed along the proposed project alignments at low density (Padre 2005).

The riparian woodlands crossed by the proposed project are important wildlife habitats. This community provides protective cover, food and fresh water, a diversity of nest and den sites, and a corridor for movement and dispersal for many wildlife species. Numerous species observed in the surrounding upland habitats (e.g., coastal scrub) would be expected to forage, drink, and take cover in the riparian habitat. Several avian species are specifically associated with riparian habitat and are expected to occur in the proposed project area, including Wilson's warbler, spotted towhee (*Pipilo maculatus*), black-headed grosbeak (*Pheucticus melanocephalus*), bushtit (*Psaltiriparus minimus*), fox sparrow (*Passerella iliaca*), hairy woodpecker, downy woodpecker (*Picoides pubescens*), and pacific-slope flycatcher (*Empidonax difficilis*). In addition, this habitat is critical to several special status wildlife species known or expected in the proposed project area, including the California red-legged frog, Cooper's hawk, and yellow warbler (*Dendroica petechia*) and birds of regional concern: Wilson's warbler (*Wilsonia pusilla*), Swainson's thrush (*Catharus ustulatus*), and warbling vireo (*Vireo gilvus*).

Coastal scrub, chaparral, oak woodlands, and grasslands provide habitat for many small mammals, including rodent species such as Botta's pocket gopher (*Thomomys bottae*), California ground squirrel (*Spermophilus beecheyi*), western harvest mouse (*Reithrodontomys megalotis*), house mouse (*Mus musculus*), and California

vole (*Microtus californicus*). Medium-size to large mammals expected to occur in the proposed project area include brush rabbit (*Sylvilagus bachmani*), Virginia opossum (*Didelphis virginianus*), striped skunk (*Mephitis mephitis*), grey fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), raccoon (*Procyon lotor*), coyote (*Canis latrans*), and domesticated species including dog (*Canis familiaris*) and cat (*Felis catus*).

Several bird species prefer open areas, orchards, and urbanized settings and are expected in these habitats including western meadowlark (*Sturnella neglecta*), northern mockingbird, mourning dove (*Zenaida macroura*), Say's phoebe (*Sayornis saya*), and European starling (*Sturnus vulgaris*).

Reptiles and amphibians typical of the habitats in the proposed project area include the Pacific chorus frog (*Pseudacris regilla*), western toad (*Bufo boreas*), southern alligator lizard (*Gerrhonotus multicarinatus*), western skink (*Eumeces skiltonianus*), and western fence lizard (*Sceloporus occidentalis*). The Pacific chorus frog and western toad are generally found in or near moist environments while the other species can be found in moist to dry habitats. The grassland habitat would support the common kingsnake (*Lampropeltis getulus*), gopher snake (*Pituophis catenifer*), western terrestrial garter snake (*Thamnophis elegans*), and western rattlesnake (*Crotalus viridis*).

Open grasslands support small mammals and small birds that provide abundant forage for raptor species. Raptors commonly foraging in the open areas included red-tailed hawk, red-shouldered hawk, white-tailed kite, American kestrel, Cooper's hawk, merlin (*Falco columbarius*), and the uncommon zone-tailed hawk (*Buteo albonotatus*). Grasslands also support seed-eaters and smaller bird species including killdeer (*Charadrius vociferous*), American goldfinch (*Carduelis tristis*), western meadowlark (*Sturnella neglecta*), song sparrow (*Melospiza melodia cooperii*), and house finch (*Carpodacus mexicanus*).

Areas of freshwater marsh habitat located along the edges of Glen Annie Reservoir may support marsh species consisting of song sparrow (*Melospiza melodia*), common yellowthroat (*Geothlypis trichas*), and red-winged blackbird (*Agelaius phoeniceus*). Great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), and great egret (*Casmerodius albus*) are common foragers in open water bodies. West Fork of Glen Annie Creek and Glen Annie Creek support populations of aquatic invertebrates and provide breeding habitat for amphibians such as Pacific chorus frog, western toad, coast range newt (*Taricha torosa torosa*), and California red-legged frog (*Rana aurora draytonii*). The latter two species are discussed under Special Status Species (Section 3.3.1.4). Fish species likely to be present include arroyo chub (*Gila orcutti*), the common (partially armored) threespine stickleback (*Gasterosteus aculeatus macrocephalus*), and the non-native mosquitofish (*Gambusia affinis*).

3.3.1.3 Wetlands

No wetlands were found during pre-project surveys in 2007. However, 2007 was an usually dry year, and wetlands were identified within the alternative crossings of the main stem of Glen Annie Creek in 2005 (Padre 2005). Hence, it is expected that seasonal wetlands are periodically associated with this drainage. These wetlands will be delineated as part of the proposed project permitting process.

3.3.1.4 Special Status Species

The CNNDDB had records for several rare, threatened, endangered, and sensitive plant and animal species that occur within the Goleta or Dos Pueblos USGS quadrangle maps (CNNDDB 2007). The list of species from that search was reduced to species that occur in habitats found in the proposed project area, or are associated with aquatic habitats and could occur downstream of the proposed project. Other species potentially occurring in the project area were added as appropriate. The species that are addressed in this document are listed in Table 3.3-1. The current status of animals was taken from the 2008 special animals list (CNDDDB 2008). For several birds in Table 3.3-1, the California Species of Special Concern (CSC) status is for breeding only; thus,

birds designated as CSC and unlikely to breed in the area (northern harrier, loggerhead shrike) will be considered common wildlife if occurring in the project area. Surveys for rare, threatened, endangered, and sensitive plant species were conducted in May 2005 (Padre 2005) and in April, March, and August 2007 along the preferred and alternative pipeline alignments. Reconnaissance-level surveys focused on sensitive species that were identified as potentially present from the CNDDDB search, but were not limited to those species. Plant species listed as rare, threatened, or endangered by the U. S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game (CDFG), or the CNPS were the focus of rare plant surveys. Other special status plant species (e.g., those considered plants of limited distribution by CNPS or sensitive by Santa Barbara County) were not the subject of rare plant surveys, but were noted when encountered in the discussion of vegetation (Section 3.3.1.1). The only rare, threatened, endangered, or sensitive plant species that were found was the Santa Barbara honeysuckle (*Lonicera subspicata* var. *subspicata*). The mesa horkelia (*Horkelia cuneata* ssp. *puberula*) and black-flowered figwort (*Scrophularia atrata*) were not observed and are not expected to be present. Consequently, these two species are not discussed further in this document. For wildlife, several of the bird species discussed as CSC are no longer considered CSC (CNDDDB 2008), and these species (ferruginous hawk, Cooper's hawk, and southern California rufous-crowned sparrow) are considered common species and are not discussed in this section.

**Table 3.3-1. Special Status Plant and Animal Species
Potentially Occurring in the Project Vicinity**

Scientific Name/ Common Name	Status Fed/ State/Other	Habitat and Description	Distribution in Project Area
STATE OR FEDERALLY LISTED AND PROPOSED THREATENED OR ENDANGERED SPECIES			
PLANTS			
<i>Horkelia cuneata</i> ssp. <i>Puberula</i> Mesa horkelia	—/—/1B	Occurs in chaparral, woodland, and coastal scrub. Blooms March to July.	Suitable habitat present in the project area, but this taxon was not found during project surveys and is not present.
<i>Lonicera subspicata</i> var. <i>subspicata</i> Santa Barbara honeysuckle	—/—/1B	Occurs in chaparral, woodland, and coastal scrub. Blooms May to August.	This species is abundant along the preferred and alternative alignments.
<i>Scrophularia atrata</i> Black-flowered figwort	—/—/1B	Sandy and diatomaceous earth areas in coastal scrub, chaparral, and riparian habitats. Blooms April to July.	Known from one occurrence in the Devereux dunes and one site in Ellwood. Not found during proposed project surveys and is not expected to be present.
WILDLIFE			
INSECTS			
<i>Danaus plexippus</i> Monarch butterfly	—/—/Local Concern	Open grassland, meadows, and wetlands with milkweed plants. Roosts in eucalyptus groves.	Individuals observed on site; no record of roost sites in the proposed project area; marginal roost sites present.
FISH			
<i>Oncorhynchus mykiss</i> Southern California ESU Steelhead	FE/CSC/—	Clear, cool water with abundant instream cover, well-vegetated stream banks, relatively stable water flow.	Moderate quality habitat is present along Glen Annie Creek at the pipeline crossing; however, presence of migratory individuals is not expected due to downstream barriers that prevent access (Stoecker et al. 2002).

**Table 3.3-1. Special Status Plant and Animal Species
Potentially Occurring in the Project Vicinity (continued)**

<i>Scientific Name/ Common Name</i>	<i>Status Fed/ State/Other</i>	<i>Habitat and Description</i>	<i>Distribution in Project Area</i>
STATE OR FEDERALLY LISTED AND PROPOSED THREATENED OR ENDANGERED SPECIES			
AMPHIBIANS			
<i>Rana aurora draytonii</i> California red-legged frog	FT/CSC/—	Seasonally ponded areas with slow to stagnant water and emergent aquatic vegetation.	Found in West Fork and main stem of Glen Annie Creek, at or near proposed project crossings (Padre 2005).
<i>Taricha torosa torosa</i> Coast range newt	—/CSC/—	Moist areas along creeks and streams with riparian vegetation.	Found in West Fork and main stem of Glen Annie Creek, at or near proposed project crossings (Padre 2005).
REPTILES			
<i>Anniella pulchra</i> Silvery legless lizard	—/CSC/—	Occurs in warm, moist loose soil of sparsely vegetate areas. Found under leaf litter and/or low lying plants and rocks.	Known from the region and may occur in woodlands near the proposed project (Padre 2005).
<i>Actinemys marmorata pallida</i> Southwestern pond turtle (Southern Pacific pond turtle)	—/CSC/—	Found in ponds, marshes, rivers, streams, and irrigation ditches with muddy or rocky bottoms.	Known from San Pedro Creek, about 1.5 miles (2.4 kilometers) east of the Corona Del Mar Treatment Plant; not found during 2005 field surveys, but may occur in Glen Annie Creek (Padre 2005).
<i>Thamnophis hammondi</i> Two-striped garter snake	—/CSC/—	Near permanent fresh water, often along streams with rocky beds bordered by streamside vegetative growth.	Occurs along foothill creeks on the South Coast. Not observed during 2005 field surveys but may occur near Glen Annie Creek (Padre 2005).
BIRDS			
<i>Elanus leucurus</i> White-tailed kite	—/FP/	Open grassland, riparian and oak woodland.	A communal roost was reported from Glen Annie Canyon in 1968, but not currently known to breed in the proposed project area. Not observed during 2005 field surveys but may forage in proposed project area (Padre 2005). Expected in open space areas; suitable foraging habitat present.
Northern harrier <i>Circus cyaneus</i>	—/CSC*/—	Regular fall, winter, and spring transient to grasslands and open scrub habitats along the South Coast of Santa Barbara County.	Likely to forage in grasslands in the proposed project area. Unlikely breeder in the area.
<i>Lanius ludovicianus</i> Loggerhead shrike	—/CSC*/—	Open and semi-open habitats including grassland, woodland, and scrub.	Breeds west of Gaviota and may forage in proposed project area. Not observed during 2005 field surveys (Padre 2005).
<i>Dendroica petechia</i> Yellow Warbler	—/CSC*/—	Favors wet habitats, especially willows and alders; open woodlands, gardens, orchards.	Found near West Fork and main stem Glen Annie Creek, along the alternative alignments (Padre 2005).

**Table 3.3-1. Special Status Plant and Animal Species
Potentially Occurring in the Project Vicinity (continued)**

<i>Scientific Name/ Common Name</i>	<i>Status Fed/ State/Other</i>	<i>Habitat and Description</i>	<i>Distribution in Project Area</i>
STATE OR FEDERALLY LISTED AND PROPOSED THREATENED OR ENDANGERED SPECIES			
MAMMALS			
<i>Eumops perotis californicus</i> Western mastiff bat	—/CSC/—	Caves near open, arid areas with high cliffs.	Distribution of bat species is poorly known; species could forage in proposed project areas (Padre 2005).
<i>Corynorhinus townsendii pallescens</i> Pale big-eared bat	—/CSC/—	Caves near scrub and pine forest.	Distribution of bat species is poorly known; species could forage in proposed project areas (Padre 2005).
<i>Antrozous pallidus</i> Pallid bat	—/CSC/—	Oak woodlands and grasslands.	Distribution of bat species is poorly known; species could forage in proposed project areas (Padre 2005).
<i>Neotoma lepida intermedia</i> San Diego desert woodrat	—/CSC/—	Desert scrub, coastal sage scrub, and chaparral.	Reported from rocky chaparral near West Camino Cielo. Not observed during 2005 field surveys, but potential to occur in proposed project area (Padre 2005).
Source: CNDDB 2007, 2008 <u>Federal Status</u> (determined by U. S. Fish and Wildlife Service or National Marine Fisheries Service): FE Endangered. In danger of extinction throughout all or a significant portion of its range. FT Threatened. Likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range. <u>State Status</u> (determined by California Department of Fish and Game): E Endangered T Threatened CSC Species of Special Concern (*Breeding only) FP Fully Protected <u>California Native Plant Society (CNPS) List:</u> 1B Plants considered rare or endangered in California and elsewhere.			

Santa Barbara Honeysuckle: The Santa Barbara honeysuckle grows in chaparral and coastal scrub in Santa Barbara and Los Angeles counties. It can be shrubby or vine-like. Numerous Santa Barbara honeysuckle were found along the preferred and alternative pipeline alignments. In some locations individual Santa Barbara honeysuckle could not be counted because the stems coming out of the ground were too dense to distinguish individual plants. However, it is abundant in many locations along the preferred and alternative pipeline alignments.

Monarch Butterfly: The monarch butterfly is a common winter migrant in Santa Barbara County and is known to occur in the vicinity of the preferred and alternative pipeline alignments. Monarchs are included in the California Department of Fish and Game's Special Animals List (October 2007), and overwintering sites are protected under the County's Local Coastal Plan (LCP) as an Environmentally Sensitive Habitat (Santa Barbara County 1982).

Each year monarch butterflies make a mass migration from milkweed breeding habitat in northwestern North America to the mild climate of coastal California; butterflies on the eastern side of the Rocky Mountains fly south to spend the winters in the Michoacán Mountains of Mexico. Santa Barbara County harbors over one hundred monarch butterfly roosting sites scattered within 1 mile (1.6 kilometers) of the coastline (Meade 1999). Eucalyptus trees create 90 percent of the overwintering habitat; other tree species used include oaks, pines, sycamores, willows, cypresses, and palms.

In mid-September, monarchs begin to arrive at similar habitats along the coast of California for their winter residence. Large numbers, sometimes up to tens of thousands, of butterflies gather in groves of trees and form dense clusters on the leaves and branches. By late February, the butterflies will mate and females will

1 start the northward migration and lay eggs on milkweed plants (*Asclepias* spp.) as they travel. Three to four
2 generations of monarchs will flourish through the summer, and in the late summer offspring will make the
3 next long journey southward. Overwintering sites typically share various characteristics that are important for
4 monarch survival, including the optimum balance between temperature, humidity, wind shelter, and sun
5 exposure. Most winter habitats follow similar patterns of composition and distribution of vegetation,
6 orientation to in-coming solar radiation, and distance from the ocean.

7 Butterfly aggregation sites are known to occur throughout Ellwood Mesa, south of the project site, and along
8 many canyons and drainages to the east and west including Tecolote Canyon, Eagle Canyon, Dos Pueblos
9 Canyon, Las Varas Canyon, arroyo 0.4 miles (0.6 kilometer) west of Gato Canyon, and Cañada del Capitan
10 Creek (Meade 1999). These sites all occur south of Highway 101 in vegetation consisting of groves of
11 eucalyptus, sycamores, and/or coast live oaks. These sites harbor populations of butterflies ranging between
12 20 and 14,000 individuals.

13 Surveys for monarch wintering aggregations have not been conducted in the proposed project area (Padre
14 2005); therefore, the presence or absence of monarch aggregation sites cannot be confirmed. However, the
15 stands of eucalyptus trees create potentially suitable habitat. Monarchs may use these trees as autumnal
16 roosting sites, temporary gathering locations persisting no more than a few months from September to
17 December.

18 **California Red-Legged Frog:** The California red-legged frog was listed as threatened on May 23, 1996
19 (USFWS 1996a) and the final rule became effective on June 24, 1996. Critical habitat was first designated
20 for the California red-legged frog on March 13, 2001 (USFWS 2001) and includes essential aquatic habitat,
21 associated uplands, and dispersal habitat connecting essential aquatic habitat. The revised critical habitat was
22 proposed on April 13, 2004 (USFWS 2004), further revised in 2005 (USFWS 2005), and designated on April
23 13, 2006 (USFWS 2006). The following description was taken from the Biological Opinion (1-8-96-F-16) for
24 the Coastal Aqueduct (USFWS 1996b), the final listing rule, and the proposed rule for critical habitat
25 (USFWS 2004, 2005).

26 The California red-legged frog is one of two subspecies of the red-legged frog (*Rana aurora*) found on the
27 Pacific coast. The final listing rule states that the species occupies a fairly distinct habitat, combining both
28 specific aquatic and riparian components. Adults prefer dense, shrubby or emergent riparian vegetation
29 closely associated with deep (more than 2.3 feet [0.7 meters] in depth), still or slowly moving water.
30 However, recent observations indicate that California red-legged frogs will occur in a variety of habitat types,
31 including aquatic, riparian, and upland habitats with permanent water nearby. Well-vegetated terrestrial areas
32 within the riparian corridor may provide important sheltering habitat during winter, foraging areas, and
33 dispersal corridors. California red-legged frogs breed from November through April, with the earlier
34 breeding records occurring in southern localities. Eggs hatch in 6 to 14 days while larvae take 3.5 months or
35 longer to metamorphose. California red-legged frogs may live 8 to 10 years. The frogs disperse upstream
36 and downstream of breeding habitat to forage and seek resting habitat. They take cover in small mammal
37 burrows and moist leaf litter (up to 100 feet [30.5 meters] from water) in dense riparian vegetation with
38 drying of creeks in summer, but will use other cover sites when traveling overland. Adults can be found
39 within streams over 1.8 miles [2.9 kilometers] from breeding habitat and within dense riparian vegetation
40 more than 328 feet (100 meters) from water. After winter rains begin, California red-legged frogs may move
41 away from aquatic habitats, primarily at night, and can travel 1 mile (1.6 kilometers) from those habitats
42 (USFWS 1997). Juveniles may also disperse locally shortly after metamorphosis in July-September and away
43 from their natal habitats during warm rain events.

44 Critical habitat includes (1) aquatic breeding habitat (includes natural and manmade ponds, slow-moving
45 streams or pools in streams, and other ephemeral or permanent waters) that hold water for a minimum of 15
46 weeks in all but the driest years, (2) non-breeding aquatic habitat (similar to breeding habitat but may not hold

water as long) that provides shelter, foraging, predator avoidance, and aquatic dispersal habitat for juveniles and adults, (3) upland habitat within 200 feet (61 meters) of aquatic and wetland habitat with various vegetation types and natural or manmade structures for cover, and (4) dispersal habitat (upland or wetland) located between occupied locations within 0.7 mile (1.2 kilometers) of each other with no barriers (USFWS 2005).

California red-legged frogs were observed along the West Fork and main stem of Glen Annie Creek during field surveys in 2005 (Padre 2005). Yearly rainfall at the time of this survey was unusually high and could cause suitable habitat for this species to be more common and abundant than in drier years. The 2006-2007 wet season was extremely dry and, therefore, the local population of California red-legged frogs may be less abundant or absent from the project area. Rainfall in the 2007-2008 wet season is above average, which may allow the population to expand again.

Coast Range Newt: The coast range newt is endemic to California and listed by the state as a Species of Special Concern. This species is terrestrial for most of its adult life and becomes aquatic during breeding. Through the summer and fall, terrestrial newts inhabit moist places under woody debris, or in rock crevices and animal burrows, and can traverse overland in moist habitat or conditions any time of the year. The coast range newt eats small invertebrates including insects, worms, slugs, and snails. The breeding season generally begins in December with the first heavy rains and continues for 6 to 12 weeks. Newts breed in ponds, reservoirs, and slow-moving to stagnant pools in streams (Nafis 2008).

Two-Striped Garter Snake: The two-striped garter snake is listed by the state as a Species of Special Concern. This species is primarily aquatic, active during the day, and prefers streams and pools and other waters with rocky areas in oak woodland, chaparral, brushland, and coniferous forest. This species forages for tadpoles, newt larvae, small frogs and toads, fish, and occasionally worms and fish eggs in water. This snake breeds in late March and early April and live young are born in late July and August. The two-striped garter snake occupies coastal California from Monterey County south to Baja California at elevations from sea level to 6,988 feet (2,130 meters) (Nafis 2008).

Silvery Legless Lizard: The silvery legless lizard is listed by the state as a Species of Special Concern and occurs in southern California from the southern edge of the San Joaquin River in Contra Costa County south to northwestern Baja California from sea level to around 5,100 feet (1,550 meters) in the Sierra Nevada foothills. This species lives primarily underground and burrows in loose sandy soil. This lizard prefers moist warm loose soil with plant cover in sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks (Nafis 2008). During the day, it forages in loose soil, sand, and leaf litter on small invertebrates including beetles, larval insects, termites, and spiders. The silvery legless lizard breeds in early spring and summer and bears one to four live young between September and November (Nafis 2008).

Southern California ESU Steelhead: Wild steelhead populations in California have decreased from their historic abundance (Swift et al. 1993, NMFS 1997). This decline prompted listing of the steelhead populations in the Southern California ESU as endangered on August 18, 1997. The ESU includes all naturally spawned populations of steelhead (and their progeny) in streams from the Santa Maria River to Malibu Creek on the south. Critical habitat was designated on February 16, 2000 (NMFS 2000) and was withdrawn on April 30, 2002. It was reissued on September 2, 2005 (NMFS 2005). The species is a state-designated Species of Special Concern (CDFG 2005).

Life History. Steelhead are steel-blue to olive above and white below with small, irregular black spots on the back and most fins and radiating rows of black spots on the caudal fin. Steelhead are the anadromous form of rainbow trout, migrating from the ocean up rivers and streams to spawning grounds. Adult steelhead enter creeks in the winter (October to March), usually after the first substantial rainfall, and move upstream to

1 suitable spawning areas. Spawning can occur in winter to spring (late February through March, or April in
2 some years), generally in riffle areas or the tails of pools. Suitable spawning gravels generally are 0.5 to 3
3 inches (1.3 to 7.6 centimeters) in diameter, are not heavily compacted, and have low amounts of sand or silt in
4 them; however, steelhead can successfully spawn in gravels not meeting these characteristics. Females dig a
5 nest in the gravel and deposit their eggs, the males fertilize the eggs, and the female covers the nest with
6 gravel. After the eggs hatch (3.5 to 5 weeks), fry emerge from the gravel in 2 to 6 weeks after hatching in late
7 May to early June and disperse throughout the creek, typically occupying shallow areas along stream margins.
8 Juvenile steelhead often move to deeper water as they grow and will remain in freshwater for an average of
9 two years before migrating to the ocean (NMFS 1997, Titus et al. 2003). Downstream movement of adults
10 after spawning and juveniles migrating to the ocean usually occurs from March through July. Photoperiod,
11 stream flow, and temperature appear to influence emigration timing (Shapovalov and Taft 1954, Bjornn and
12 Reiser 1991, Holubetz and Leth 1997). Juvenile steelhead may spend several weeks in the coastal lagoon or
13 estuary of a stream before entering the ocean. They reside in the ocean for two to three years before returning
14 to their natal stream to spawn (NMFS 1997), although in wet years steelhead may return to spawn after only
15 one year in the ocean (Moyle et al. 1995). The adults can spawn more than once, although most do not spawn
16 more than twice (NMFS 1997).

17 Habitat Requirements. Optimal habitat for steelhead can generally be characterized by clear, cool water with
18 abundant instream cover, well-vegetated stream banks, relatively stable water flow, and a 50:50 pool-to-riffle
19 ratio (Raleigh et al. 1984). Although optimal water temperatures for steelhead are considered to range from
20 12 to 20°C, various sources document southern steelhead as persisting in streams with water temperatures
21 ranging from 14.4 to 25.5°C during the summer and early fall months of drought years (Titus et al. 2003).
22 The critical thermal maximum is reported to be up to 29.4°C (Lee and Rinne 1980).

23 In fresh water, steelhead need spawning and rearing areas, and migration corridors (NMFS 2000). Essential
24 features of steelhead habitat include adequate substrate, water quality and quantity, water temperature, water
25 velocity, cover/shelter, food, riparian vegetation, space, and safe passage conditions. In general, appropriate
26 stream flow, water temperature, and water chemistry (e.g., high dissolved oxygen and low turbidity) are
27 necessary for adult migration to spawning areas and juvenile migration to the ocean. Suitable water depth and
28 velocity and substrate composition are the primary requirements for spawning, although water temperature
29 and turbidity are also important. Dissolved oxygen, pH, and water temperature all affect survival of
30 incubating embryos. Fine sediment particles (sand and smaller) can settle into the spaces between larger
31 substrate particles (such as gravel and cobbles) thereby reducing water flow through the nest as well as
32 dissolved oxygen concentration. For juvenile steelhead, living space (defined by water depth and velocity),
33 shelter from predators and adverse environmental conditions, a food supply, and suitable water quality and
34 quantity are necessary for survival and development while in fresh water. All age classes may seek cover and
35 cool water in pools during the summer (Nielsen et al. 1994), especially when flow, and consequently space,
36 decline during the summer and fall (Kraft 1972).

37 Historically, steelhead occupied Glen Annie Canyon Creek. This species had access to the lower 6.5 miles
38 (10.5 kilometers) of the creek where a 10 percent stone slope limited upstream movement and created a
39 natural barrier (Stoecker et al. 2002). This slope is upstream of the proposed project crossing, and steelhead
40 had access to the area when flowing water was present. A number of man-made structures have been
41 installed along the creek that form barriers to steelhead movement upstream. These barriers include five
42 double box culverts located 3 to 4.5 miles (4.8 to 7.2 kilometers) from the ocean, and four are ranked as
43 impassible or extremely high severity to impassible (Stoecker et al. 2002). Due to these barriers, steelhead
44 are not expected to be present in Glen Annie Creek in the proposed project area; however, their resident
45 counterpart, rainbow trout, are expected to occur when flowing water is present. The dam at Glen Annie
46 Reservoir is an impassible barrier that prevents steelhead from reaching the project crossing of West Fork
47 Glen Annie Creek. The main stem of Glen Annie Creek is classified as moderate habitat for steelhead
48 between the confluence of McCoy Creek and West Fork (Stoecker et al. 2002).

White-Tailed Kite: The white-tailed kite is classified by the CDFG as a Fully-Protected Species. White-tailed kites are regularly observed within the vicinity of the proposed project area. The white-tailed kite is a semi-social raptor that prefers open grassland and marshy (wetland) habitats with high abundances of small rodent species. Kites are also found in agricultural areas but less frequently (Lehman 1994). California voles (*Microtus californicus*) are an especially important prey item for this species. They hunt primarily in meadows, roosting and nesting in trees bordering good foraging habitat.

Local experts include the following list as habitat characteristics and conditions that maintain a healthy kite population: ample foraging habitat and prey base; open areas with connectivity to diverse habitats; and maintenance of natural processes and functions of a particular roosting or nesting site in regards to drainage, runoff, recharge and tidal exchange (Holmgren and Knight 1998).

Roost site aggregations begin to form in mid- to late-September, and last until the onset of breeding behavior in late January or February, although roost sites can change throughout the seasons (Waian 1973). Roost sites are found in willow woodland, oaks, avocado and citrus orchards, and stands of eucalyptus (Lehman 1994) and are used repeatedly year after year.

This species has the potential to forage and nest in the proposed project vicinity, although no known nesting sites are currently present in the immediate project area.

Northern Harrier: Northern harriers forage over open grassland, coastal sage scrub, marshes, and agricultural areas. This species nests on the ground in grassy or scrubby habitats. Northern harriers are expected to occasionally forage over the proposed project area but are unlikely to nest there.

Loggerhead Shrike: The loggerhead shrike is listed as a California Species of Special Concern for breeding only. This species prefers open and semi-open habitats including grassland, woodland, and scrub. It breeds west of Gaviota and may forage in the proposed project area; however, it was not observed during 2005 field surveys (Padre 2005).

Yellow Warbler: The yellow warbler is listed as a California Species of Special Concern for breeding only. This species favors wet habitats, especially willows and alders, open woodlands, gardens, and orchards. It was found near the West Fork and main stem of Glen Annie Creek, along the alternative alignments (Padre 2005) and has the potential to breed in the area.

Bats: Western mastiff bat, Pale big-eared bat, and pallid bat are listed as California Species of Special Concern. These bats can be found in caves near open, arid areas with high cliffs, near scrub and pine forest, oak woodlands, and grasslands. These species may forage in the project area, but their distribution is poorly known (Padre 2005).

San Diego Desert Woodrat: The San Diego desert woodrat is listed as a California Species of Special Concern and inhabits desert scrub, coastal sage scrub, and chaparral. This species was not observed during 2005 field surveys but has been reported from rocky chaparral near West Camino Cielo and, thus, has the potential to occur in the project area (Padre 2005).

3.3.2 Regulatory Setting

3.3.2.1 Federal

Clean Water Act (33 U.S.C. Section 1251 et seq.)

The Clean Water Act (CWA) was enacted to restore and maintain the chemical, physical, and biological integrity of the Nation's waters through the elimination of discharges of pollutants. The CWA primarily relates to water quality and is discussed in Section 3.7. However, Section 404 of the CWA also regulates discharge of dredged or fill materials into wetlands.

Endangered Species Act (16 U.S.C. Section 1531 et seq.)

The Endangered Species Act (ESA) protects federally listed and proposed threatened and endangered species, and their designated critical habitats. Consultation with the USFWS and/or National Marine Fisheries Service (NMFS) is required under ESA Section 7 if listed species or their designated critical habitats would be adversely affected by a federal action. Section 9 of the ESA prohibits the taking of listed species without authorization from the USFWS or NMFS.

Migratory Bird Treaty Act (16 U.S.C. Section 703 et seq.)

The Migratory Bird Treaty Act (MBTA) provides for the protection of migratory birds by making it illegal to possess, hunt, pursue, or kill migratory bird species unless specifically authorized by a regulation implemented by the Secretary of the Interior, such as designated seasonal hunting. Further, the MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase or barter, any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11). Under certain circumstances, a depredation permit can be issued to allow limited and specified take of migratory birds.

Executive Order 13186

This EO outlines the responsibilities of federal agencies to protect migratory birds, in furtherance of the MBTA, the Bald and Golden Eagle Protection Acts, the Fish and Wildlife Coordination Act, ESA, and NEPA. This order specifies the following:

- The USFWS is the lead for coordinating and implementing EO 13186;
- Federal agencies are required to incorporate migratory bird protection measures into their activities; and
- Federal agencies are required to obtain permits from the Service before any "take" occurs, even when the agency intent is not to kill or injure migratory birds.

Executive Order 11990 – Protection of Wetlands

This EO directs federal agencies to avoid to the extent possible long and short-term adverse impacts associated with the destruction or modification of wetlands and to avoid direct or indirect support of new construction in wetlands wherever there is a practicable alternative.

This EO does not apply to the issuance of permits (by federal agencies), licenses, or allocations to private parties for activities involving wetlands on non-federal property.

Executive Order 11988 – Floodplain Management

This EO directs federal agencies to avoid to the extent possible the long and short-term adverse impacts associated with the occupancy and modification of floodplains and to avoid direct or indirect support of floodplain development wherever there is a practicable alternative.

Executive Order 13112 – Invasive Species

The National Invasive Species Management Plan was developed in response to this order in 1997. This order established the National Invasive Species Council (Council) as the leaders in development of the plan, and directs the Council to provide leadership and oversight on invasive species issues to ensure that federal activities are coordinated and effective. In addition, the Council has specific responsibilities including: promoting action at local, state, tribal, and ecosystem levels; identifying recommendations for international cooperation; facilitating a coordinated network to document, evaluate, and monitor invasive species' effects; developing a web-based information network on invasive species; and developing guidance on invasive species for federal agencies. The Council has developed nine plan priorities that provide direction for federal agencies. The plan priorities include: leadership and coordination of state and federal entities; prevention (a risk based approach); early detection and rapid response; control and management; restoration; international cooperation; research; information management; and education and public awareness.

3.3.2.2 State

Porter Cologne Water Quality Control Act (C.W.C. Section 13000 et seq.; C.C.R. Title 23 Chapter 3, Chapter 15)

This Act is the primary state regulation addressing water quality, and waste discharges (including dredged material) on land; and all permitted discharges must be in compliance with the Regional Basin Plan. For the proposed project site, the Act's requirements are implemented by the Central Coast RWQCB.

California Endangered Species Act (Fish and Game Code Section 2050 et seq.)

The California Endangered Species Act (CESA) provides for recognition and protection of rare, threatened, and endangered plants and animal species. CESA requires state agencies to coordinate with the CDFG to ensure that state authorized/funded projects do not jeopardize a listed species. The CESA prohibits the taking of a state-listed species without authorization from the CDFG under Section 2081 of the Fish and Game Code. For projects that could affect species that are both state and federally listed, compliance with the federal ESA will satisfy the state CESA if CDFG determines that the federal incidental take authorization is consistent with the state CESA under Fish and Game Code Section 2080.1.

California Lake and Stream Alteration (Fish and Game Code Section 1600 et seq.)

This program requires notification of the CDFG before activities that would substantially alter the bed, bank, or channel of a stream, river, or lake, including obstructing or diverting the natural flow. This applies to all perennial, intermittent, and ephemeral water bodies as well as the associated riparian vegetation that are used by fish and wildlife resources. Such alterations must also be evaluated under CEQA and authorized via a Streambed Alteration Agreement (SAA) by regional CDFG staff. The SAA specifies conditions and mitigation measures that will minimize impacts to riparian or aquatic resources from proposed actions.

Executive Order W-59-93 - California Wetlands Conservation Policy

In August 1993, the Governor announced the California Wetlands Conservation Policy. The goals of the policy are to establish a framework and strategy that:

- Ensures no overall net loss and achieves a long-term net gain in the quantity, quality, and permanence of wetlands acreage and values in California in a manner that fosters creativity, stewardship, and respect for private property;
- Reduces procedural complexity in the administration of state and federal wetlands conservation programs; and
- Encourages partnerships to make landowner incentive programs and cooperative planning efforts the primary focus of wetlands conservation and restoration.

The EO also directed the California Resources Agency to establish an Interagency Task Force to direct and coordinate administration and implementation of the policy. The California Resources Agency and the departments within the agency generally do not authorize or approve projects that fill or harm any type of wetlands. Exceptions may be granted for projects meeting all the following conditions: the project is water dependent; there is no other feasible alternative; the public trust is not adversely affected; and the project adequately compensates the loss.

3.3.2.3 Local

The Santa Barbara County Comprehensive Plan

The Santa Barbara County Comprehensive Plan established policies relating to protecting biological resources in the County. The Environmental Thresholds and Guidelines Manual (1995), including Appendix A, established significance criteria and thresholds that supplement those provided in the State CEQA Guidelines for determination of significant environmental effects. For the purpose of this analysis, the proposed project is subject to Comprehensive Plan policies.

3.3.3 Impacts and Mitigation

The primary source of impacts would be construction of the proposed project. Operation of the pipeline would have minimal effects on biological resources. Infrequent major repairs could require excavation of sections of the pipeline and repairing or replacing them. If repair or replacement were necessary, the impacts would be similar to those described for the construction below, although they would be localized to the area of excavation. Specific operational impacts are identified as appropriate in the following sections.

3.3.3.1 Methodology

Impacts to vegetation, special-status plant species, and oak trees were determined by overlaying the project footprint maps for each alternative alignment on the vegetation map created for the proposed project. Areas of overlap were totaled to determine area of impact, or in the case of oak trees, numbers of trees within the proposed project boundaries were counted. Impacts to remaining biological resources were determined based on qualitative analysis using existing information regarding the species habitat preferences and sensitivity to disturbance along with the preparers' expertise and experience.

3.3.3.2 Significance Criteria

Consistent with Reclamation NEPA Guidance and guidance provided in CEQA Guidelines *Appendix G* Environmental Checklist Form, the proposed project would have a significant impact on biological resources if it would result in one or more of the following conditions:

- BIO-1:** Have a substantial direct or indirect effect on plant or wildlife species identified for special status under local, state, tribal, or federal laws, regulations, or policies;
- BIO-2:** Have a substantial adverse effect on any natural vegetation community identified for special status under local, state, tribal, or federal laws, regulations, or policies, including wetlands;
- BIO-3:** Have a substantial adverse effect on native resident or migratory wildlife movement corridors, breeding or spawning habitats, and nursery habitats;
- BIO-4:** Cause a substantial disruption of local biological communities (e.g., from construction impacts or the introduction of noise, light, or invasive species); or
- BIO-5:** Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
- BIO-6:** Conflict with provisions of an approved local, state, tribal, or federal habitat or species conservation plan.

As there are no habitat or species conservation plans covering the project area, criterion **BIO-6** would not apply and thus is not used in the following impact analysis.

3.3.3.3 Preferred Alternative

Impact BIO-1: Construction activities would result in the loss of individuals or habitat for special status plants and wildlife.

Plants. The Preferred Alternative would result in the removal of approximately 116 individuals and 0.37 acre (0.15 hectare) of occupied Santa Barbara honeysuckle habitat, a species considered rare, threatened, or endangered by the California Native Plant Society. This loss would be considered substantial and, thus, would be a *significant but feasibly mitigated* impact. The Mesa horkelia and black-flowered figwort were not observed along the Preferred Alternative alignment and would not be affected by the project.

Wildlife. Construction activities for the Preferred Alternative could directly affect individuals or populations of special status wildlife species through mortality of individuals, habitat loss, and/or temporary disturbance to their habitat. Special status species could be affected by construction if individuals were present within the construction area or if construction resulted in degradation of habitat through direct removal of native vegetation, sedimentation, or erosion. One federally listed species potentially affected by project construction is the California red-legged frog, which is known to be present within or downstream of the pipeline crossing of the West Fork and main stem of Glen Annie Creek. Migratory steelhead would not be present in West Fork or the main stem of Glen Annie Creek near the project creek crossings due to downstream barriers. Other special status species that may be present in these creeks during construction are the coast range newt, two-striped garter snake, and southwestern pond turtle.

Most pipeline construction activities would be in upland habitat that is unlikely to be used by California red-legged frogs, except possibly during movement between drainages. The Preferred Alternative, however, would be trenched through the West Fork and main stem of Glen Annie Creek. Trenching in these locations could result in impacts to the California red-legged frog through direct injury or mortality and temporary alteration of habitat. Any flow present when construction occurs would be diverted around the work area

through a flume or pipe so that flow would not be interrupted and so that the work area would be dry. Installation of this diversion has the potential to injure individuals present, and work at the crossing could affect any individual California red-legged frogs that enter the work area. In addition, construction materials (e.g., concrete washwater, lubricants, fuels, and paint) and sediment have the potential to be released into these drainages from construction activities within and adjacent to them and could be transported downstream of the work area. If transported downstream, these materials would alter the physical and chemical character of the habitat through sedimentation, changes in pH (from concrete washwater), reduced dissolved oxygen, or toxicity. These habitat changes could result in adverse affects on breeding success of sensitive species of amphibians and fish, including the California red-legged frog. Loss of individuals or reduced breeding success that adversely affects the populations of these species would be considered a *significant but feasibly mitigated* impact. Construction of the main stem of Glen Annie Creek crossing would have *no impacts* to migratory steelhead because none are expected to be present. Furthermore, the work would be completed during the dry season when little or no water is present at the crossing location.

Construction of the Preferred Alternative would involve the removal of eucalyptus trees within the pipeline corridor (0.34 acre, 0.14 hectare) that may provide habitat for autumnal roosting monarch butterflies (September through December). Construction activities at this location in the summer prior to September would not affect any roosting monarchs, and would only remove a few of the eucalyptus trees. Construction at this location after the first of September could affect monarchs, if any are present and roosting at the time of tree removal. Impacts could include direct injury or mortality of individuals and destruction of occupied roosting habitat. These impacts would be *less than significant* because only a small amount of habitat would be affected and few individuals would potentially be lost, resulting in no substantial effects on their population.

The silvery legless lizard and southwestern pond turtle are unlikely to occur in the project area and, thus, would not be affected by construction activities. The coast range newt is known to occur along both drainages in the project vicinity, and the two-striped garter snake and San Diego desert woodrat may be present as well. Project construction activities would result in a short-term loss of habitat for these three species and potentially a loss of a few individuals. These species are California Species of Special Concern that have a wide but scattered distribution in the region, and these impacts would not adversely affect their populations because only a small amount of habitat would be affected and few if any individuals would be lost. Therefore impacts would be *less than significant*, and mitigation measures proposed for other species described below would further protect these species as well.

Construction activities would remove trees within the work area, resulting in a short- to long-term loss of habitat potentially used by three sensitive bat species for roosting. Construction noise and human presence are unlikely to affect foraging behavior of these species because they primarily feed at dusk which is outside normal construction hours. Due to other abundant roosting habitat in the area, the loss of trees along the project route would have *less than significant* impacts on these species.

Impacts to California Species of Special Concern bird species that could breed in the project area such as yellow warbler are discussed in **Impact BIO-3**.

Mitigation Measures

PLANTS

BIO-1.1 Santa Barbara honeysuckle plants shall be avoided to the greatest extent feasible during construction. Locations of this species within the construction corridor shall be clearly marked on the project plans and in the field by a qualified biologist prior to construction. The qualified biologist shall work with the Resident Engineer and construction contractor to determine which

of these areas cannot be avoided. For the areas that cannot be avoided, cover of Santa Barbara honeysuckle shall be recorded using line-intercept sampling and will form the restoration criterion.

Plan Requirements and Timing: This measure shall be indicated on the final construction plans. Surveys shall be conducted after the construction corridor has been marked and prior to any vegetation clearing.

MONITORING: COMB shall ensure that the measure is included in the final construction plans and is implemented.

BIO-1.2 The project Revegetation Plan (see Section 2.3.2) shall include specific measures for restoring Santa Barbara honeysuckle to pre-project cover.

Plan Requirements and Timing: The Revegetation Plan shall be included in the final construction plans.

MONITORING: COMB shall ensure that the Revegetation Plan is prepared and included in the final construction plans and that it is implemented.

WILDLIFE

BIO-1.3 A Special Status Species Protection Plan shall be prepared and implemented to minimize or avoid impacts to special status biological resources, including aquatic habitats, during pipeline construction. Habitat and species protection measures shall include, at a minimum:

1. Construction shall be scheduled to avoid the breeding season of special status species. For example, schedule pipeline construction (or at a minimum, crossing of drainages that support special status aquatic species) to avoid the breeding season for the California red-legged frog (November 1 through May 30) and steelhead migration and spawning (February 1 through March 31) or to occur while water is not present;
2. Work shall be scheduled to avoid the high flow seasons (October through April) if trenching is used to cross the two seasonal drainages to avoid potential impacts to downstream resources, including breeding habitat for the California red-legged frog and steelhead;
3. A USFWS-approved California red-legged frog biologist shall conduct pre-construction California red-legged frog surveys following USFWS protocols in all suitable habitat crossed by the pipeline right-of-way (the West Fork and main stem of Glen Annie Creek) to determine the presence or absence of this species within about 500 feet (152 meters) of the construction area;
4. A qualified biologist with the appropriate permits shall be present during construction in habitats that support special status species;
5. The project biologist and the project engineer shall clearly designate “sensitive resource zones” on the project maps and construction plans. Sensitive resource zones are defined as areas where construction would be limited in space, time, or methods to minimize or avoid impacts to special status species or their habitat;

6. A USFWS-approved California red-legged frog biologist shall be present during construction in locations known to support California red-legged frogs to monitor for this species. The biologist shall inspect the work area (especially areas with ponded water, if present) for the presence of the species and shall be authorized to temporarily stop work if immediate threats to the species are identified during monitoring. Any disturbances to occupied habitat or red-legged frogs shall be in conformance with the terms and conditions of the project Biological Opinion from the USFWS;
7. All machinery shall be stored and fuelled in designated locations at least 100 feet (30.5 meters) away from any sensitive habitats or in areas approved by the project biologist. Heavy equipment and construction activities shall be restricted to the defined construction corridor. Construction vehicles and personnel shall use existing access roads;
8. A qualified biologist shall conduct pre-construction surveys of the stand of eucalyptus trees for roosting monarch butterflies in the appropriate season. Surveys shall be conducted during the fall and winter (October through December) to verify the presence or absence of autumnal or wintering roost sites. If autumnal or wintering roost sites are identified, the biologist shall work with the resident engineer to either avoid removal of these trees or schedule construction to occur outside of the monarch roosting season when the species would not be present; and
9. Any other requirements stipulated by the USFWS and/or NMFS as part of Section 7 Consultation under the ESA shall be implemented.

Plan Requirements and Timing: The Special Status Species Protection Plan shall be included in the final construction plans.

MONITORING: COMB shall ensure that the Special Status Species Protection Plan is prepared and included in the construction plans and that it is implemented.

BIO-1.4 Glen Annie Creek, including West Fork, bed and banks shall be restored to pre-project conditions to the greatest extent feasible. This shall include disposing of material displaced by the pipe and bedding outside the creek corridor but not over existing topsoil, replacing boulders and cobbles in the stream bed, and contouring to restore the stream bed gradient and bank structure. Biological monitors shall ensure that creek beds and banks are restored correctly and shall work with the construction contractor directly or through the resident engineer.

Plan Requirements and Timing: This measure shall be indicated on the final construction plans.

MONITORING: COMB shall ensure that the measure is included in the construction plans and is implemented.

Residual Impacts

Residual impacts would be *less than significant* with implementation of **Mitigation Measures BIO-1.1** through **BIO-1.4**.

Impact BIO-2: Construction would result in a temporary loss of riparian woodland and seasonal wetlands, and a long-term loss of oak woodland.

Riparian Woodland. Construction of the Preferred Alternative would result in direct removal of approximately 0.12 acre (0.05 hectare) of riparian woodland from creek crossings at the West Fork and main stem of Glen Annie Creek. Mature oaks and willows would be removed at these locations. Riparian woodland is considered a sensitive habitat by the County of Santa Barbara and other agencies, and these losses would be *significant but feasibly mitigated*.

Oak Woodland. Construction of the Preferred Alternative would result in the removal of 3.37 acres (1.36 hectares) of coast live oak woodland. Oak woodlands are a declining natural community and are protected in many counties, including Santa Barbara County. The trees are slow-growing, and an oak woodland ecosystem takes decades to become established. Removal of 3.37 acres (1.36 hectares) of coast live oak woodland would be a *significant and unavoidable* impact. Losses of individual oak trees are addressed separately under **Impact BIO-5**.

Waters of the U.S. and Wetlands. Construction of the Preferred Alternative would result in a temporary disturbance to Waters of the U.S. at the West Fork of Glen Annie Creek and at the main stem of Glen Annie Creek. Construction would occur during the dry season, and little to no surface water would be present. No permanent loss of Waters of the U.S. would occur, and impacts would be *less than significant*. In addition, seasonal wetlands may be temporarily lost during construction across the main stem of Glen Annie Creek. These wetlands are small and not well developed due to annual scouring by storm runoff during the rainy season. Impacts would be temporary and *less than significant* because the wetlands would reestablish during low flows following construction, resulting in a 1:1 replacement. Implementation of **Mitigation Measure BIO-1.4** would further reduce this impact.

Mitigation Measures

RIPARIAN WOODLAND.

BIO-2.1 Measures for restoration of riparian woodland shall be included in the Revegetation Plan (see Section 2.3.2). All riparian woodland removed shall be replaced at a 2:1 ratio, or as mandated in project permits. For each acre of riparian woodland that can be restored onsite, an additional acre shall be restored offsite. All permanently impacted riparian woodland shall be restored offsite at a 2:1 ratio.

Plan Requirements and Timing: This measure shall be indicated on the final construction plans.

MONITORING: COMB shall ensure that the measure is included in the construction plans and is implemented.

OAK WOODLAND.

BIO-2.2 Measures for restoration of oak woodland in the Revegetation Plan (see Section 2.3.2) shall include planting individual coast live oak trees at suitable sites and the following specifications. Coast live oak tree 6 inches (15 centimeters) or greater in diameter at breast height (DBH) removed for the project shall be replaced by establishing 10 planted trees meeting minimum performance criteria five years after planting for each tree removed. The performance criteria shall include a period of two years without supplemental watering, a healthy vigorous appearance, minimum height of 6 feet (1.8 meters), and a minimum diameter 1 foot (0.3 meter) above the ground of 2 inches (5 centimeters). In most cases, it will take more than five years for trees to meet these criteria. Oak tree plantings shall be appropriately spaced to promote survival past the monitoring period.

Plan Requirements and Timing: This measure shall be indicated on the final construction plans.

MONITORING: COMB shall ensure that the measure is included in the construction plans and is implemented.

Waters of the U.S. and Wetlands. As impacts would be less than significant, no mitigation is necessary. However, any compensation for impacts to wetlands required in project permits would be implemented in compliance with the permits.

Residual Impacts

Riparian Woodland. With implementation of **Mitigation Measure BIO-2.1**, residual impacts would be *less than significant*.

Oak Woodland. Replanting of oak trees (**Mitigation Measure BIO-2.2**) will eventually replace the habitat removed. However, it can take up to many decades for coast live oaks to mature and provide the habitat characteristics of oak woodlands, resulting in a long-term loss of oak woodland habitat. In addition, young trees do not have the diversity of micro habitats that make these communities so valuable to wildlife (e.g., lush foliage, dead wood and bark, and diverse understory of shade tolerant plants). Therefore, residual impacts would be *significant and unavoidable*.

Waters of the U.S. and Wetlands. The residual impact would be *less than significant*. Natural conditions in the creeks would be established within approximately one year after construction.

Impact BIO-3: Construction activities could adversely affect wildlife migration or breeding habitat for migratory birds and wildlife.

The Preferred Alternative alignment traverses several canyons that support native coast live oak and riparian woodlands. Construction of the pipeline would result in damage to and removal of native and non-native trees and shrubs that provide cover, roosting, and nesting habitat for common wildlife and migratory birds. Raptors and other bird species protected under the MBTA, including the red-tailed hawk, red shouldered hawk, white-tailed kite, and American kestrel, may use these trees for nesting and perch sites. Other bird species common in the area are expected to nest within coast live oak woodland, chaparral, and coastal sage scrub habitats along the Preferred Alternative alignment. The breeding season for raptors can begin as early as February and continue through August, while the season for smaller resident and migratory birds can extend from mid-March through mid-September. Birds listed as California Species of Special Concern for breeding only, including yellow warbler, may also be affected by removal of potential breeding habitat. If removal of these vegetation types occurred within the breeding seasons for these species, reproductive success of the individuals nesting there would be adversely affected. Nests could be lost during vegetation clearing, and noise and human activities within the construction corridor could cause birds nesting in adjacent habitat to abandon their nests. Disruption and loss of nesting for migratory birds and those listed as California Species of Special Concern would be considered a *significant but feasibly mitigated* impact.

Since northern harrier, loggerhead shrike, and ferruginous hawk are unlikely to breed in the area, temporary removal of vegetation would be considered *less than significant* for these species.

Construction activities would not adversely affect any migratory corridors for terrestrial wildlife because none are known to be crossed by the pipeline corridor and the work would generally be concentrated at one location along the route, allowing animals to move freely across the remainder of the corridor. Therefore, *no impacts* would occur. Construction activities could disrupt a few individual migrating monarchs if removal of

roosting trees occurred within the wintering season for monarchs with *less than significant impacts*. For aquatic species, any flow present at the two creek crossings would be maintained via a diversion so that individuals could at least move downstream during construction resulting in a *less than significant impact*. Work would not be conducted during the migration time for steelhead and none would be present so *no impacts* would occur to movement of this species.

Mitigation Measures

Because no wildlife migration or movement corridors would be affected, no mitigation measures would be required. The Special Status Species Protection Plan (**Mitigation Measure BIO-1.3**), which is designed to reduce impacts to special status species, would also reduce impacts to migratory bird nesting and migrating monarch individuals. Restoration of all areas disturbed by pipeline construction (see Section 2.3.2) would ensure that impacts associated with ground disturbance and removal of vegetation would be temporary and would reduce the potential for indirect impacts associated with soil destabilization or erosion. **Mitigation Measures BIO-2.1 and BIO-2.2** would restore riparian and oak woodland habitats.

BIO-3 The following shall be incorporated into the Special Status Species Protection Plan (**Mitigation Measure BIO-1.3**) to avoid or reduce impacts to migratory and resident breeding birds:

1. A qualified biologist shall conduct pre-construction bird surveys during the nesting season in areas that would require the direct removal of coastal scrub and chaparral vegetation, native and non-native trees, or other areas where suitable nesting habitat for resident or migratory bird species may occur. The surveys shall focus on breeding behavior and nesting locations in the proposed work area and immediately adjacent to that area. Based on the results of the surveys, recommended buffer areas between construction activities and observed nesting habitat shall be provided to the resident engineer if the work were scheduled to occur near those locations while nesting is occurring (February 15 through August 31);
2. A qualified biologist shall be present during removal of vegetation to ensure that breeding wildlife and nesting bird species are not harmed. The biologist shall be able to redirect or temporarily stop work if threats to the species are identified during monitoring; and
3. Riparian vegetation and oak trees scheduled to be removed for construction shall be removed before the nesting season (April 15) to further avoid impacts to nesting birds. For trees outside the area to be trenched, removal should be by cutting at ground level to leave the roots in place to facilitate restoration.

Plan Requirements and Timing: This measure shall be included in the final construction plans.

MONITORING: COMB shall ensure that the measure is in the Special Species Protection Plan and construction plans and that it is implemented.

Residual Impacts

In addition to **Mitigation Measures BIO-1.2, BIO-1.3, BIO-2.1, and BIO-2.2**, implementation of **Mitigation Measure BIO-3** would ensure residual impacts on migratory bird and wildlife breeding would be *less than significant*.

Impact BIO-4a: Construction activities would not substantially disrupt local plant or wildlife communities.

Construction of the Preferred Alternative would result in the removal of 15.0 acres (6.1 hectares) of native and naturalized vegetation (Table 3.3-2). Temporary losses of coastal scrub and chaparral would not substantially

disrupt local plant communities and would be *less than significant* because these plant communities are common and widespread in the region, the amount removed would be small, and recovery to early successional stages would be rapid. Clearing of non-native grassland, weed-dominated areas, eucalyptus woodland, and orchard would have *less than significant* impacts on these common, non-native plant communities. Work in disturbed and developed areas would not affect plant communities. Impacts to riparian habitat and oak woodlands are addressed in **Impact BIO-2**.

The vegetation types along the Preferred Alternative pipeline corridor provide wildlife habitat and also help to prevent soil erosion that could affect plant communities and wildlife downslope of the work area. Raptors such as the ferruginous hawk and northern harrier have the potential to forage or roost in the project area as do many other birds species, including the loggerhead shrike. Common species of mammals, reptiles, and amphibians discussed in Section 3.3.1.2 would also be present. Impacts to common wildlife would be *less than significant* due to the small area affected, short duration of the work at any one location along the pipeline corridor, and rapid habitat recovery to plant communities that can be used by wildlife during site restoration.

Table 3.3-2. Potential Vegetation Removal Resulting from the Preferred Alternative

<i>Vegetation Type</i>	<i>Acres (hectares) Removed</i>
Coastal scrub	5.24 (2.12)
Coast live oak woodland	3.37 (1.36)
Chaparral	1.49 (0.60)
Riparian Woodland	0.12 (0.05)
Non-native grassland	1.56 (0.63)
Weed-dominated	0.67 (0.27)
Eucalyptus woodland	0.34 (0.14)
Orchard	2.20 (0.89)
Disturbed and developed	3.65 (1.48)
Total	18.65 (7.55)

Mitigation Measures

Although impacts to coastal sage, chaparral, and non-native plant communities and common wildlife that use these communities would be *less than significant*, revegetation of the entire pipeline disturbance corridor would occur (see Section 2.3.2) to stabilize soils following construction and to restore the habitat for wildlife. The following measure is recommended for that revegetation.

BIO-4a The Revegetation Plan shall include a seed mix appropriate for coastal scrub and chaparral areas as well as non-native grassland and other areas to be revegetated. Performance criteria for each plant community shall be included in the Revegetation Plan. Due to the relatively short distance of the project alignment and the similarity of habitats crossed by the project, one diverse seed mix may be developed for the entire route. This seed mix shall be applied to all areas where vegetation was removed.

Plan Requirements and Timing: This measure shall be included in the final construction plans.

MONITORING: COMB shall ensure that the measure is in the Revegetation Plan and construction plans and that it is implemented.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-4b: Construction and operations activities could disrupt local plant communities through the introduction or spread of invasive species.

Construction. Construction activities associated with the Preferred Alternative could result in the spread of invasive exotic plant species already present onsite. In addition, invasive exotic plant species could be introduced from vehicles and equipment coming from other construction sites. Invasive exotic plant species of particular concern include Cape ivy which is particularly abundant in portions of the project corridor and could be particularly problematic. Cape ivy can very easily be spread, and it has been known to completely engulf native vegetation, killing the underlying vegetation. Furthermore, small sections of the plant can survive and form a new plant, even after months with no water or soil.

Other invasive exotic plant species that would require careful management in the area disturbed by construction include black mustard, castor bean, veldt grass, and tree tobacco. Presence in the disturbed areas of any of the above species, except where they were present prior to construction, would be considered a *significant but feasibly mitigated* impact.

Operations. Operation of the pipeline would include periodic checking and maintenance of structures (e.g., valves) along the route. Most structures would be accessed from existing paved roads. However, some structures would have small unpaved roads for access. Driving on the unpaved roads could result in the spread of invasive exotic plant species from one part of the pipeline corridor to another. This impact would be *less than significant* because the amount of dirt road traversed during project maintenance would be small, therefore, resulting in a low potential for a minor spread of invasive exotic plant species.

Mitigation Measures

BIO-4b.1 Areas of invasive exotic plant infestation shall be identified and mapped within 200 feet (61 meters) of the alignment prior to construction. All such areas within the construction corridor shall be marked on the construction plans and clearly flagged in the field.

Plan Requirements and Timing: This measure shall be a condition of project approval and shall be implemented prior to the beginning of construction. The locations of invasive plant infestations shall be included in the final construction plans.

MONITORING: COMB shall ensure that the measure is implemented.

BIO-4b.2 Prior to construction, Cape ivy and other weed species shall be controlled. For Cape ivy, control shall consist of herbicide treatment of growing stems where such spraying would not damage adjacent native plants and removing portions of the plants growing within native vegetation that cannot be sprayed. Cape ivy that has been removed from native vegetation shall be hauled off-site to a landfill. Treatment shall encompass a corridor a minimum of 200 feet (61 meters) wide centered on the pipeline alignment. Treatment shall continue a minimum of three times per year, but up to five times per year until all of the performance criteria in the Revegetation Plan have been met.

Plan Requirements and Timing: This measure shall be a condition of project approval and shall be implemented prior to the beginning of construction.

MONITORING: COMB shall ensure that the measure is implemented.

BIO-4b.3 Unless access is refused by the property owner, the area of invasive exotic plant species infestation (primarily black mustard and Veldt grass) in the vicinity of Ellwood Reservoir shall be treated to reduce invasive exotic plant species growth and encourage non-native annual grasses and native species to recolonize the area. Treatment shall be attempted for two years prior to construction, if feasible. Areas of very dense black mustard may be sprayed aerially or by using a tractor mounted system for efficiency, but areas near native vegetation must be treated by hand. Veldt grass shall be treated by hand as many herbaceous native species co-occur with this species. Treating before construction will greatly reduce the amount of viable seed that could be spread by construction or that could come up following construction.

Plan Requirements and Timing: This measure shall be a condition of project approval and shall be implemented prior to the beginning of construction.

MONITORING: COMB shall ensure that the measure is implemented.

BIO-4b.4 Extreme caution shall be taken in using equipment, including passenger vehicles and pickups, in areas identified as having invasive exotic plant species infestations. The undercarriage of all vehicles and equipment shall be washed prior to moving to another portion of the project area, including other areas with infestation of different or the same invasive exotic plant species, or moving off the project site. All construction personnel boots must be cleaned to remove invasive exotic plant species propagules (e.g., seeds) when moving from invasive exotic plant species infested areas to other areas of the pipeline or leaving the project site.

Plan Requirements and Timing: This measure shall be included in the final construction plans.

MONITORING: COMB shall ensure that the measure is implemented.

BIO-4b.5 The Revegetation Plan shall include an invasive exotic plant species control component to address invasive exotic plant species removal within the native and naturalized habitats. The Plan shall also establish performance criteria for distribution and density of invasive exotic plant species infestations.

Plan Requirements and Timing: This measure shall be included in the final construction plans.

MONITORING: COMB shall ensure that the measure is implemented.

Mitigation Measures BIO-4b.6 and BIO-4b.7 are recommended to reduce operational impacts.

BIO-4b.6 A weed manual shall be prepared prior to operation and maintenance activities that shall include photographs of the different invasive exotic plant species that are present along the pipeline route. The weed manual shall be distributed to technicians performing maintenance on the structures. They will be instructed to look for invasive exotic plant species infestations along the access roads and at structures. Invasive exotic plant species infestations identified shall be treated or removed.

Plan Requirements and Timing: This measure shall be included in the operations plan for the project and shall be implemented upon completion of construction.

MONITORING: COMB shall ensure that the measure is implemented.

BIO-4b.7 A biologist shall inspect unpaved access roads for the project annually for invasive exotic plant species as part of regular pipeline maintenance activities. If invasive exotic species are found, they shall be removed using the methods provided in the Revegetation Plan, or currently accepted methods. In addition, vehicles shall be washed or inspected by COMB after driving through areas with identified invasive exotic plant species infestations prior to using the vehicles elsewhere to prevent the spread of those invasive exotic plant species to other areas.

Plan Requirements and Timing: This measure shall be included in the operations plan for the project and shall be implemented upon completion of construction.

MONITORING: COMB shall ensure that the measure is implemented.

Residual Impacts

With implementation of **Mitigation Measures BIO-4b.1** through **BIO-4b.7**, residual impacts would be *less than significant*.

Impact BIO-4c: Pipeline construction and operations would not disrupt local aquatic communities through the introduction or spread of non-native species.

Water transported in the pipeline is unfiltered, untreated water from Lake Cachuma. This water could transport non-native species such as sport fish, bullfrogs (*Rana catesbeiana*), or invertebrates from Lake Cachuma. Native species whose range does not include coastal drainages could also be transported. During use of blowoff valves to drain segments of the pipeline, released water could introduce new species from the Cachuma watershed into West Fork and main stem of Glen Annie Creek, the reservoir, and tributary waterways. These species could disrupt the biological communities of West Fork and main stem of Glen Annie Creek. However, as described in Sections 2.2.2 and 2.4.2, water from the blowoff valves would be released in upland areas and not directly into existing drainages (West Fork of Glen Annie Creek, an unnamed tributary of Glen Annie Reservoir, and Glen Annie Creek). This would minimize the potential for introduction of non-native aquatic species from the Cachuma watershed into the Glen Annie watershed, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-5: Removal of oak trees during construction would conflict with local policies.

Construction of the Preferred Alternative pipeline alignment would result in the removal of approximately 110 coast live oak trees 6 inches (15.2 centimeters) or greater in DBH. The actual number removed would be determined at the end of construction. This would be considered a *significant but feasibly mitigated* impact, as it conflicts with oak tree protection policies of Santa Barbara County.

Mitigation Measures

Implementation of **Mitigation Measure BIO-2.2** would reduce impacts on oak trees. The number of trees required to replace those removed cannot be accommodated in the space that is currently occupied by oak

woodlands; therefore, replanting of oak trees at a ratio of 10:1 or as required by project permits would expand the current oak woodland habitat.

BIO-5 Oak trees shall be avoided to the maximum extent feasible. Protections shall include financial incentives and penalties, and creation of exclusion zones. Trees that may be removed and those that must be protected shall be clearly shown on project plans and marked in the field. The construction plans and specifications shall include financial compensation to the construction contractor for avoiding oak trees that would be permitted to be removed and financial penalties for removing trees that are designated for protection. Financial compensation shall minimally be the estimated cost of mitigating loss of that tree (planting, monitoring, maintenance, and reporting to attain 10 trees that meet performance criteria for each tree removed). Financial penalties shall be minimally two times the compensation amount. Exclusion zones shall be created within the nominal construction easement to protect groups of trees where feasible.

Plan Requirements and Timing: This measure shall be included in the final construction plans.

MONITORING: COMB shall ensure that the measure is included in the final construction plans and is implemented.

Residual Impacts

With implementation of **Mitigation Measures BIO-2.2** and **BIO-5**, residual impacts would be *less than significant*.

3.3.3.4 Alternative A (Parallel Pipeline)

Impact BIO-1: Construction activities would result in the loss of individuals or habitat for special status plants and wildlife.

Plants. The Alternative A alignment would result in the removal of approximately 97 individuals and about 0.74 acre (0.3 hectare) of occupied Santa Barbara honeysuckle habitat, a species considered rare, threatened, or endangered by the California Native Plant Society. This loss would be considered substantial and, therefore, would be a *significant but feasibly mitigated impact*. The mesa horkelia and black-flowered figwort were not observed along the Alternative A alignment and would not be affected by the project.

Wildlife. Construction activities for the Alternative A alignment could directly affect individuals or populations of a special status species through mortality of individuals, habitat loss, and/or temporary disturbance to their habitat as described for the Preferred Alternative.

Most pipeline construction activities would be in upland habitat that is unlikely to be used by California red-legged frogs, except possibly during movement between drainages. The Alternative A alignment would be trenched through the West Fork and main stem of Glen Annie Creek at the same locations as for the Preferred Alternative with the same *significant but feasibly mitigated impact* for the California red-legged frog and *no impact* for steelhead.

Construction of the Alternative A alignment would involve the removal of more eucalyptus trees within the pipeline corridor than for the Preferred Alternative (0.68 vs. 0.34 acre, 0.28 vs. 0.14 hectare) and in a different location (Figure 3.3-1). These trees may provide habitat for autumnal roosting monarch butterflies (September through December). Construction activities at this location in the summer prior to September would not affect any roosting monarchs, and would only remove a few of the eucalyptus trees. However, construction at this location after the first of September could affect monarchs, if any are present and roosting

at the time of tree removal. Impacts could include direct injury or mortality of individuals and destruction of occupied roosting habitat. These impacts would be *less than significant* because only a small amount of habitat would be affected and few individuals would potentially be lost, resulting in no substantial effects on their population.

The silvery legless lizard and southwestern pond turtle are unlikely to occur in the project area and, thus, would not be affected by construction activities. The coast range newt is known to occur along both drainages in the project vicinity and two-striped garter snake may be present as well. Project construction activities would result in a short-term loss of habitat for these two species and potentially a loss of a few individuals as described for the Preferred Alternative. Impacts would be *less than significant*, and mitigation measures proposed for other species described below would further protect these species.

Construction activities would remove trees within the work area, resulting in a short- to long-term loss of habitat potentially used by three sensitive bat species for roosting. Construction noise and human presence are unlikely to affect foraging behavior of these species because they primarily feed at dusk which is outside normal construction hours. Due to other abundant roosting habitat in the area, the loss of trees along the project route would have *less than significant* impacts on these species.

Impacts to birds included in Table 3.3-1 that could breed in the project area and listed as California Species of Special Concern for breeding only are discussed in **Impact BIO-3**.

Mitigation Measures

Plants. Implementation of **Mitigation Measures BIO-1.1** and **BIO-1.2** would minimize impacts on special status plants associated with pipeline construction.

Wildlife. Implementation of **Mitigation Measures BIO-1.3** and **BIO-1.4** would minimize impacts on special status wildlife associated with pipeline construction.

Residual Impacts

With implementation of **Mitigation Measures BIO-1.1** through **BIO-1.4**, residual impacts would be *less than significant*.

Impact BIO-2: Construction would result in a temporary loss of riparian woodland and seasonal wetlands, and a long-term loss of oak woodland.

Riparian Woodland. As for the Preferred Alternative alignment, construction of the Alternative A alignment would result in direct removal of 0.12 acre (0.05 hectare) of riparian woodland from creek crossings at the West Fork and main stem of Glen Annie Creek. Riparian is a sensitive habitat, designated by Santa Barbara County and other resource agencies, and these losses would be considered *significant but feasibly mitigated*.

Oak Woodland. Construction of the Alternative A alignment would result in the removal of 3.26 acres (1.32 hectares) of coast live oak woodland, which is slightly less than for the Preferred Alternative. Removal of 3.26 acres (1.32 hectares) of coast live oak woodland would be a *significant and unavoidable* impact. Losses of individual oak trees are addressed separately under **Impact BIO-5**.

Waters of the U.S. and Wetlands. Construction of the Alternative A alignment would result in a temporary disturbance of Waters of the U.S. at the West Fork and the main stem of Glen Annie Creek. Impacts would be the same as for the Preferred Alternative alignment as both routes cross these creeks in the same location. In addition, seasonal wetlands may be temporarily lost during construction across the main stem of Glen

Annie Creek as described for the Preferred Alternative. Impacts would be temporary and *less than significant* because the wetlands would re-establish during low flows following construction, resulting in a 1:1 replacement. Implementation of **Mitigation Measure BIO-1.4** would further reduce this impact.

Mitigation Measures

Riparian Woodland. Implementation of **Mitigation Measure BIO-2.1** would reduce impacts on riparian woodland during construction.

Oak Woodland. Implementation of **Mitigation Measure BIO-2.2** would reduce impacts on oak woodland during construction.

Waters of the U.S. and Wetlands. As impacts would be less than significant, no mitigation is necessary. However, any compensation for impacts to wetlands required in project permits would be implemented in compliance with the permits.

Residual Impacts

Riparian Woodland. With implementation of **Mitigation Measure BIO-2.1**, residual impacts would be *less than significant*.

Oak Woodland. Replanting of oak trees (**Mitigation Measure BIO-2.2**) will eventually replace the habitat removed. However, it can take up to many decades for coast live oaks to mature and provide habitat equivalent to oak woodlands. In addition, young trees do not have the diversity of micro habitat characteristics that make these communities so valuable to wildlife (e.g., lush foliage, dead wood and bark, and diverse understory of shade tolerant plants). Residual impacts would be *significant and unavoidable*.

Waters of the U.S. and Wetlands. The residual impact would be *less than significant*. Natural conditions in the creeks would be established within approximately one year after construction.

Impact BIO-3: Construction activities could adversely affect wildlife migration or breeding habitat for migratory birds and wildlife.

The Alternative A alignment traverses several canyons that support native coast live oak and riparian woodlands. Construction of the pipeline would result in damage to and removal of native and non-native trees and shrubs that provide cover, roosting, and nesting habitat for common wildlife and migratory birds as described for the Preferred Alternative. Although the Alternative A route is not identical to the Preferred Alternative, approximately the same amount of vegetation would be removed with the same impacts to migrating or breeding birds and wildlife. Disruption and loss of nesting for migratory birds and those listed as California Species of Special Concern would be considered a *significant but feasibly mitigated* impact.

Since northern harrier, loggerhead shrike, and ferruginous hawk are unlikely to breed in the area, the effects of temporary removal of vegetation on these species would be *less than significant*.

Construction activities would not adversely affect any migratory corridors for terrestrial wildlife because none are known to be crossed by the Alternative A pipeline corridor and the work would generally be concentrated at one location along the route, allowing animals to move freely across the remainder of the corridor. Therefore, *no impacts* would occur. Construction activities could disrupt a few individual migrating monarchs if removal of roosting trees occurred within the wintering season for monarchs with *less than significant impacts*. For aquatic species, any flow present at the two creek crossings would be maintained via a diversion so individuals could at least move downstream during construction resulting in a *less than*

significant impact. Work would not be conducted during the migration time for steelhead and none would be present, and *no impacts* would occur to movement of this species.

Mitigation Measures

Because no wildlife migration movement corridors would be affected, no mitigation is necessary. Implementation of **Mitigation Measures BIO-1.3** (Special Status Species Protection Plan), **BIO-1.2** (Santa Barbara honeysuckle restoration), **BIO-2.1** (riparian woodland replacement), **BIO-2.2** (oak tree replanting), and **BIO-3** would be required to reduce impacts on migratory bird nesting.

Residual Impacts

With implementation of **Mitigation Measures BIO-1.2, BIO-1.3, BIO-2.1, BIO-2.2, and BIO-3**, residual impacts on migratory bird and wildlife breeding would be *less than significant*.

Impact BIO-4a: Construction activities would not substantially disrupt local plant or wildlife communities.

Construction of the Alternative A alignment would result in the removal of 15.29 acres (6.19 hectares) of native and naturalized habitat (Table 3.3-3). Temporary losses of coastal scrub and chaparral would not substantially disrupt local plant communities and would be *less than significant* because these plant communities are common and widespread in the region, the amount removed would be small, and recovery to early successional stages would be rapid. Clearing of non-native grassland, weed-dominated areas, eucalyptus woodland, and orchard would similarly have *less than significant* impacts on these common, non-native plant communities. Work in disturbed and developed areas would not affect plant communities. Impacts to riparian habitat and oak woodlands are addressed in **Impact BIO-2**.

The vegetation types along the pipeline corridor provide wildlife habitat and also help to prevent soil erosion that could affect plant communities and wildlife downslope of the work area as described for the Preferred Alternative. Impacts to common wildlife would be *less than significant* due to the small area affected, short duration of the work at any one location along the pipeline corridor, and rapid habitat recovery to plant communities that can be used by wildlife during site restoration.

Table 3.3-3. Potential Vegetation Removal Resulting from Alternative A Alignment

<i>Vegetation Type</i>	<i>Acres (hectares) Removed</i>
Coastal scrub	6.36 (2.57)
Coast live oak woodland	3.26 (1.32)
Chaparral	1.31 (0.53)
Riparian	0.12 (0.05)
Non-native grassland	1.56 (0.63)
Weed-dominated	0.67 (0.27)
Eucalyptus woodland	0.68 (0.27)
Orchard	1.32 (0.53)
Disturbed and developed	2.79 (1.13)
Total	18.08 (7.32)

Mitigation Measures

Although impacts to non-native plant communities and the common wildlife that use these communities would be *less than significant*, revegetation of the entire pipeline disturbance corridor would occur (see Section 2.3.2) to stabilize soils following construction and to restore the habitat for wildlife.

Implementation of **Mitigation Measure BIO-4a** is recommended to further reduce impacts on local plant and wildlife communities.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-4b: Construction and operations activities could disrupt local plant communities through the introduction or spread of invasive species.

Construction. As described for the Preferred Alternative alignment, construction activities associated with the Alternative A alignment could result in the spread of invasive exotic plant species already present onsite and/or the introduction of invasive species from other sites by vehicles and equipment. Impacts would be significant but feasibly mitigated.

Operation. Pipeline operations would include periodic checking and maintenance of structures, requiring occasional use of unpaved roads for access. Driving on the roads could result in the spread of invasive exotic plant species from one part of the pipeline corridor to another. This impact would be less than significant because the amount of dirt roads traversed during project maintenance would be small, thus resulting in a low potential for a minor spread of invasive exotic plant species.

Mitigation Measures

Implementation of **Mitigation Measures BIO-4b.1, BIO-4b.2, BIO-4b.3, BIO-4b.4, BIO-4b.5, BIO-4b.6, and BIO-4b.7** would be required to minimize impacts associated with the introduction or spread of invasive species.

Residual Impacts

With implementation of **Mitigation Measures BIO-4b.1 through BIO-4b.7**, residual impacts would be *less than significant*.

Impact BIO-4c: Pipeline construction and operations would not disrupt local aquatic communities through the introduction or spread of non-native species.

Water transported in the pipeline is unfiltered, untreated water from Lake Cachuma. This water could transport non-native species, as well as native species whose range does not include coastal drainages, from Lake Cachuma as described for the Preferred Alternative. These species could disrupt the biological communities of West Fork and main stem of Glen Annie Creek. However, as described in Sections 2.2.2 and 2.4.2, water from the blowoff valves would be released to upland areas and not directly into flowing streams. This would minimize the potential for introduction of non-native aquatic species from the Cachuma watershed to the Glen Annie watershed, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-5: Removal of oak trees during construction would conflict with local policies.

Construction of the Alternative A alignment would result in the removal of approximately 90 coast live oak trees 6 inches (15.2 centimeters) or greater in DBH. This would be considered a *significant but feasibly mitigated* impact, as it conflicts with Santa Barbara County oak tree protection policies.

Mitigation Measures

Implementation of **Mitigation Measures BIO-2.2** and **BIO-5** would be required to minimize impacts on oak trees.

Residual Impacts

With implementation of **Mitigation Measures BIO-2.2** and **BIO-5**, residual impacts would be *less than significant*.

3.3.3.5 Alternative B (Non-Parallel Pipeline)

Impact BIO-1: Construction would result in the loss of individuals or habitat for special status plants and wildlife.

Plants. The Alternative B alignment would result in the removal of approximately 140 individuals and about 0.09 acre (0.03 hectare) of occupied Santa Barbara honeysuckle habitat, a species considered rare, threatened, or endangered by the California Native Plant Society. This loss would be considered substantial and, therefore, would be a *significant but feasibly mitigated* impact. The mesa horkelia and black-flowered figwort were not observed along the Alternative B alignment and would not be affected by the project.

Wildlife. Construction activities for the Alternative B alignment could directly affect individuals or populations of a special status wildlife species through mortality of individuals, habitat loss, and/or temporary disturbance to their habitat as described for the Preferred Alternative.

Most pipeline construction activities would be in upland habitat that is unlikely to be used by California red-legged frogs, except possibly during movement between drainages. The Alternative B alignment would cross the West Fork of Glen Annie Creek at the same location as for the Preferred Alternative with the same potential for impacts to the California red-legged frog. Alternative B would cross the main stem of Glen Annie Creek upstream of the Preferred Alternative location where steep banks would require much more grading that would increase the potential for impacts to the California red-legged frog and its habitat. Impacts would be *significant but feasibly mitigated* for the California red-legged frog and *no impact* for steelhead as described for the Preferred Alternative.

Construction of the Alternative B alignment would involve the removal of less eucalyptus trees within the pipeline corridor compared to the Preferred Alternative (0.28 vs. 0.34 acres, 0.11 and 0.14 hectare) and in a different location (Figure 3.3-1). These trees may provide habitat for autumnal roosting monarch butterflies (September through December). Construction activities at this location in the summer prior to September would not affect any roosting monarchs, and would only remove a few of the eucalyptus trees. However, construction at this location after the first of September could affect monarchs, if any are present and roosting at the time of tree removal. Impacts could include direct injury or mortality of individuals and destruction of occupied roosting habitat. These impacts would be *less than significant* because only a small amount of habitat would be affected and few individuals would potentially be lost, resulting in no substantial effects on their population.

The silvery legless lizard and southwestern pond turtle are unlikely to occur in the project area and, therefore, would not be affected by construction activities. The coast range newt is known to occur along both drainages in the project vicinity and two-striped garter snake may also be present. Project construction activities would result in a short-term loss of habitat for these two species and potentially a loss of a few individuals as described for the Preferred Alternative. Impacts would be *less than significant*, and mitigation measures proposed for other species would further protect these as well.

Construction activities would remove trees within the work area, resulting in a short- to long-term loss of habitat potentially used by three sensitive bat species for roosting. Construction noise and human presence are unlikely to affect foraging behavior of these species because they primarily feed at dusk which is outside normal construction hours. Due to other abundant roosting habitat in the area, the loss of trees along the project route would have *less than significant* impacts on these species.

Impacts to birds included in Table 3.3-1 that could breed in the project area and listed as California Species of Special Concern for breeding only are discussed in **Impact BIO-3**.

Mitigation Measures

Plants. Implementation of **Mitigation Measures BIO-1.1** and **BIO-1.2** would be required to reduce impacts on special status plants.

Wildlife. Implementation of **Mitigation Measure BIO-1.3** and **BIO-1.4** would be required to reduce impacts on special status wildlife.

Residual Impacts

With implementation of **Mitigation Measures BIO-1.1 through 1.4**, residual impacts would be *less than significant*.

Impact BIO-2: Construction activities would result in a temporary loss of riparian woodland and seasonal wetlands, and a long-term loss of oak woodland.

Riparian Woodland. Construction of the Alternative B pipeline alignment would result in direct removal of 0.16 acre (0.06 hectare) of riparian woodland from creek crossings at the West Fork and main stem of Glen Annie Creek. Impacts would be similar to those for the Preferred Alternative, except additional riparian woodland, particularly western sycamores, would be removed. Riparian is a sensitive habitat, designated by Santa Barbara County and other resource agencies, and these losses would be *significant but feasibly mitigated*.

Oak Woodland. Construction of the Alternative B alignment would result in the removal of 3.41 acres (1.38 hectares) of coast live oak woodland, slightly more than for the Preferred Alternative. Removal of 3.41 acres (1.38 hectares) of coast live oak woodland would be a *significant and unavoidable* impact. Losses of individual oak trees are addressed separately under **Impact BIO-5**.

Waters of the U.S. and Wetlands. Construction of the Alternative B alignment would result in a temporary disturbance of Waters of the U.S. at the West Fork and main stem of Glen Annie Creek. In addition, seasonal wetlands may be lost during construction across the main stem of Glen Annie Creek. Impacts would be temporary and *less than significant* because the wetlands would re-establish during low flows following construction, resulting in a 1:1 replacement. Implementation of **Mitigation Measure BIO-1.4** would further reduce this impact.

Mitigation Measures

Riparian Woodland. Implementation of **Mitigation Measure BIO-2.1** would be required to minimize impacts on riparian woodlands.

Oak Woodland. Implementation of **Mitigation Measure BIO-2.2** would be required to reduce impacts on oak woodlands.

Waters of the U.S. and Wetlands. As impacts would be less than significant, no mitigation is necessary. However, any compensation for impacts to wetlands required in project permits would be implemented in compliance with the permits.

Residual Impacts

Riparian Woodland. With implementation of **Mitigation Measure BIO-1.2**, residual impacts would be *less than significant*.

Oak Woodland. Replanting of oak trees (**Mitigation Measure BIO-2.2**) will eventually replace the habitat removed. However, it can take up to many decades for coast live oaks to mature and provide the habitat equivalent to oak woodlands. In addition, young trees do not have the diversity of micro habitat characteristics that make these communities so valuable to wildlife (e.g., lush foliage, dead wood and bark, and diverse understory of shade tolerant plants). Therefore, residual impacts would be *significant and unavoidable*.

Waters of the U.S. and Wetlands. The residual impact would be *less than significant*. Natural conditions in the creeks should be established within approximately one year after construction.

Impact BIO-3: Construction activities could adversely affect wildlife migration or breeding habitat for migratory birds and wildlife.

The Alternative B alignment traverses several canyons that support native coast live oak and riparian woodlands. Construction of the pipeline would result in damage to and removal of native and non-native trees and shrubs that provide cover, roosting, and nesting habitat for common wildlife and migratory birds as described for the Preferred Alternative. The Alternative B route is partially the same as the Preferred Alternative and would result in removal of approximately the same amount of vegetation with the same impacts to migrating or breeding birds and wildlife. Disruption and loss of nesting for migratory birds and those listed as California Species of Special Concern would be a *significant but feasibly mitigated* impact.

Since northern harrier, loggerhead shrike, and ferruginous hawk are unlikely to breed in the area, the effects of temporary removal of vegetation on these species would be *less than significant*.

Construction activities would not adversely affect any migratory corridors for terrestrial wildlife because none are known to be crossed by the Alternative B pipeline corridor and the work would generally be concentrated at one location along the route, allowing animals to move freely across the remainder of the corridor. Therefore, *no impacts* would occur. Construction activities could disrupt a few individual migrating monarchs if removal of roosting trees occurred within the wintering season for monarchs with *less than significant impacts*. For aquatic species, any flow present at the two creek crossings would be maintained via a diversion so that individuals could at least move downstream during construction resulting in a *less than significant* impact. Work would not be conducted during the migration time for steelhead and none would be present so *no impacts* would occur to movement of this species.

Mitigation Measures

Because no wildlife migration movement corridors would be affected, no mitigation is necessary. Implementation of **Mitigation Measures BIO-1.3** (Special Status Species Protection Plan), **BIO-1.2** (Santa Barbara honeysuckle restoration), **BIO-2.1** (riparian woodland replacement), **BIO-2.2** (oak tree replanting), and **BIO-3** would be required to reduce impacts on migratory bird nesting.

Residual Impacts

With implementation of **Mitigation Measures BIO-1.2, BIO-1.3, BIO-2.1, BIO-2.2, and BIO-3**, residual impacts on migratory bird and wildlife breeding would be *less than significant*.

Impact BIO-4a: Construction activities would not substantially disrupt local plant or wildlife communities.

Construction of the Alternative B alignment would result in the removal of 13.82 acres (5.59 hectares) of native and naturalized habitat (Table 3-3.4). Temporary losses of coastal scrub and chaparral would not substantially disrupt local plant communities and would be *less than significant* because these plant communities are common and widespread in the region, the amount removed would be small, and recovery to early successional stages would be rapid. Clearing of non-native grassland, weed-dominated areas, eucalyptus woodland, and orchard would similarly have *less than significant* impacts on these common, non-native plant communities. Work in disturbed and developed areas would not affect plant communities. Impacts to riparian habitat and oak woodlands are addressed in **Impact BIO-2**.

The vegetation types along the pipeline corridor provide wildlife habitat and also help to prevent soil erosion that could affect plant communities and wildlife downslope of the work area as described for the Preferred Alternative. Impacts to common wildlife would be *less than significant* due to the small area affected, short duration of the work at any one location along the pipeline corridor, and rapid habitat recovery to plant communities that can be used during site restoration.

Table 3.3-4. Potential Vegetation Removal Resulting from Alternative B Alignment

<i>Vegetation Type</i>	<i>Acres (hectares) Removed</i>
Coastal scrub	4.98 (2.02)
Coast live oak woodland	3.41 (1.38)
Chaparral	1.10 (0.45)
Riparian	0.16 (0.06)
Non-native grassland	0.06 (0.02)
Weed-dominated	0.00 (0.00)
Eucalyptus woodland	0.28 (0.11)
Orchard	2.17 (0.88)
Disturbed and developed	4.98 (2.02)
Total	18.80 (7.61)

Mitigation Measures

Although impacts to non-native plant communities and the common wildlife that use these communities would be *less than significant*, revegetation of the entire pipeline disturbance corridor would occur (see Section 2.3.2) to stabilize soils following construction and to restore the habitat for wildlife.

Implementation of **Mitigation Measure BIO-4a** is recommended to further reduce impacts on local plant and wildlife communities.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-4b: Construction and operations activities could disrupt local plant communities through introduction or spread of invasive species.

Construction. As described for the Preferred Alternative alignment, construction activities associated with the Alternative B alignment could result in the spread of invasive exotic plant species already present onsite and/or introduction of invasive species from other sites on vehicles and equipment. Impacts would be significant but feasibly mitigated.

Operation. Operation of the pipeline would include periodic checking and maintenance of structures, requiring occasional use of unpaved roads for access. Driving on the roads could result in the spread of invasive exotic plant species from one part of the pipeline corridor to another. This impact would be less than significant because the amount of dirt road traversed during project maintenance would be small, thus resulting in a low potential for a minor spread of invasive exotic plant species.

Mitigation Measures

Implementation of **Mitigation Measures BIO-4b.1, BIO-4b.2, BIO-4b.3, BIO-4b.4, BIO-4b.5, BIO-4b.6, and BIO-4b.7** would be required to reduce impacts on local plant communities associated with the introduction or spread of invasive species. .

Residual Impacts

With implementation of **Mitigation Measures BIO-4b.1 through BIO-4b.7**, residual impacts would be *less than significant*.

Impact BIO-4c: Pipeline construction and operations could disrupt local aquatic communities through the introduction or spread of non-native species.

Water transported in the pipeline is unfiltered, untreated water from Lake Cachuma. This water could transport non-native species, as well as native species whose range does not include coastal drainages, from Lake Cachuma as described for the Preferred Alternative. However, as described in Sections 2.2.2 and 2.4.2, water from the blowoff valves would be released to upland areas and not directly into flowing streams. This would minimize the potential for the introduction of non-native aquatic species from the Cachuma watershed to the Glen Annie watershed, and impacts would be *less than significant*.

Mitigation Measures

As impacts would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-5: Removal of oak trees during construction would conflict with local policies.

Construction of the Alternative B alignment would result in the removal of approximately 130 coast live oak trees 6 inches (15.2 centimeters) or greater in DBH. This would be considered a *significant but feasibly mitigated* impact, as it conflicts with oak tree protection policies of Santa Barbara County.

Mitigation Measures

Mitigation Measure BIO-2.2 and **BIO-5** would apply.

Residual Impacts

Residual impacts would be *less than significant* with implementation of **Mitigation Measures BIO-2.2** and **BIO-5**.

3.3.3.6 No Project Alternative

Impact BIO-1: Construction would not result in the loss of individuals or habitat for special status plants and wildlife.

Plants. The No Project Alternative would not result in the removal of any Santa Barbara honeysuckle or its habitat because none is present in the areas where site improvement construction activities would occur. The mesa horkelia and black-flowered figwort were not observed along the existing pipeline alignment and would not be affected by the No Project Alternative. *No impacts* to special status plants would occur.

Wildlife. The No Project Alternative would not directly affect individuals or populations of special status wildlife species. All construction disturbance areas would occur in already disturbed habitats, and no vegetation providing habitat for sensitive species would be removed or adversely impacted. Therefore, *no impacts* to special status wildlife species would occur.

Mitigation Measures

Plants. As no impacts would occur, no mitigation is necessary.

Wildlife. As no impacts would occur, no mitigation is necessary.

Residual Impacts

No residual impact would occur.

Impact BIO-2: Construction would result in a temporary loss of riparian woodland and seasonal wetlands, and no loss of oak woodland.

As construction disturbance areas for site improvements not at the two creek crossings would occur in already disturbed habitats, *no impacts* to riparian woodland, oak woodland, and seasonal wetlands would occur. Site improvements to protect or replace the pipeline at the two creek crossings would affect riparian woodland and seasonal wetlands as described for the Preferred Alternative, and impacts would be *significant but feasibly mitigated* for riparian woodland and *less than significant* for seasonal wetlands. No loss of oak woodland would occur, resulting in *no impact*.

Mitigation Measures

For the no impact and less than significant impact, no mitigation is necessary. **Mitigation Measure BIO-2.1** would reduce impacts to riparian woodland.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-3: Construction activities could adversely affect wildlife migration or breeding habitat for migratory birds and wildlife.

Noise and human activities from construction of the No Project Alternative site improvements could cause birds nesting in adjacent habitat to abandon their nests. Only small previously disturbed areas would be affected by construction activities at the SPTT, Glen Anne Turnout, and Glen Anne meter, and therefore, no nesting habitat would be removed and few, if any, nesting pairs of birds would be affected. Site improvements at the two creek crossings, however, could affect nesting birds at those locations. No migration corridors would be affected by construction activities at a few localized areas. Disruption of nesting for migratory birds and those listed as California Species of Special Concern would be a *significant but feasibly mitigated* impact.

Mitigation Measures

Implementation of **Mitigation Measures BIO-1.3, Bio-2.1, and BIO-3** would avoid impacts to nesting birds in the project vicinity and restore their habitat.

Residual Impacts

The residual impact would be *less than significant*.

Impact BIO-4a: Construction activities would not substantially disrupt local plant or wildlife communities.

Native plant communities would not be disturbed at the SPTT, Glen Anne Turnout, or Glen Anne meter under the No Project Alternative because all work would be in previously disturbed areas with no native plant communities; therefore, *no impacts* would occur. The disturbance areas where construction would occur provide minimal habitat for wildlife, and the temporary disturbance in these small areas would not substantially disrupt wildlife communities. Therefore, impacts would be *less than significant*. Impacts to riparian woodland at the creek crossings are addressed in **Impact BIO-2**.

Mitigation Measures

As no impacts to plant communities would occur and impacts to wildlife communities would be less than significant, no mitigation is necessary.

Residual Impacts

No residual impact would occur for plant communities. Residual impacts for wildlife communities would be *less than significant*.

Impact BIO-4b: Construction and operations activities could disrupt local plant communities through the introduction or spread of invasive species.

Construction. Construction activities would occur in previously disturbed areas and at the creek crossings that do not support infestation of invasive species and, therefore, would not result in an introduction or spread of invasive species. *No impacts* would occur.

Operation. Operation of the pipeline would include periodic checking and maintenance of structures, requiring occasional use of unpaved roads for access. Driving on the unpaved roads could result in the spread of invasive exotic plant species from one part of the pipeline corridor to another. This impact would be *less than significant* because the amount of dirt road traversed during project maintenance would be small, thus resulting in a low potential for a minor spread of invasive exotic plant species.

1 **Mitigation Measures**

2 As no impacts during construction and less than significant impacts during operations would occur, no
3 mitigation is necessary. However, **Mitigation Measures BIO-4b.6** and **BIO-4b.7** are recommended for
4 implementation during operation.

5 **Residual Impacts**

6 The residual impact would be *less than significant*.

7 **Impact BIO-4c: Pipeline construction and operations would not disrupt local aquatic communities**
8 **through the introduction or spread of non-native species.**

9 Water transported in the pipeline is unfiltered, untreated water from Lake Cachuma as described for the
10 Preferred Alternative. However, as described in Sections 2.2.2 and 2.4.2, water from the blowoff valves
11 would be released to upland areas and not directly into flowing streams. This would minimize the potential
12 for introduction of non-native aquatic species from the Cachuma watershed to the Glen Annie watershed, and
13 impacts would be *less than significant*.

14 **Mitigation Measures**

15 As impacts would be less than significant, no mitigation is necessary.

16 **Residual Impacts**

17 The residual impact would be *less than significant*.

18 **Impact BIO-5: Removal of oak trees during construction would not occur and therefore would not conflict**
19 **with local policies.**

20 All disturbances would occur in currently unvegetated areas; therefore, *no impacts* to oak trees would occur.

21 **Mitigation Measures**

22 As no impacts would occur, no mitigation is necessary.

23 **Residual Impacts**

24 No residual impact would occur.

25 **3.3.3.7 No Action Alternative**

26 Under the No Action Alternative no construction of project facilities or site improvements would occur, and
27 regular maintenance activities would continue as in the past, resulting in *no impacts* to biological resources.
28 However, as described in Section 2.5, one or more of the pipeline facilities would ultimately fail if the site
29 improvements in the No Project Alternative were not implemented. The structural failure of facilities, such as
30 the SPTT, would result in the uncontrolled release of water to the environment that could cause erosion and
31 deposition of soil in drainages as well as loss of plants and wildlife habitat due to erosion and repair activities.
32 Impacts would depend on the location of the failure but would likely affect either West Fork or the main stem
33 of Glen Annie Creek as well as the land between the failure and the creek. Loss of topsoil through erosion
34 would limit restoration of vegetation, and deposition of soil in the creek would alter or eliminate aquatic

1 habitat for as far downstream as the deposition occurs. Habitat for the California red-legged frog, coast range
2 newt, and other special status species would be affected. Such impacts would be *significant and unavoidable*.

3 ***Mitigation Measures***

4 **Mitigation measures BIO-1.4, BIO-2.1, BIO-2.2, and BIO-4a** would apply during repair activities but
5 would not prevent impacts or completely compensate for habitat disturbances or losses.

6 ***Residual Impacts***

7 Residual impacts would be *significant and unavoidable*.

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