3.4 CULTURAL RESOURCES

This section addresses potential impacts on prehistoric and historic resources that would potentially result from the development of the project. Cultural resources are districts, buildings, sites, structures, areas of traditional use, or objects with historical, architectural, archaeological, cultural, or scientific importance. They include archaeological resources (both prehistoric and historic), historic architectural resources (physical properties, structures, or built items), and traditional cultural resources (those important to living Native Americans for religious, spiritual, ancestral, or traditional reasons).

3.4.1 Environmental Setting

3.4.1.1 Prehistoric Resources

Archaeological evidence suggests that Santa Barbara County has been inhabited by Native Americans for at least 13,000 years (Johnson et al. 2001). Native American occupation lasted until European colonial expansion disrupted traditional cultures throughout California. Indigenous life ways were not static over this long occupational sequence, however, and many cultural changes have been documented by local archaeologists. Cultural change in southern California has been attributed to adaptive responses to both ecological factors (e.g., climatic fluctuations) and cultural factors (e.g., population growth and decline). Archaeologists have created a temporal chronology of prehistoric cultural manifestations based on changing artifact assemblages and radiocarbon dates. These periods include the Paleoindian/Paleo-Coastal Period (13,500-9,000 years before present [YBP]), Millingstone Period (9,000-5,500 YBP), Early Period (5,500-3,500 YPB), Middle Period (3,500-800 YPB), and the Late Period (800 YBP-European Contact). Prehistoric archaeological resources commonly located in the Santa Barbara area include, but are not limited to, village sites, camp sites, resource exploitations areas, rock art sites, and locations of ritual and spiritual activity.

3.4.1.2 Ethnohistoric Resources

At the time of Spanish contact, the Santa Barbara region was occupied by a group of Native Americans collectively known as the Chumash. The Chumash lived in large sedentary villages with population densities rivaling those of prehistoric agriculturalists. Scholars have suggested that they reached a level of social complexity rare among most California and North American hunting and gathering groups. Their society was stratified into social classes that included commoners, elites, religious specialists, and craft specialists (Glassow 1996:15). Political organization was manifested at the village level, and a chief or headman usually controlled political and economic interactions (Gamble and Russel 2002). Although most villages were autonomous, ethnographic data suggest that in certain circumstances, chiefs had influence over multiple village districts (Kennett 2005: 209). The Chumash produced a shell bead currency that facilitated trade relationships with distant groups. Along with beads, craft specialists produced a range of sophisticated technologies that included the redwood plank canoe (*tomol*) among other goods. It has been suggested that control over the production and exchange of these commodities contributed greatly to the development and maintenance of an elite class and the growth of social complexity (Arnold 1992; Munns and Arnold 2002).

The Chumash endured significant changes to traditional culture with the establishment of Mission Santa Barbara in 1786. The missionaries, for example, used the neophyte population as forced labor to construct mission buildings and to perform agricultural tasks vital to the mission economy. This fact restricted Chumash involvement in traditional subsistence activities and other aspects of native life ways that were essential components of cultural identity. In addition, indigenous religious practices were forbidden by the missionaries who considered native religion to be paganistic and a threat to organized Catholicism and mission life. Most devastating to the local Chumash population was the introduction of Old World diseases

for which they had little immunity. As a result, the Native American population in the area dropped dramatically between the end of the 18th and the end of the 19th century.

3.4.1.3 Historic Resources

The establishment of the Royal Presidio and Mission opened the Santa Barbara region to Spanish colonial settlement, and by the 1830's the town of Santa Barbara contained a population of 400 settlers. After Mission secularization in 1834, church land holdings were divided into large ranchos and granted to prominent residents. Cattle ranching was the principle economic venture at this time and most Ranchos traded in cattle hides and tallow. A major drought event during the mid to late 1800's crippled the cattle industry and caused local rancho owners to sell their estates. With signing of the Treaty of Guadalupe Hidalgo at the end of the Mexican-American war, Santa Barbara entered into the early American Period.

During the mid to late 1800's, the town of Santa Barbara grew rapidly. The growing population and economy was related (at least partially) to the establishment of the local oil industry, and the construction of wells, refineries, and transportation operations (Carbone 2005). The construction of Stearns Warf and the Southern Pacific Railroad also spurred commercial development, and a thriving business district was established at the bottom of State Street. The mostly agrarian landscape of Goleta underwent industrial and residential development as a result of the local oil industry and construction of the railroad system.

3.4.1.4 Site-Specific Setting

Summary of Previous Archaeological Investigations

A total of 14 archaeological investigations have been conducted within a 1-mile (1.6 kilometer) radius of the project area (Carbone 2005). Three of these investigations were carried out within the project area. The first of these investigations was performed by Larry Wilcoxon Consultants in November 1982. This survey was limited to areas within the University Exchange Corporation's proposed Glen Annie Water Diversion bounds. Padre Associates, Inc. conducted a survey of the Alternative A alignment in 2002. The most recent investigation was a Phase 1 archaeological assessment performed by Larry Carbone in 2005 for the proposed project. This investigation included a pedestrian survey of Alternative A, Alternative B, and a 50-foot (15.2-meter) buffer zone surrounding each alternative pipeline route. In addition, all accessible bedrock exposures were inspected for evidence of modification including bedrock mortars and rock art. Dense vegetation limited surface visibility to less than one percent over most of the survey area. Based on this fact survey efforts were focused on areas with exposed ground surface along creek terraces, ridge crests, saddles, and rodent burrows (Carbone 2005). The Phase 1 archaeological assessment also included a complete record search to identify all archaeological resources (both historic and prehistoric) within a 1-mile (1.6-kilometer) radius of the project area.

Summary of Known Archaeological Resources

Eight archaeological resources are located within a 1-mile (1.6-kilometer) search radius of the project area. These include CA-SBA-67, -136, -1102, -1103, -1104, -1651, -1775, and -3923. Seven of these resources represent prehistoric Native American sites consisting of either camp sites, or specific resource extraction and processing areas. CA-SBA-3923 contains both historic and prehistoric remains.

Both CA-SBA-1775 and CA-SBA-3923 are located within the project area. CA-SBA-1775 is recorded as a low density shell midden with chert flakes in a matrix of dark brown soil (Wilcoxon 1982). CA-SBA-3923 contains a prehistoric rock alignment consisting of ten sandstone cobbles in an oval or ring pattern. At the time of Spanish contact, the Chumash people of the Santa Barbara Channel were known to construct rock features along ridge tops for ritual purposes (Carbone 2005). Carbone (2005) suggests that the rock ring at

this site may represent a ritual location or otherwise sacred place. CA-SBA-3923 also contains a historic rock engraving on a bedrock exposure. These sites have not been formally evaluated for listing on the National Register of Historic Places (NRHP) or the California Register of Historic Resources (CRHR).

3.4.2 Regulatory Setting

3.4.2.1 Federal Regulations

National Historic Preservation Act

The National Historic Preservation Act (NHPA) of 1996, as amended (16 USC 470 *et seq*.), is the primary Federal legislation that outlines the Federal Governments' responsibility to consider the affects of their actions on historic properties. The 36 CFR Part 800 regulations that implement Section 106 of the NHPA describe how Federal agencies address these effects. Historic properties are defined as those cultural resources listed, or eligible for listing, on the NRHP. The term "cultural resources" is used to describe archaeological sites, illustrating evidence of past human use of the landscape; the built environment, represented by structures such as dams, roadways, and buildings; and resources of religious and cultural significance, including, but not limited to, structures, objects, districts, and sites.

The criteria for NRHP eligibility is outlined at 36 CFR Part 60. These criteria state that the "quality of significance in American history, architecture, archeology, engineering, and culture" must first be demonstrated by the property's "integrity of location, design, setting, materials, workmanship, feeling, and association." Additionally, in order to be a historic property, a "district, site, building, structure, or object" must meet at least one of the following four criteria:

A. be associated with events that have made a significant contribution to the broad patterns of our history;

B. be associated with the lives of persons significant in the past;

C. embody distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or

D. have yielded, or may be likely to yield, information important in prehistory or history.

If a cultural resource meets one of these criteria and has integrity, it is considered eligible for listing on the NRHP and, therefore, a "historic property".

Archaeological Resources Protection Act

In addition to the NHPA, cultural resources are protected by the Archaeological Resources Protection Act of 1979 (ARPA) (16 U.S.C. §§469-469c). The ARPA describes the requirements that must be met before federal authorities can issue a permit to excavate or remove any archeological resource on federal or Indian lands. Requirements for curation of artifacts, other materials excavated or removed, and the records related to the artifacts and materials are described. The act provides detailed descriptions of prohibited activities including damage, defacement, and unpermitted excavation or removal of cultural resources on federal lands. Selling, purchasing, and other trafficking activities of cultural resources either within the United States or internationally is prohibited. ARPA also identifies stiff penalties that can be levied against convicted violators.

Ethnographic Resources

As prehistoric archaeological sites, artifacts, and human remains are considered important components of contemporary Native American heritage, two federal statutes apply. The American Indian Religious Freedom Act of 1978 (AIRFA) (42 U.S.C. §§1996-1996a) requires that locations identified as central to Native American religious practice be protected. The Native American Graves Protection and Repatriation Act of 1990 (NAGPRA) (25 U.S.C. §§3001-3013) requires that prehistoric human remains and burial-related artifacts of individuals recovered during ground disturbances be provided to those contemporary Native Americans who are recognized as descendants.

3.4.2.2 State Regulations

Archaeological and Historic Architectural Resources

CEQA Guidelines Section 15064.5(a.3) and Public Resources Code (PRC) Section 21084.1 define the following criteria used to determine the significance of cultural resources, characterized as "historic resources."

> *Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (PRC SS5024.1, Title 14 CCR, Section 4852).*

CEQA Guidelines Section 15064.5(b) (revised October 26, 1998) states that "a project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment."

1. Substantial adverse change in the significance of a historical resource means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired.
2. The significance of a historical resource is materially impaired when a project:
   A. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources;
   B. Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in a historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
   C. Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources as determined by a lead agency for purposes of CEQA.

When an archaeological resource is listed in, or is eligible to be listed in, the CRHR, PRC Section 21084.1 requires that any substantial adverse effect to that resource be considered a significant environmental effect. PRC Sections 21083.2 and 21084.1 operate independently to ensure that potential effects on archaeological resources are considered as part of the environmental analysis for a project. Either of these benchmarks may indicate that a proposal may have a potential adverse effect on archaeological resources.

CEQA Guidelines Sections 15064.5 and 15126.4 guide the evaluation of impacts to prehistoric and historic archaeological resources. Section 15064.5(c) provides that, to the extent an archaeological resource is also a historical resource, the provisions regarding historical resources apply. These provisions endorse the first set of standardized mitigation measures for historic resources by providing that projects following the Secretary of the Interior's Standards for Treatment of Historic Properties be considered as mitigated to a less than significant level.

Other state-level requirements for cultural resources management are written into the California PRC, Chapter 1.7, Section 5097.5 (Archaeological, Paleontological, and Historical Sites).

Ethnographic Resources

The disposition of Native American burials is governed by Section 7050.5 of the California Health and Safety Code, and Sections 5097.94 and 5097.98 of the PRC, and falls within the jurisdiction of the Native American Heritage Commission (NAHC). Section 7052 of the Health and Safety Code establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historical or archaeological interest located on public or private lands, but specifically excludes the landowner. PRC Section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, or historical, resources located on public lands.

3.4.3 Impacts and Mitigation

3.4.3.1 Methodology

Impacts on cultural resources from the proposed project were evaluated by determining whether ground disturbance activities would have a significant adverse effect on any archaeological or historical resources listed in or eligible for listing in the NRHP or the CRHR.

3.4.3.2 Significance Criteria

The following significance criteria are derived from relevant federal and state regulations related to the identification of significant cultural resources and substantial adverse effects on those resources. An impact on cultural or paleontological resources would be considered significant if a project:

CR-1: Adversely affects a resource listed in or eligible for listing in the NRHP, the CRHR, or otherwise considered a unique or important archaeological resource under CEQA.

An adverse effect on a cultural resource is defined as:

- Demolition, physically damaged, or altered;
- Relocation that would isolate the resource from its original context; or

- Conversion, rehabilitation, or alteration that does not conform to the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings.

CEQA Guidelines Section 15064.5 (revised October 26, 1998) indicate a project may have a significant environmental effect if it causes "substantial adverse change" in the significance of a "historical resource" or a "unique archaeological resource," as defined or referenced in CEQA Guidelines Section 15064.5 (b,c). Such changes include "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired" (CEQA Guidelines Section 15064.5 [b]).

3.4.3.3 Preferred Alternative

Impact CR-1: ***Construction of the Preferred Alternative 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.***

Construction of the Preferred Alternative would require (1) clearing, grubbing, and grading, and (2) excavation of the trench. This construction could result in subsurface ground disturbance extending between 50 and 100 feet (15.2 and 30.4 meters) in width along the project corridor. Ground disturbing activities associated with the Preferred Alternative could result in the partial destruction of intact cultural remains associated with archaeological site. Site CA-SBA-3923 would be avoided. Until the significance of CA-SBA-1775 is evaluated using the NRHP/CRHR criteria, it is reasonable to assume that construction of the Preferred Alternative would have the potential to result in a significant adverse effect on that site . Impacts would be *significant but feasibly mitigated*.

Mitigation Measures

The following mitigation measure would reduce potential impacts associated with disturbance of archaeological site CA-SBA-1775.

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.

Plan Requirements and Timing: A Phase 2 significance evaluation shall be conducted and a significance evaluation report shall be prepared and provided to COMB prior to construction. If the site is found to be significant, construction plans indicating site avoidance measures shall be developed by COMB prior to construction. If avoidance is not feasible then a Phase 3 data recovery excavation shall be conducted by a county qualified archaeologist and Native American observer prior to construction. A county qualified archaeologist and Native American observer shall be present

during all constriction with 330 feet (100 meters) of the identified archaeological site. In addition, this measure shall be included in all construction and grading plans.

MONITORING: COMB personnel shall conduct random field inspections during project construction to ensure compliance with approved plans and conditions.

Residual Impacts

Implementation of **Mitigation Measure CR-1** requiring a Phase 2 significance evaluation of archaeological site CA-SBA-1775 and avoidance of any cultural resources found would reduce impacts on cultural resources to *less than significant*.

3.4.3.4 Alternative A (Parallel Pipeline)

Impact CR-1: ***Construction of Alternative A 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.***

Construction of Alternative A (Parallel Pipeline) would require (1) clearing, grubbing, and grading, and (2) excavation of the trench as described for the Preferred Alternative. Ground disturbing activities associated with Alternative A could result in the partial destruction of intact cultural remains associated with archaeological site CA-SBA-1775. Until the significance of this sites is evaluated using the NRHP/CRHR criteria, it is assumed that construction of Alternative A would have the potential to result in a significant adverse effect on that site. Therefore, impacts on cultural resources would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measure CR-1** would reduce potential impacts associated with disturbance of archaeological site CA-SBA-1775.

Residual Impacts

Adherence to **Mitigation Measure CR-1** requiring a Phase 2 significance evaluation of archaeological site CA-SBA-1775 and avoidance of any cultural resources found would reduce impacts on cultural resources to *less than significant*.

3.4.3.5 Alternative B (Non-Parallel Pipeline)

Impact CR-1: ***Construction of Alternative B 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.***

Construction of Alternative B (Non-Parallel Pipeline) would require (1) clearing, grubbing, and grading, and (2) excavation of the trench as described for the Preferred Alternative. Construction activities associated with Alternative B would avoid impacts to archaeological sites CA-SBA-1775and CA-SBA-3923. Therefore, no impacts on cultural resources would occur.

Mitigation Measures

No mitigation would be required.

Residual Impacts

There would be no residual impact.

3.4.3.6 No Project Alternative

The No Project Alternative would include construction of site improvements, regular maintenance, and operational activities that could occur with issuance of federal permits for stream crossings. Regular maintenance activities include inspection of the air release valves and blowoff valves for operability and annual inspection of the right-of-way for encroachments. Site improvements include upgrading and maintenance of the Glen Anne and Corona Del Mar turnout structures and Glen Anne meter. Additionally, existing downstream degradation of all stream crossings would require substantial improvements to protect the pipeline and potential replacement of the pipeline at the crossings. Minimal ground disturbing activities are associated with planned regular maintenance and site improvements, and none of the disturbance would affect archaeological sites CA-SBA-1775 or CA-SBA-3923. Therefore, the No Project Alternative would result in *no impacts* on cultural resources.

Mitigation Measures

As no impacts would occur, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.4.3.7 No Action Alternative

Under the No Action Alternative no construction of project facilities or site improvements would occur, and regular maintenance activities would continue as in the past, resulting in *no impacts* to cultural resources. However, as described in Section 2.5, one or more of the pipeline facilities would ultimately fail if the site improvements in the No Project Alternative were not implemented. The structural failure of facilities, such as the SPTT or pipeline crossing of Glen Annie Creek, would result in the uncontrolled release of water to the environment that could cause disturbance of archaeological sites due to erosion and subsequent repair activities. Impacts to these resources, if they occurred, would be *significant and unavoidable*.

Mitigation Measures

No mitigation is feasible to prevent impacts of structure failure.

Residual Impacts

The residual impact would be *significant and unavoidable*.

3.5 GEOLOGY AND SOILS

3.5.1 Environmental Setting

3.5.1.1 Regional Setting

The pipeline alignment is located near the base of the Santa Ynez Mountains, which are part of the western Transverse Ranges geomorphic province of southern California. This east-west-trending range is composed almost entirely of sedimentary rocks of Cenozoic and late Mesozoic age. In the Santa Barbara area, the Santa Ynez Mountains are folded into a south-dipping monocline.

3.5.1.2 Topography

The topography along the proposed pipeline alignments is predominantly very steep to moderately steep (Figure 3.5-1). Beginning at the SPTT, the Preferred Alternative, Alternative A, and Alternative B pipeline alignments are the same and traverse a relatively flat area, which was created as a staging area for construction of the Tecolote Tunnel. The alignments then traverse southeast down a very steep fill slope, created during grading for the aforementioned staging area, as well as from tunneling spoils during construction of the tunnel. The proposed alignments then trend down a tributary canyon of the West Fork of Glen Annie Creek, before crossing this creek. From that point, the Preferred Alternative and Alternative B alignments generally follow the topography around these ridges and intervening canyons along an existing road, resulting in a gentle downhill slope gradient along the alignment; the Alternative A alignment takes a direct route straight up and over three steep ridges and intervening canyons.

After generally following the topography around several ridges, the Preferred Alternative and Alternative B alignments trend straight up an approximately 30–foot (9–meter) high vertical cliff to join the Alternative A alignment (Figure 2-3). Near Ellwood Reservoir, the Preferred Alternative and Alternative A alignments continue southeastward traversing moderately sloped topography to Glen Annie Creek. After crossing Glen Annie Creek, the Preferred Alternative and Alternative A alignments climb up a moderately steep to steep hillside east of the creek. The final portion of the alignment before the CDMWTP is gently sloping.

The Alternative B alignment diverges eastward near Ellwood Reservoir and traverses a narrow, very steep-sided portion of the creek, before following a moderately sloped ridge-line to the CDMWTP (Figure 2-3). The final portion of this alignment traverses the top of a large fill slope, created for treatment plant detention ponds.

3.5.1.3 Stratigraphy

The pipeline alignments are underlain by artificial fill, surficial soils, alluvium, Sespe Formation sandstone and claystone, Vaqueros Formation sandstone, and Rincon Formation shale (Dibblee 1987a, 1987b) (Figure 3.5-1). Artificial fill is present primarily at both ends of the project, where fill was placed during construction of the Tecolote Tunnel (at the north end) and the CDMWTP (at the south end).

In areas previously not disturbed by grading for the existing pipeline and road, the upper few feet of strata consists of surficial soil deposits, including the Todos-Lodo Complex, Lodo-Sespe Complex, and Gaviota Series. Todos-Lodo soils, which are present along all three alternative pipeline alignments within West Fork and Glen Annie canyons, consist of well-drained soils found on 30 to 50 percent slopes, where runoff is rapid and the erosion hazard is high. The Lodo-Sespe soils, which are present along the alternative pipeline alignments on ridge- and hill-tops, consist of somewhat excessively drained soils found on 50 to 75 percent slopes, where runoff is rapid and the hazard of erosion is high. Gaviota sandy loam, which is present at the southern end of the Preferred Alternative and Alternative A pipeline routes, overlying the Rincon Shale,

consists of excessively drained soils found on 30 to 75 percent slopes, where runoff is rapid and the hazard of erosion is very high (USDA 1973).

Holocene alluvium, consisting of unconsolidated floodplain deposits of silt, sand, and gravel, is present in the base of West Fork and Glen Annie canyons (Figure 3.5-1). The Sespe Formation, consisting primarily of massive red sandstone, with interbeds of claystone up to 2-feet (0.6–meter) thick, is present along the alternative alignments, from the SPTT, southward to the third ridge (Figure 3.5-1). From this point, the remainder of the Preferred Alternative and Alternative A alignments, to the CDMWTP, are underlain by alternating Sespe Formation, as described above, the Vaqueros Formation, consisting primarily of tan, massive to thick-bedded sandstone, and Rincon Formation, consisting primarily of poorly bedded, gray clay shale and claystone. However, the Alternative B alignment traverses primarily Sespe Formation from the third ridge to the CDMWTP.

3.5.1.4 Seismicity

The proposed project is located within a seismically active area of southern California, where the potential exists for strong ground motion to occur. In general, the primary effects of an earthquake at the project site would be those phenomena associated with shaking and/or ground acceleration. Prominent active or potentially active faults within a 5-mile (8–kilometer) radius of the project site include the Los Carneros Fault, located approximately 0.4 mile (0.6 kilometer) to the south, the Glen Annie Fault, located approximately 1.1 miles (1.8 kilometers) to the south, and the Santa Ynez Fault, located approximately 5 miles (8 kilometers) to the north (Dibblee 1987a, 1987b; Jennings 1994).

Other regional active faults capable of producing substantial seismically induced ground motion at the project site include the More Ranch Fault, located 3 miles (5 kilometers) to the south, the North Channel Slope Fault, located approximately 7 miles (11 kilometers) to the south, and the Red Mountain Fault, located approximately 15 miles (24 kilometers) to the southeast (Dibblee 1987a, 1987b; Jennings 1994). These faults are capable of producing maximum earthquake magnitudes of 6.7 to 7.1 (Fugro West, Inc. 2003). Site-specific seismic analyses have not been performed for the project site; however, based on studies by Petersen (et al. 1999), the estimated horizontal ground acceleration in the project area, with a 10 percent probability of exceedance in 50 years (475-year return period) is approximately 0.5 g to 0.6 g (measure of percent of gravity).

Surface fault rupture is not anticipated along the pipeline alignments, as no known active faults traverse the project site and the site does not lie within an Alquist-Priolo Fault Zone. Construction within such a zone requires that special geologic studies be conducted to locate and assess any active fault traces in and around known active fault areas prior to development of structures for human occupancy.

3.5.1.5 Slope Stability

The majority of the pipeline alignments traverse steep topography. One surficial landslide is present west of the pipeline alignments, along the steep northwest-facing bank of West Fork of Glen Annie Creek. A second landslide is present along the southern portion of the Preferred Alternative and Alternative A alignments, within the Rincon Shale Formation. Landslides and slumps are common in this unstable rock unit throughout Santa Barbara County. However, all three alignments are predominantly underlain by either the Sespe or Vaqueros formations. Both of these units dip steeply to the south, at approximately 50 degrees. No areas of gross overall instability appear to be present along the alignments. However, there is a potential for localized soil movement associated with thickened soil horizons in draw areas (Fugro West, Inc. 2003).

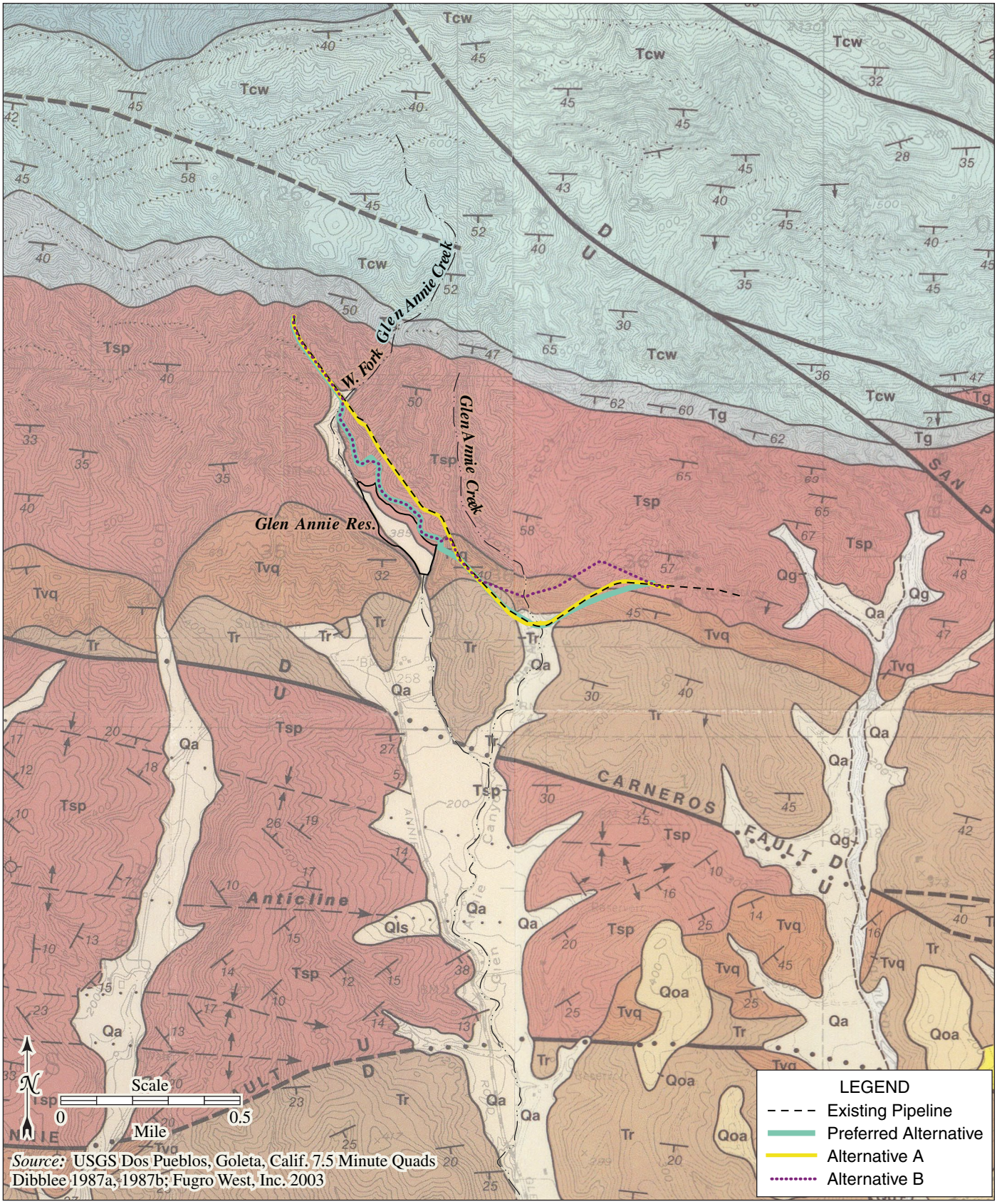

Figure 3.5-1. Geologic Map

Color

Page 2

3.5.1.6 Paleontological Resources

Any rock material that contains fossils has the potential to yield fossils that are unique or significant to science. However, paleontologists consider that geological formations having the potential to contain vertebrate fossils are more "sensitive" than those likely to contain only invertebrate fossils. Invertebrate fossils found in marine sediments are usually not considered by paleontologists to be significant resources, because geological contexts in which they are encountered are widespread and fairly predictable. Invertebrate fossil species are usually abundant and well-preserved, such that they are not unique. In contrast, vertebrate fossils are much rarer than invertebrate fossils, and are often poorly preserved. Therefore, when found in a complete state, vertebrate fossils are more likely to be a more significant resource than invertebrate fossils. As a result, geologic formations having the potential to contain vertebrate fossils are considered the most sensitive.

Vertebrate fossil sites are usually found in non-marine, upland deposits. However, vertebrate marine fossils such as whale, porpoise, seal, or sea lion can be found in marine rock units such as the Monterey, Rincon, Vaqueros, and Sisquoc formations of Santa Barbara County. Therefore, these rock formations are considered to have a high paleontological sensitivity (Santa Barbara County Energy Department 2007). Portions of the Preferred Alternative, Alternative A, and Alternative B alignments are underlain by the Vaqueros Formation; a portion of the Alternative A alignment is underlain by the Rincon Formation.

3.5.2 Regulatory Setting

3.5.2.1 Federal

The International Building Code (IBC) defines different regions of the United States and ranks them according to their seismic hazard potential. The four categories of these regions are designated as Seismic Zones 1 through 4, with Zone 1 having the least seismic potential and Zone 4 having the highest seismic potential. The project area is located within Seismic Zone 4; accordingly, any future development would be required to comply with all design standards applicable to Seismic Zone 4.

Paleontological Resources

In recent years, public interest and the commercial value of fossils has increased. The unfortunate consequence has been loss of fossils for scientific purposes. The removal of fossils, especially vertebrate fossils, from private or public lands reduces scientific and public access to important and instructive fossils and destroys the contextual information critical for interpreting the fossils.

There is no federal legislation designed specifically for the management and protection of paleontological resources. Professional societies such as the Society of Vertebrate Paleontologists (SVP) and the Board of Earth Science of the National Research Council have attempted, thus far unsuccessfully, to get Congress to approve legislation for paleontological resources. Under strong pressure from the SVP and other organizations, the U.S. House of Representatives and the Senate are considering bills that strengthen the protection of vertebrate fossils through stronger penalties and provide clear management guidelines to federal land managers.

Although no federal laws have been passed to require preservation and protection of paleontological resources, CEQA Guidelines (Appendix G, Section V, Part c) refer to whether or not implementation of a project would "directly or indirectly destroy a unique paleontological resource." Additionally, the California Public Resource Code, Section 31244, states that "where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable measures shall be required."

3.5.2.2 State

California Building Code

The State of California provides a minimum standard for building design through the California Building Code (CBC), which is based on the IBC, but has been modified for California conditions. The CBC is selectively adopted by local jurisdictions, based on local conditions. The project area is also located within Seismic Zone 4 of the CBC (Santa Barbara County P&D 1979).

Chapter 23 of the CBC contains specific requirements for seismic safety. Chapter 29 of the CBC regulates excavation, foundations, and retaining walls. Chapter 33 of the CBC contains specific requirements pertaining to site demolition, excavation, and construction to protect people and property from hazards associated with excavation cave-ins and falling debris or construction materials. Chapter 70 of the CBC regulates grading activities, including drainage and erosion control. Construction activities are subject to occupational safety standards for excavation, shoring, and trenching, as specified in the State of California Division of Occupational Safety and Health (commonly called Cal/OSHA) regulations (Title 8 of the California Code of Regulations) and in section A33 of the CBC.

The Alquist-Priolo Special Studies Zones Act of 1972

The criteria most commonly used to estimate fault activity in California are described in this act, which addresses only surface fault-rupture hazards. The legislative guidelines to determine fault activity status are based on the age of the youngest geologic unit offset by the fault. The California Geological Survey (formerly the California Division of Mines and Geology [CDMG]) defines an active fault as a fault that has "had surface displacement within Holocene time (about the last 11,000 years)" (CDMG 1994). A potentially active fault is defined as "any fault that showed evidence of surface displacement during Quaternary time (last 1.6 million years)." This legislation prohibits the construction of buildings used for human occupancy on active and potentially active surface faults. However, only those potentially active faults that have a relatively high potential for ground rupture are identified as fault zones. Therefore, not all potentially active faults are zoned under the Alquist-Priolo Earthquake Fault Zone, as designated by the State of California.

The Seismic Hazards Mapping Act

These regulations were promulgated for the purpose of promoting public safety by protecting against the effects of strong ground shaking, liquefaction, landslides, other ground failures, or other hazards caused by earthquakes. Special Publication 117, Guidelines for Evaluating and Mitigating Seismic Hazards in California (CDMG 1997), constitutes the guidelines for evaluating seismic hazards other than surface fault-rupture, and for recommending mitigation measures as required by PRC section 2695(a).

Paleontological Resources

Section 5097.5 of the California PRC prohibits excavation or removal of any "vertebrate paleontological site or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands." PRC Section 30244 requires reasonable mitigation of adverse impacts to paleontological resources from development on public land. Penal Code Section 623 spells out regulations for the protection of caves, including their natural, cultural, and paleontological contents. It specifies that no "material" (including all or any part of any paleontological item) shall be removed from any natural geologically formed cavity or cave.

3.5.2.3 Local

Conformance with the Santa Barbara County's Grading and Building Codes are considered generally satisfactory (by the County), with respect to geologic hazards; however, select amendments are recommended in the County General Plan Seismic Safety and Safety Element (Santa Barbara County P&D 1979). This document recommends that an adequate site-specific investigation be performed where the possibility of soil or geologic problems exist.

3.5.3 Impacts and Mitigation

3.5.3.1 Methodology

Geological impacts have been evaluated in two ways: (1) impacts of the proposed project on the local geologic environment; and (2) impacts of geohazards on components of the proposed project that may result in substantial damage to structures or infrastructure or expose people to substantial risk of injury. Impacts would be considered significant if the proposed project meets any of the significance criteria listed in Section 3.5.3.2.

3.5.3.2 Significance Criteria

Impacts would be considered significant under the following circumstances:

Construction Impacts

GEO-1: Substantial alteration of the topography beyond that resulting from natural erosion and depositional processes,

GEO-2: Substantial erosion would be triggered or accelerated,

GEO-3: Landslides would be triggered or accelerated.

GEO-4: Results in the permanent loss of, or loss of access to a paleontological resource of regional or statewide significance.

Operational Impacts

The potential for geologic hazard impacts would be considered significant under the following circumstances:

GEO-5: Ground rupture due to an earthquake at the site and attendant damage to structures, limiting their use due to safety considerations or physical condition,

GEO-6: Earthquake-induced ground motion (shaking) causing liquefaction, settlement, or surface cracks at the site and attendant damage to proposed structures, resulting in a substantial loss of use for more than 60 days or exposing the public to substantial risk of injury.

GEO-7: Exposure of people or property to a greater than average risk of tsunamis or seiches.

3.5.3.3 Preferred Alternative

Impact GEO-1*: Construction of the Preferred Alternative would not substantially alter the topography beyond that resulting from natural erosion and depositional processes.*

The pipeline would be installed using an open trench construction method. The trench would be excavated, soil would be temporarily stockpiled adjacent to the trench, the pipe would be placed in the trench, and the

trench would finally be backfilled and compacted. The trench would be a minimum of 9.5 feet (2.9 meters) deep to allow a nominal 5 feet (1.5 meter) of cover over the top of the pipe. At the West Fork and Glen Annie creek crossings, the pipeline would be buried with a minimum of 8 feet (2.4 meters) of cover.

A temporary construction corridor up to 100 feet (30.5 meters) wide 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. This methodology would result in a temporary alteration of the topography, which would be restored upon project completion. Therefore, impacts would be *less than significant.*

Mitigation Measures

As impacts associated with alteration of the topography would be less than significant, no mitigation measures are necessary.

Residual Impacts

The residual impact on topography would be *less than significant*.

Impact GEO-2: ***Construction of the Preferred Alternative would potentially trigger or accelerate substantial erosion.***

As described in **Impact GEO-1**, the pipeline would be installed using an open trench construction method. Any creek flow present would be temporarily redirected during construction. Vegetation would be cleared throughout the temporary construction corridor, and the width of this easement would be up to 100 feet (30.5 meters) wide, 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. Construction would result in short-term exposure of on-site soils, which are highly prone to erosion due to the steep topography and erodible soils along the pipeline corridor. Although pipeline corridor revegetation would occur subsequent to construction **(**see Section 2.3.2 and **Mitigation Measures BIO-1.2**, **BIO-2.1**, **BIO-2.2**, and **BIO-4a)**, 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. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

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).

Plan Requirements: COMB shall obtain an exemption or submit a Notice of Intent to the RWQCB for stormwater discharge. The construction contractor shall provide a copy of the required SWPPP to COMB for review and approval. All BMPs shall be located and detailed on the SWPPP/Erosion and Sediment Control Plan and grading and drainage plan. A copy of the SWPPP/Erosion and Sediment Control Plan shall be maintained on the project site during grading and construction activities. **Timing:** The Erosion Control Plan shall be approved prior to construction.

MONITORING: COMB shall review the SWPPP/Erosion and Sediment Control Plan documentation. COMB inspectors shall inspect the site prior to the commencement of and as needed during all grading and construction activities for compliance with the SWPPP/Erosion and Sediment Control Plan and BMPs.

Residual Impacts

With implementation of **Mitigation Measure GEO-2,** residual impacts would be *less than significant*.

Impact GEO-3: ***Construction of the Preferred Alternative could potentially trigger or accelerate shallow landslides.***

The pipeline would be installed using an open trench construction method. The majority of the pipeline alignment traverses steep topography that is subject to shallow landslides, rockfalls, and debris flows, which could be triggered during construction or subsequently during (or following) heavy rainfall events, especially before the vegetation can be re-established. Such shallow failures could potentially expose the pipeline, but would not likely result in structural failure. Deep-seated landslides are not anticipated as a result of construction, as no areas of gross overall instability appear to be present along the alignment (Fugro West, Inc. 2003). In addition, construction would be completed in accordance with recommendations of a final geotechnical report and grading/excavation requirements of the California Building Code. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with slope stability would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant.*

Impact GEO-4: ***Construction of the Preferred Alternative would potentially disturb or otherwise adversely affect paleontological resources of unusual scientific value.***

Vertebrate fossil sites are usually found in non-marine, upland deposits. However, vertebrate marine fossils such as whale, porpoise, seal, or sea lion can be found in marine rock units such as the Rincon and Vaqueros formations of Santa Barbara County. Therefore, these rock formations are considered to have a high paleontological sensitivity (Santa Barbara County Energy Department 2007). Portions of the Preferred Alternative alignment are underlain by both the Vaqueros and Rincon formations (Figure 3.5-1), and trenching for pipeline construction would potentially encounter marine vertebrate fossils. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

The following mitigation measures would reduce potential impacts associated with disturbance of paleontological resources.

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 (including environmental monitors) 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.

Plan Requirements and Timing: A pre-construction workshop by a County-qualified paleontologist shall be conducted prior to construction.

MONITORING: COMB shall ensure compliance with approved plans and conditions.

GEP-4.2 A County-qualified paleontological monitor shall be on call during excavation activities within the Vaqueros and Rincon formations.

Plan Requirements and Timing: This measure shall be included in all construction and grading plans. In addition, the location of the Vaqueros and Rincon formations shall be indicated on the construction plans and a County-qualified paleontological monitor shall be on call during excavation activities within these areas.

MONITORING: COMB shall have the paleontologist conduct random field inspections during project construction to ensure compliance with approved plans and conditions.

GEO-4.3 In the event that vertebrate fossils are found by the monitor or construction personnel, the following actions shall be taken:

1. Follow appropriate notification procedures;
2. Assess the find and determine recovery procedures;
3. Provide for construction avoidance until the fossils are assessed and recovered, if appropriate; and

4. Continue paleontological monitoring while fossil assessment and/or recovery are being completed.

Plan Requirements and Timing: This measure shall be included in all construction and grading plans.

MONITORING: COMB shall have the paleontologist conduct random field inspections during project construction to ensure compliance with approved plans and conditions.

Residual Impacts

With implementation of **Mitigation Measures GEO-4.1** through **GEO-4.3**, residual impacts would be *less than significant*.

Impact GEO-5: ***During operations, the Preferred Alternative 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.***

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. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with ground rupture would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact GEO-6: ***The Preferred Alternative 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.***

The project site is located in a seismically active area of southern California, with numerous active faults in the project area capable of producing earthquakes of magnitude 6.8 to 7.1 and ground accelerations up to 0.6 g (measure of percent of gravity). Although sediments along the proposed pipeline alignment would not likely be subject to liquefaction, other types of seismically induced ground failure are possible. Differential settlement is a process where soils settle non-uniformly, potentially resulting in stress and damage to pipelines or other overlying structures. Such movement can occur in the absence of seismically induced ground failure, due to improper grading and soil compaction, or discontinuity of naturally occurring soils; however, strong ground shaking often greatly exacerbates soil conditions already potentially prone to differential settlement, resulting in distress to overlying structures. Elongated structures such as pipelines are especially prone to damage as a result of differential settlement.

Lateral spreading is a type of seismically induced ground failure that occurs when cracks and fissures form on an unsupported slope, resulting in lateral propagation and failure of slope material in a downslope direction. This type of failure is common in unconsolidated stream bank deposits, where lateral stream scour creates oversteepened banks in unconsolidated silts and sands. Such failures are possible where the pipeline traverses the steep northwest-facing slope along the West Fork of Glen Annie Creek.

Seismic hazards are common to the Santa Barbara region and seismically induced structural damage to the pipeline cannot be completely avoided. Therefore, the pipeline may be rendered unusable following a strong earthquake, pending repairs. However, 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. Such engineering would include compacted trench backfill around the pipeline, in accordance with engineering specifications, to minimize ground movement surrounding the pipeline. Such engineering would minimize potential damage and reduce potential seismic related impacts to *less than significant*.

Mitigation Measures

As impacts associated with seismically induced ground failure would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant.*

Impact GEO-7: ***Operation of the Preferred Alternative would not expose people or property to a greater than average risk of tsunamis or seiches.***

The project site is located approximately 3.5 miles (5.6 kilometers) from the Pacific Ocean, at a minimum elevation of approximately 300 feet (91.4 meters) above sea level. Therefore, tsunami impacts would not occur during project operations.

A seiche is an oscillation in an enclosed body of water, such as a reservoir or tank, due to strong seismically induced ground motion. The pipeline alignment is located a minimum of 20 feet (6 meters) higher than the adjacent Glen Annie Reservoir at any given point. In addition, the pipeline 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.

Mitigation Measures

As impacts associated with tsunamis and seiches would not occur, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.5.3.4 Alternative A (Parallel Pipeline)

Impact GEO-1*: Construction of Alternative A would not substantially alter the topography beyond that resulting from natural erosion and depositional processes.*

As described in **Impact GEO-1** for the Preferred Alternative, the pipeline would be installed using an open trench construction method.

A temporary construction corridor would be provided for storage of excavated material, topsoil, pipe segments, and vehicle access. The width of this easement would be up to 100 feet (30.5 meters), depending on topography. This construction methodology would result in a temporary alteration of the topography, which would be restored upon project completion. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with alteration of the topography would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact GEO-2: *Construction of Alternative A would potentially trigger or accelerate erosion.*

As described in **Impact GEO-1**, the pipeline would be installed using an open trench construction method. Any creek flow present would be temporarily redirected during construction.

Vegetation would be cleared throughout the temporary construction corridor as described for the Preferred Alternative, and the width of this easement would be up to 100 feet (30.5 meters) wide, depending on topography. The central portion of the Alternative A route would not follow the road as in the Preferred Alternative but would parallel the existing pipeline across hilly terrain. Construction would result in short-term exposure of onsite soils, which are highly prone to erosion due to the steep topography and erodible soils along the pipeline corridor, to wind and water erosion. Although pipeline corridor revegetation would occur subsequent to construction **(**see Section 2.3.2 and **Mitigation Measures BIO-1.2**, **BIO-2.1**, **BIO-2.2**, **and BIO-4a)**, thus minimizing the potential for long-term soil erosion, the potential for substantial short-term soil erosion that could cause increased sediment runoff into of West Fork of Glen Annie and Glen Annie creeks would remain until the disturbed soils are stabilized. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measure GEO-2** would minimize potential erosion impacts associated with pipeline construction.

Residual Impacts

With implementation of **Mitigation Measure GEO-2,** residual impacts would be *less than significant*.

Impact GEO-3: *Construction of Alternative A could potentially trigger or accelerate shallow landslides.*

The pipeline would be installed using an open trench construction method as previously described. More of the Alternative A pipeline alignment traverses steep topography that is subject to shallow landslides, rockfalls, and debris flows, which could be triggered during construction or subsequently during (or following) heavy rainfall events, especially before the vegetation can be re-established, than for the Preferred Alternative. Such shallow failures could potentially expose the pipeline, but would not likely result in structural failure. Deep-seated landslides are not anticipated as a result of construction, as no areas of gross overall instability appear to be present along the alignment (Fugro West, Inc. 2003). In addition, construction would be completed in accordance with recommendations of a final geotechnical report and grading/excavation requirements of the California Building Code. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with slope stability would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact GEO-4: ***Construction of Alternative A (Parallel Pipeline) would potentially disturb or otherwise adversely affect paleontological resources of unusual scientific value.***

Vertebrate fossil sites are usually found in non-marine, upland deposits. However, vertebrate marine fossils such as whale, porpoise, seal, or sea lion can be found in marine rock units such as the Rincon and Vaqueros formations of Santa Barbara County. Therefore, these rock formations are considered to have a high paleontological sensitivity (Santa Barbara County Energy Department 2007). Portions of the Alternative A alignment are underlain by both the Vaqueros and Rincon formations (Figure 3.5-1), and trenching for pipeline construction would potentially encounter marine vertebrate fossils. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measures GEO-4.1, GEO-4.2,** and **GEO-4.3** would reduce the potential for impacts associated with disturbance of paleontological resources.

Residual Impacts

With implementation of **Mitigation Measures GEO-4.1** through **GEO-4.3**, residual impacts would be *less than significant*.

Impact GEO-5: *During operations, the Alternative A 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.*

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. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with ground rupture would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant.*

Impact GEO-6: *The pipeline in the Alternative A alignment 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.*

The project site is located in a seismically active area of southern California, as described for the Preferred Alternative. Although sediments along the proposed pipeline alignment would not likely be subject to liquefaction, other types of seismically induced ground failure are possible as described in **Impact GEO-5** for the Preferred Alternative. Elongated structures such as pipelines are especially prone to damage as a result of differential settlement.

As described for the Preferred Alternative, lateral spreading could result in ground failure where the pipeline traverses the steep northwest-facing slope along the West Fork of Glen Annie Creek.

Seismic hazards are common to the Santa Barbara region and seismically induced structural damage to the pipeline cannot be completely avoided. Therefore, the pipeline may be rendered unusable following a strong earthquake, pending repairs. However, 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. Such engineering would include compacted trench backfill around the pipeline, in accordance with engineering specifications, to minimize ground movement surrounding the pipeline. Such engineering would minimize potential damage and reduce potential seismic related impacts to *less than significant*.

Mitigation Measures

As impacts associated with seismically induced ground failure would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact GEO-7: ***Operation of Alternative A would not expose people or property to a greater than average risk of tsunamis or seiches.***

The project site is located approximately 3.5 miles (5.6 kilometers) from the Pacific Ocean, at a minimum elevation of approximately 300 feet (91.4 meters) above sea level. Therefore, tsunami impacts would not occur during project operations.

A seiche is an oscillation in an enclosed body of water, such as a reservoir or tank, due to strong seismically induced ground motion. The pipeline alignment is located a minimum of 40 feet (12.2 meters) higher than the adjacent Glen Annie Reservoir, at any given point. In addition, the pipeline 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.

Mitigation Measures

As impacts associated with tsunamis and seiches would not occur, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.5.3.5 Alternative B (Non-Parallel Pipeline)

Impact GEO-1: ***Construction of Alternative B would substantially alter the topography beyond that resulting from natural erosion and depositional processes.***

As described for the Preferred Alternative, the pipeline would be installed using an open trench construction method. The route would be the same or very similar to that for the Preferred Alternative from the SPTT to near the Ellwood Reservoir. From there the route diverges to the east and would cross Glen Annie Creek where the west bank is very high and nearly vertical. Trenching through this bank would result in a permanent change in the topography because the vertical bank could not be reconstructed, resulting in

significant topographic impacts. Topography along the remainder of the route would be restored as for the preferred alternative, resulting in a temporary alteration. However, impacts on topography would be *significant and unavoidable.*

Mitigation Measures

Due to the steepness of the rocky substrate, no measures are available that would completely restore the topography of the steep western bank of Glen Annie Creek.

Residual Impacts

With no mitigation measures available, the residual impact would remain *significant and unavoidable*.

Impact GEO-2: ***Construction of Alternative B would potentially trigger or accelerate erosion.***

As described in **Impact GEO-1**, the pipeline would be installed using an open trench construction method, and any flow present at the two creek crossings would be temporarily redirected during construction. Vegetation would be cleared throughout the temporary construction corridor (up to 100 feet [30.5 meters] wide). The short-term potential for erosion of disturbed soils would be essentially the same as for the Preferred Alternative throughout the Alternative B corridor, except at the Glen Annie Creek crossing. At this location, alternation of the steep west bank would result in a larger amount of disturbed ground than for the Preferred Alternative and, thus, a greater potential for erosion prior to soil stabilization by revegetation. Pipeline corridor revegetation would occur subsequent to construction **(**see Section 2.3.2 and **Mitigation Measures BIO-1.2**, **BIO-2.1**, **BIO-2.2**, **and BIO-4a)**, thus minimizing long-term soil erosion impacts. However, 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. Therefore, impacts would be *significant but feasibly mitigated*.

Impacts associated with the Alternative B alignment would be greater than those associated with the Preferred Alternative due to the larger disturbance at the Glen Annie Creek crossing.

Mitigation Measures

Implementation of **Mitigation Measure GEO-2** would minimize potential erosion impacts associated with pipeline construction.

Residual Impacts

With implementation of **Mitigation Measure GEO-2,** residual impacts would be *less than significant*.

Impact GEO-3*: Construction of Alternative B could potentially trigger or accelerate shallow landslides.*

The pipeline would be installed using an open trench construction method as described in **Impact GEO-1** for the Preferred Alternative. The Alternative B alignment is the same as or similar to the Preferred Alternative from the SPTT to near Ellwood Reservoir, where it diverges to the east, crosses Glen Annie Creek where the west bank is steep and high, and continues up a slope to the CDMWTP. The majority of the pipeline alignment traverses steep topography that is subject to shallow landslides, rockfalls, and debris flows, which could be triggered during construction or subsequently during (or following) heavy rainfall events, especially before the vegetation can be re-established. Such shallow failures could potentially expose the pipeline, but would not likely result in structural failure. Deep-seated landslides are not anticipated as a result of construction, as no areas of gross overall instability appear to be present along the alignment (Fugro West,

Inc. 2003). In addition, construction would be completed in accordance with recommendations of a final geotechnical report and grading requirements of the California Building Code. Therefore, impacts would be *less than significant*.

Impacts associated with the Alternative B alignment would be similar to those for the Preferred Alternative, except at the Glen Annie Creek crossing. In addition, the Alternative B alignment does not traverse the Rincon Shale Formation (which is traversed by the Preferred Alternative route), which is highly prone to surficial slumps and slides.

Mitigation Measures

As impacts associated with slope stability would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact GEO-4: ***Construction of Alternative B (Non-Parallel Pipeline) would potentially disturb or otherwise adversely affect paleontological resources of unusual scientific value.***

Vertebrate fossil sites are usually found in non-marine, upland deposits. However, vertebrate marine fossils such as whale, porpoise, seal, or sea lion can be found in marine rock units such as the Rincon and Vaqueros formations of Santa Barbara County. Therefore, these rock formations are considered to have a high paleontological sensitivity (Santa Barbara County Energy Department 2007). Portions of the Alternative B alignment are underlain by both the Vaqueros and Rincon formations (Figure 3.5-1), and trenching for pipeline construction would potentially encounter marine vertebrate fossils. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measures GEO-4.1, GEO-4.2,** and **GEO-4.3** would reduce the potential for impacts associated with disturbance of paleontological resources.

Residual Impacts

With implementation of **Mitigation Measures GEO-4.1** through **GEO-4.3**, residual impacts would be *less than significant*.

Impact GEO-5: *During operations, the Alternative B 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.*

Surface fault rupture is not anticipated along the pipeline alignment. The site does not lie within an Alquist-Priolo fault rupture zone. Therefore, impacts would be *less than significant*.

Impacts associated with the Alternative B alignment would be similar to those associated with the Preferred Alternative, as neither alignment is traversed by a known active fault.

Mitigation Measures

As impacts associated with ground rupture would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant.*

Impact GEO-6*: The pipeline in the Alternative B alignment would 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.*

The project site is located in a seismically active area of southern California as described for the Preferred Alternative. Although sediments along the proposed pipeline alignment would not likely be subject to liquefaction, other types of seismically induced ground failure are possible, as described in **Impact GEO-5** for the Preferred Alternative. Elongated structures, such as pipelines, are especially prone to damage as a result of differential settlement, and trench backfill around the pipeline would be compacted to meet engineering specifications.

Lateral spreading could result in ground failure where the pipeline traverses the steep northwest-facing slope along the West Fork of Glen Annie Creek, as well as the steep east-facing slope along Glen Annie Creek.

Seismic hazards are common to the Santa Barbara region, and seismically induced structural damage to the pipeline cannot be completely avoided. Therefore, the pipeline may be rendered unusable following a strong earthquake, pending repairs. However, 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. Such engineering would include compacted trench backfill around the pipeline, in accordance with engineering specifications, to minimize ground movement surrounding the pipeline. Such engineering would minimize potential damage and reduce potential seismic related impacts to *less than significant*.

Mitigation Measures

As impacts associated with seismically induced ground failure would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact GEO-7: *Operation of Alternative B would not expose people or property to a greater than average risk of tsunamis or seiches.*

The project site is located approximately 3.5 miles (5.6 kilometers) from the Pacific Ocean, at a minimum elevation of approximately 300 feet (91.4 meters) above sea level. Therefore, tsunami impacts would not occur during project operations.

A seiche is an oscillation in an enclosed body of water, such as a reservoir or tank, due to strong seismically induced ground motion. The pipeline alignment is located a minimum of 20 feet (6 meters) higher than the adjacent Glen Annie Reservoir at any given point. In addition, the pipeline would be buried beneath a minimum of 5 feet (1.5 meters) of fill. Therefore, a potential seiche in the Glen Annie Reservoir would have no impact on the proposed pipeline.

Mitigation Measures

As impacts associated with tsunamis and seiches would not occur, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.5.3.6 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 stream crossings. SPTT, Glen Anne, and Corona Del Mar turnout structures, as well as the Glen Anne meter are substantially corroded; therefore, these structures would need to be replaced. Additionally, existing downstream degradation of all stream crossings would require substantial improvements to protect the pipeline. Similar to impacts described for the Preferred Alternative in **Impact GEO-2**, the potential for erosion-induced sedimentation of Glen Annie and West Fork Glen Annie creeks during construction activities at the two creeks would occur. Impacts would be less than those associated with the Preferred Alternative, due to substantially less construction; however, impacts would remain *significant but feasibly mitigated*.

Similarly, *less than significant* construction-related **Impacts GEO-1, GEO-3, and GEO-4** would occur in association with this alternative. However, in comparison to the Preferred Alternative, impacts would be fewer, as less construction would occur. *Less than significant* operations-related **Impacts GEO-5 and GEO-6** would occur under this alternative and would be similar to the Preferred Alternative, as the existing water pipeline would still be in use and similarly susceptible to seismically induced ground failure. Also similar to the Preferred Alternative, *no impacts* would occur in association with tsunamis or seiches (**Impact GEO-7**).

Mitigation Measures

Implementation of **Mitigation Measure GEO-2** would minimize potential erosion impacts associated with site improvement construction.

Residual Impacts

With implementation of **Mitigation Measure GEO-2,** the residual impact would be *less than significant*.

3.5.3.7 No Action Alternative

Under the No Action Alternative, no construction of project facilities or site improvements would occur and regular maintenance activities would continue as in the past, resulting in no impacts to geology and soils. However, as described in Section 2.5, the SPTT or the pipeline at one of the two creek crossings would ultimately fail if the site improvements in the No Project Alternative were not implemented. The structural failure of these facilities would result in the uncontrolled release of water to the environment at a rate of 40+ MGD that could cause severe erosion and gullying, followed by deposition of soil in downstream drainages. Repair activities and restoration of eroded areas would also cause disturbances to soil. Impacts would depend on the location of the pipeline failure, but would likely affect either West Fork or the main stem of Glen Annie Creek. With respect to a SPTT failure, impacts would occur to the land between the failure and the West Fork. Eroded soils would be deposited in Glen Annie Reservoir during a failure of the SPTT or the West Fork pipeline crossing, while failure of the pipeline at the main stem crossing would affect Glen Annie Creek and Goleta Slough. Such an event would have temporary erosional impacts that would be *significant and unavoidable*. Repair of the failed structure and erosion would also cause short-term soil disturbances similar to

those associated with construction of the Preferred Alternative pipeline. Impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Gullies formed as a result of SPTT or pipeline failure shall be filled with compacted soil and the topography restored to pre-failure conditions, to the maximum extent possible. Implementation of **Mitigation Measure GEO-2** would minimize potential short-term erosion impacts associated with repair and restoration activities. Implementation of **Mitigation Measures BIO-1.2**, **BIO-2.1**, **BIO-2.2**, and **BIO-4a** would minimize potential long-term erosion impacts associated with repair and restoration activities.

Residual Impacts

The residual impact would be *less than significant* for repair and restoration activities. However, impacts associated with substantial downstream sedimentation in Glen Annie Creek, Glen Annie Reservoir, and the Goleta Slough, subsequent to structure failure, would remain *significant and unavoidable*.

3.6 HAZARDS AND HAZARDOUS MATERIALS

3.6.1 Environmental Setting

Generally speaking, "hazardous materials" means any material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials that are commonly found in soil and groundwater include petroleum products, fuel additives, heavy metals, and volatile organic compounds. Hazardous substances are defined by federal and state regulations as substances that must be regulated in order to protect the public health and the environment. Hazardous materials are characterized by certain chemical, physical, or infectious properties. California Code of Regulations (CCR) Title 22, Chapter 11, Article 2, Section 66261 defines a hazardous material as a substance or combination of substances which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may either: (1) cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible illness; or (2) pose a substantial present or potential hazard to human health or environment when improperly treated, stored, transported, or disposed of or otherwise managed.

According to Title 22 (Chapter 11, Article 3, CCR), substances having a characteristic of toxicity, ignitability, corrosivity, or reactivity are considered hazardous. Hazardous wastes are hazardous substances that no longer have a practical use, such as material that has been abandoned, discarded, spilled, or contaminated, or which is being stored prior to disposal.

The proposed project is located in a rural foothill area at the base of the Santa Ynez Mountains. No industrial or commercial facilities, which might have resulted in soil and/or groundwater contamination with hazardous materials, are present in the project vicinity.

3.6.2 Regulatory Setting

Applicable federal, state, and local laws each contain lists of hazardous materials or hazardous substances that may require special handling if encountered in soil or groundwater during construction of the proposed project. These include "hazardous substances" under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and the state Hazardous Substances Account Act (Health and Safety Code Section 25300, et seq.); "hazardous materials" under Health and Safety Code Section 25501, California Labor Code Section 6380 and CCR Title 8, Section 339; "hazardous substances" under 40 Code of Federal Regulations (CFR) Part 116; and, priority toxic pollutants under CFR Part 122. In addition, "hazardous materials" are frequently defined under local hazardous materials ordinances, such as the Uniform Fire Code.

Depending on the type and degree of contamination that is present in soil and groundwater, any of several governmental agencies may have jurisdiction over the proposed project's site. Generally, the agency with the most direct statutory authority over the affected media is designated as the lead agency for purposes of overseeing any necessary investigation or remediation. Typically, sites that are nominally contaminated with hazardous materials remain within the jurisdiction of local hazardous materials agencies, such as the Santa Barbara County, Fire Protection Services Division. Sites that have more heavily contaminated soils are more likely to fall under the jurisdiction of the State Department of Toxic Substances Control (DTSC), which is authorized to administer the federal hazardous waste program under the Resource Conservation and Recovery Act (RCRA) and is also responsible for administering the State Superfund Program, under the Hazardous Substance Account Act.

Sites that have contaminated groundwater fall within the jurisdiction of the Central Coast Regional Water Quality Control Board (RWQCB) and are subject to the requirements of the Porter-Cologne Water Quality Control Act. Contaminated groundwater that is proposed to be discharged to surface waters or to a publicly

owned treatment works would be subject to the applicable provisions of the Clean Water Act (CWA), including permitting and possibly pretreatment requirements. A National Pollutant Discharge Elimination System (NPDES) permit is required to discharge pumped groundwater to surface waters, including local storm drains, in accordance with California Water Code Section 13260. Additional restrictions may be imposed upon discharges to water bodies that are listed as "impaired" under Section 303(d) of the CWA, including Goleta Slough.

In July 2002, USEPA amended the Oil Pollution Prevention regulation at 40 CFR, Part 112. The regulation incorporated revisions proposed in 1991, 1993, and 1997. Subparts A through C of the Oil Pollution Prevention regulation are often referred to as the "SPCC Rule" because they describe the requirements for certain facilities to prepare, amend, and implement Spill Prevention, Control, and Countermeasure (SPCC) Plans. These plans ensure that facilities include containment and other countermeasures that would prevent oil spills that could reach navigable waters. In addition, oil spill contingency plans are required as part of this legislation to address spill cleanup measures after a spill has occurred.

3.6.3 Impacts and Mitigation

3.6.3.1 Methodology

Hazards and hazardous materials impacts have been evaluated in two ways: (1) impacts of proposed project-related hazardous materials on local soil and groundwater quality; and (2) impacts of existing hazardous materials on components of the proposed project, that may result in health and safety impacts to construction workers or operational personnel. Impacts would be significant if the proposed project meets any of the significance criteria listed in Section 3.6.3.2.

3.6.3.2 Significance Criteria

Impacts on hazards and hazardous materials would be significant under the following circumstances:

HAZ-1: 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-2: Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions associated with operations and/or maintenance; or

HAZ-3: The presence of soil or groundwater contamination creates a significant hazard to the public or the environment.

3.6.3.3 Preferred Alternative

Impact HAZ-1: ***Construction of the Preferred Alternative 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.***

Accidental spills or leaks of pollutants such as fuels, lubricants, and hydraulic fluid during equipment operation, refueling, or maintenance have the potential to enter West Fork of Glen Annie and Glen Annie creeks. Other potential construction related contaminants include solid and sanitary wastes, concrete truck washout, construction chemicals, and construction debris. Any of these contaminants would have the potential to impair surface water quality if they reach surface water in the creeks. Impacts of small spills would be adverse, short-term, and less than significant because small spills are likely to remain within the

work area with little or no material reaching flowing water, and construction at the creek crossings would be during the dry season when creek flow would be low to none. However, larger spills that enter either creek would potentially have short-term, significant impacts on water quality (see Section 3.7). Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

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 Best Management Practices (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.

Plan Requirements: COMB shall obtain an exemption or submit a Notice of Intent to the RWQCB for stormwater discharge. The construction contractor shall provide a copy of the required SWPPP to COMB for review and approval. All BMPs shall be located and detailed on the SWPPP and grading/drainage plan. A copy of the SWPPP shall be maintained on the project site during grading and construction activities. The Hazardous Materials Business Plan shall be reviewed and approved by COMB. **Timing:** Approval and implementation of all required specifications shall be completed prior to issuance of grading permit.

MONITORING: COMB shall review the SWPPP documentation and inspect the site prior to the commencement of and as needed during all grading and construction activities, for compliance with the SWPPP. COMB shall also inspect construction and operation as to plan (Hazardous Materials Business Plan) in the field.

Residual Impacts

With implementation of **Mitigation Measure HAZ-1,** residual impacts would be *less than significant*.

Impact HAZ-2: ***The Preferred Alternative would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions associated with operations and/or maintenance.***

Limited vehicle and equipment use would be required during standard pipeline inspections, operations, and maintenance. Impacts of accidental spills or leaks of pollutants such as fuels, lubricants, and hydraulic fluid during equipment operation would be adverse, short-term, and less than significant because such spills would generally be minor and localized, enabling clean-up prior to such substances entering West Fork Glen Annie and Glen Annie creeks. Therefore, impacts would be *less than significant.*

Mitigation Measures

As impacts associated with potential spills of petroleum products and hazardous materials would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact HAZ-3: ***Construction of the Preferred Alternative would not create a significant hazard to the public or the environment due to the presence of soil or groundwater contamination.***

The proposed pipeline route is located in a rural foothill area at the base of the Santa Ynez Mountains. No industrial or commercial facilities, which might have resulted in soil and/or groundwater contamination, are present in the vicinity of the Preferred Alternative alignment. Therefore, the potential for soil and/or groundwater contamination is low and impacts would be *less than significant*.

Mitigation Measures

As impacts associated with potential soil and groundwater contamination would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.6.3.4 Alternative A (Parallel Pipeline)

Impact HAZ-1: ***Construction of Alternative A 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.***

Accidental spills or leaks of pollutants have the potential to enter West Fork of Glen Annie and Glen Annie creeks, as described previously in **Impact HAZ-1** for the Preferred Alternative. The pipeline crossings of these creeks would be at the same location as for the Preferred Alternative. Impacts of small spills would be adverse, short-term, and less than significant because small spills are likely to remain within the work area with little or no material reaching flowing water, and construction at the creek crossings would be during the

dry season when creek flow would be low to none. However, larger spills that enter either creek could have short-term, significant impacts on water quality (see Section 3.7). Therefore, impacts would be *significant but feasibly mitigated.*

Mitigation Measures

Implementation of **Mitigation Measure HAZ-1** would minimize impacts associated with hazardous material spills during pipeline construction.

Residual Impacts

With implementation of **Mitigation Measure HAZ-1,** residual impacts would be *less than significant*.

Impact HAZ-2: ***Alternative A would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions associated with operations and/or maintenance.***

The limited vehicle and equipment use required during standard pipeline inspections, operations, and maintenance would be the same as for the Preferred Alternative. Impacts of accidental spills or leaks of pollutants such as fuels, lubricants, and hydraulic fluid during equipment operation would be adverse, short-term, and less than significant because such spills would generally be minor and localized, enabling clean-up prior to such substances entering West Fork Glen Annie and Glen Annie creeks. Therefore, impacts would be *less than significant.*

Mitigation Measures

As impacts associated with potential spills of petroleum products and hazardous materials would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact HAZ-3: ***Construction of Alternative A would not create a significant hazard to the public or the environment due to the presence of soil or groundwater contamination.***

The proposed Alternative A pipeline route is located in a rural foothill area, at the base of the Santa Ynez Mountains. No industrial or commercial facilities, which might have resulted in soil and/or groundwater contamination, are present in the vicinity of the Alternative A alignment. Therefore, the potential for soil and/or groundwater contamination is low, and impacts would be *less than significant*.

Mitigation Measures

As impacts associated with potential soil and groundwater contamination would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.6.3.5 Alternative B (Non-Parallel Pipeline)

Impact HAZ-1: ***Construction of Alternative B 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.***

Potential spill impacts associated with the Alternative B alignment would be similar to those described for the Preferred Alternative, as construction would be completed similarly for both routes. Both routes cross West Fork of Glen Annie Creek at the same location; however, the Alternative B Glen Annie Creek crossing would be approximately 325 feet (99 meters) upstream of the crossing proposed for the Preferred Alternative. Larger spills that enter either creek could have short-term, significant impacts on water quality. Therefore, impacts would be *significant but feasibly mitigated.*

Mitigation Measures

Implementation of **Mitigation Measure HAZ-1** would minimize impacts associated with hazardous material spills during pipeline construction.

Residual Impacts

With implementation of **Mitigation Measure HAZ-1,** residual impacts would be *less than significant*.

Impact HAZ-2: ***Alternative B would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions associated with operations and/or maintenance.***

Limited vehicle and equipment use would be required during standard pipeline inspections, operations, and maintenance. Accidental spills or leaks of pollutants such as fuels, lubricants, and hydraulic fluid during equipment operation would be adverse, short-term, and less than significant because such spills would generally be minor and localized, enabling clean-up prior to such substances entering West Fork Glen Annie and Glen Annie creeks. Therefore, impacts would be less than significant.

Potential spill impacts associated with Alternative B alignment would be similar to those associated with the Preferred Alternative, as operations would be completed similarly for both routes.

Mitigation Measures

As impacts associated with potential spills of petroleum products and hazardous materials would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact HAZ-3: ***Construction of Alternative B would not create a significant hazard to the public or the environment due to the presence of soil or groundwater contamination.***

The proposed Alternative B pipeline route is located in a rural foothill area at the base of the Santa Ynez Mountains. No industrial or commercial facilities, which might have resulted in soil and/or groundwater contamination, are present in the vicinity of the Alternative B alignment. Therefore, the potential for soil and/or groundwater contamination is low and impacts would be less than significant.

Potential contamination impacts associated with the Alternative B alignment would be similar to those associated with the Preferred Alternative, as construction would similarly be completed in a rural, undeveloped area with limited potential for soil or groundwater contamination.

Mitigation Measures

As impacts associated with potential soil and groundwater contamination would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.6.3.6 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. SPTT, Glen Anne and Corona Del Mar turnout structures, as well as the Glen Anne meter are substantially corroded; therefore, these structures would need to be replaced. Additionally, existing downstream degradation of all stream crossings would require substantial improvements to protect the pipeline. Similar to the Preferred Alternative, the potential for significant construction related impacts described in **Impact HAZ-1,** associated with potential petroleum and/or hazardous materials spills into Glen Annie and West Fork Glen Annie creeks, would occur. However, impacts would be less than those associated with the Preferred Alternative, due to substantially less construction. Impacts would be *significant but feasibly mitigated*.

Less than significant operations-related impacts specified in **Impact HAZ-2** would occur under this alternative and would be similar to the Preferred Alternative, as the existing water pipeline would still be in use and adjacent creeks would similarly be susceptible to minor petroleum and hazardous materials spills during maintenance. Construction-related impacts associated with soil or groundwater contamination (**Impact HAZ-3**) would similarly occur, but would be reduced with respect to the Preferred Alternative, as less construction would occur. Impacts would be *less than significant*.

Mitigation Measures

Impacts would be reduced to less than significant through implementation of **Mitigation Measure HAZ-1**, which would require pollution prevention and cleanup measures, in association with a SWPPP. No mitigation is necessary for less than significant **Impacts HAZ-2** and **HAZ-3**.

Residual Impacts

With implementation of **Mitigation Measure HAZ-1,** the residual impact would *be less than significant*.

3.6.3.7 No Action Alternative

Under this alternative, no site improvements would be implemented although regular maintenance would continue as in the past. As a result, the SPTT and pipeline at the creek crossings would ultimately fail if the site improvements in the No Project Alternative were not implemented, with release of large amounts of water. Equipment would be used at and downslope of the failure to repair the structure and erosion damage with the potential for spills of petroleum/hazardous materials in or adjacent to the creek (**Impact HAZ-1**). Impacts of such spills would have the potential to be *significant but feasibly mitigated*. Impacts of

maintenance (**Impact HAZ-2**) and soil or water contamination from construction of repairs (**Impact HAZ-3**) would be the same as for the Preferred Alternative, *less than significant*.

Mitigation Measures

Impacts would be reduced to less than significant through implementation of **Mitigation Measure HAZ-1**, which would require pollution prevention and cleanup measures, in association with a SWPPP. No mitigation is necessary for less than significant **Impacts HAZ-2** and **HAZ-3**.

Residual Impacts

With implementation of **Mitigation Measure HAZ-1,** residual impact would *be less than significant*.

3.7 HYDROLOGY AND WATER QUALITY

3.7.1 Environmental Setting

3.7.1.1 Topography

The topography along the alternative pipeline alignments is predominantly very steep to moderately steep (Figure 3.7-1) as described in Section 3.5, Geology and Soils.

3.7.1.2 Drainage and Water Quality

The Preferred Alternative, Alternative A, and Alternative B pipeline alignments traverse West Fork of Glen Annie and Glen Annie creeks. West Fork of Glen Annie Creek is a tributary to Glen Annie Creek, both which are intermittent streams. Glen Annie Reservoir is located along West Fork of Glen Annie Creek, which flows into Glen Annie Creek approximately 1,500 feet (457 meters) south of the pipeline alignments (Figure 3.7-1). Glen Annie Creek merges downstream into Tecolotito Creek. The Tecolotito/Glen Annie Creek watershed originates on the southern flanks of the Santa Ynez Mountains and drains a 3,858-acre (1,561-hectare) watershed, capable of producing 4,600 cubic feet (130 cubic meters) per second of flow during a 100-year period precipitation event (Santa Barbara County Flood Control Department 2007).

The Tecolotito/Glen Annie Creek watershed flows into Goleta Slough approximately 3 miles (4.8 kilometers) southeast of the project area. The Goleta Slough, which is fed by seven creeks (Tecolotito, Carneros, San Pedro, Las Vegas, San Jose, Atascadero, and Maria Ygnacio creeks), is the largest estuary between Point Mugu and Morro Bay, and is the northernmost example of a large southern California estuary. The slough is widely acknowledged to be in decline and less than fully functional. Due largely to agricultural development and construction and expansion of the Santa Barbara Airport, the slough has shrunk from a historical 18 square miles (47 square kilometers) to 400 acres (162 hectares) today. Over time, its creeks have been filled and channelized, wetland acreage has been lost to human development, and water quality has been severely degraded by surrounding urban and agricultural land uses. The ability of the slough to filter pollutants has been diminished at the same time that pollution levels have risen. The Goleta Slough is listed as an impaired waterbody on the State's 303(d) List of Water Quality Limited Segments as a result of contamination by pathogens, heavy metals, priority organics, and sediment (Cal EPA SWRCB 2002; California Coastal Commission 2006; Santa Barbara Channelkeeper 2006).

3.7.1.3 Groundwater

The project site does not overlie any established groundwater basin. Groundwater is present within the Sespe, Vaqueros, and Rincon formations, as evidenced by wells producing from these formations throughout southern Santa Barbara County. Permeability is largely controlled by fracture permeability in these formations, although some intergranular permeability may occur in both the Sespe and Vaqueros formations. Typical of fractured rock aquifers, well yields in the Tertiary bedrock aquifers are quite variable. Well yields ranging from 2 to 254 gallons per minute and transmissivities ranging from 42 to 786 gallons per day per foot have been reported by the U.S. Geological Survey for water wells completed in the Gaviota and Tajiguas areas, located west of the project site (McClelland Engineers 1987).

Water quality from the bedrock aquifers is also highly variable. Total dissolved solid (TDS) concentrations in the nearby Gaviota area range from 400 to 2,900 milligrams per liter. Bedrock aquifer water in this area typically exceeds drinking water standards for iron, manganese, and fluoride, and may contain dissolved hydrogen sulfide gas (McClelland Engineers 1987). The Goleta Water District has extracted water from bedrock wells in the vicinity of the project site on a test basis. The pumped water from the fractures in

consolidated bedrock in this foothill area was of very poor quality. The District has no plans to utilize water from this source (Santa Barbara County Public Works, Water Resources Department, Water Agency Division 2006).

The project site lays upgradient of the West Subbasin of the Goleta Groundwater Basin. This underground reservoir is considered to be hydrologically separate from the North and Central subbasins of the Goleta Groundwater Basin (Goleta North/Central Basin). Based on the most recent analysis, the West Subbasin is in a state of surplus. However, water quality from wells drilled in this subbasin is of poor quality and low yield, but is classified as beneficial use drinking water by the RWQCB under the Basin Plan (California RWQCB 1994; Santa Barbara County Public Works, Water Resources Department, Water Agency Division 2006).

3.7.2 Regulatory Setting

3.7.2.1 Federal

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

The 1972 Federal Water Pollution Control Act and its 1977 amendments, collectively known as the Clean Water Act (CWA), established national water-quality goals and the basic structure for regulating discharges of pollutants into the waters of the United States. Section 402 of the CWA also created NPDES permits that specified minimum standards for the quality of discharged waters. It required states to establish standards specific to water bodies and designated the types of pollutants to be regulated, including total suspended solids and oil. The CWA authorized the U.S. Environmental Protection Agency (EPA) to issue the NPDES permits. Section 404 of the CWA requires permits for discharge of dredge or fill material into waters of the United States, and this section is administered by the USACE. A Section 401 Water Quality Certification is required for issuance of a Section 404 permit.

3.7.2.2 State

Porter-Cologne Water Quality Control Act (CWC Section 13000 et seq.*; CCR Title 23, Chapter 3, Chapter 15)*

Since 1973, the California State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs) have been delegated the responsibility for administering permitted discharge into the waters of California. The Porter-Cologne Water Quality Act provided a comprehensive water-quality management system for the protection of California waters. Under the Act "any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the state" must file a report of the discharge with the appropriate RWQCB. In April 1991, the SWRCB and other state environmental agencies were incorporated into the California Environmental Protection Agency.

This Act is the primary state regulation addressing water quality and waste discharges on land. Permitted discharges must be in compliance with the regional Basin Plan that was developed by the Central Coast RWQCB for Region 3, which includes Santa Barbara County and the proposed project area. Each Regional Board implements the Basin Plan to ensure that projects consider regional beneficial uses, water quality objectives, and water quality problems.

The RWQCB regulates non-point construction runoff discharges under the NPDES permit regulations, by issuing Construction Permits, which primarily deal with erosion, sediment transfer, and chemical spills at construction sites. The monitoring requirements are less stringent for the Construction Permit than for the General Industrial Permit Requirements and no sampling is required.

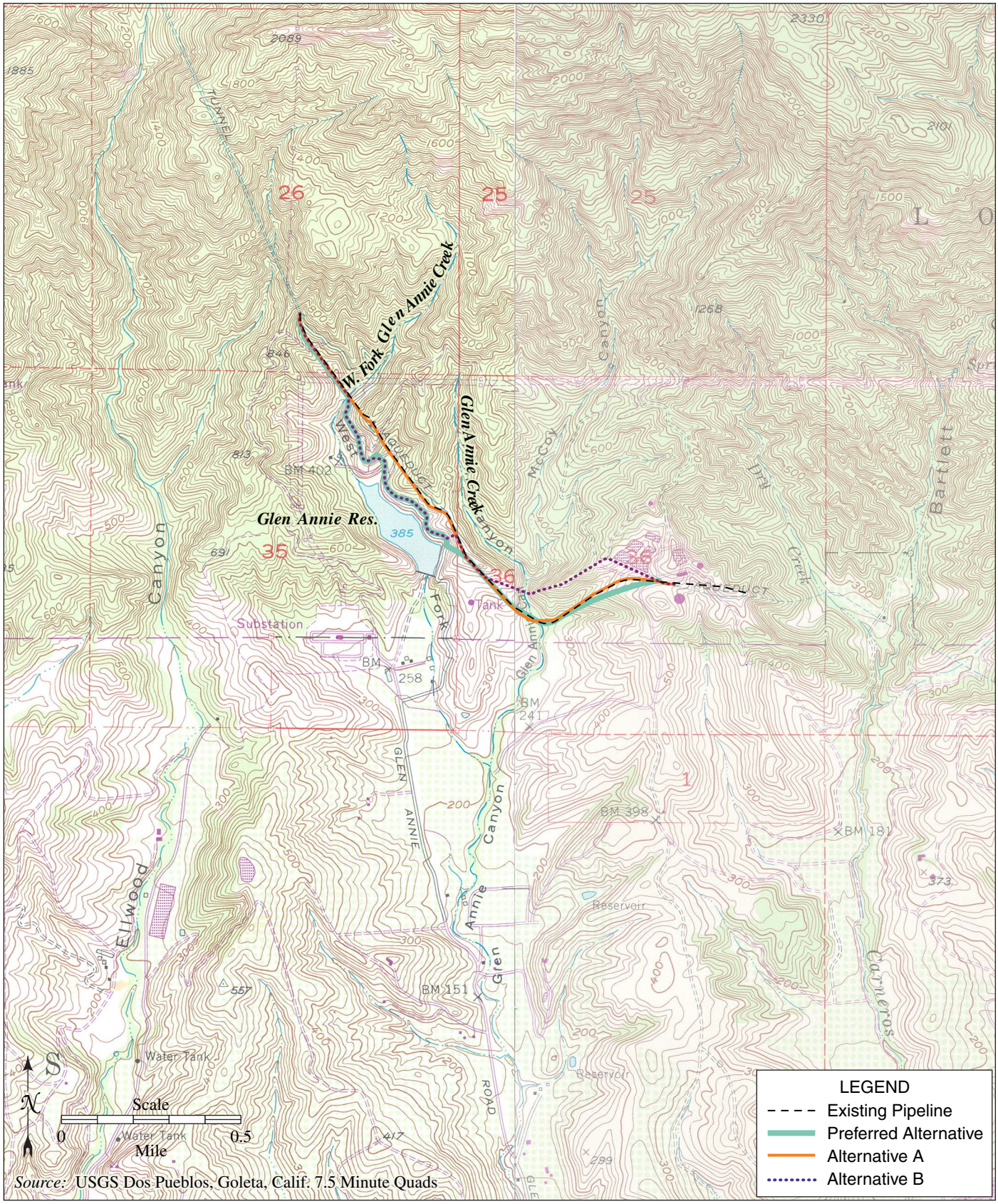

Figure 3.7-1. Topography and Drainage

1 Color

2 Page 2

3

BMPs are required as part of a SWPPP. The EPA defines BMPs as "schedules of activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of Waters of the United States. BMPs include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage" (40 CFR 122.2).

3.7.2.3 Local

Project Clean Water

The Santa Barbara County Water Agency, Project Clean Water has been established to reduce or eliminate discharges of pollution into creeks, rivers, ponds, or ocean waters, through implementation of NPDES permit requirements and applicable regulations. This agency completes stormwater sampling at select locations, including Goleta Slough, located downstream of the project site. The County Water Agency is currently in the process of adopting provisions of the Storm Water Phase II Final Rule, which requires the operator of a regulated small municipal separate storm sewer system (MS4) to obtain NPDES permit coverage because discharges of storm water from such systems are considered point sources of potential pollution. MS4s are considered publicly owned or operated point sources because they collect storm water and direct it to discrete conveyances, including roads with drainage systems and municipal streets.

3.7.3 Impacts and Mitigation

3.7.3.1 Methodology

Water quality and hydrologic impacts have been evaluated primarily with respect to construction. Water quality impacts are primarily associated with minor accidental spills of petroleum products and hazardous materials. Erosional impacts are addressed in Section 3.5, Geology and Soils. Project operations are not anticipated to adversely affect water quality or hydrologic conditions. Impacts would be significant if the proposed project meets any of the significance criteria listed in Section 3.7.3.2.

3.7.3.2 Significance Criteria

Impacts on hydrology and water quality would be significant under the following circumstances:

HYDRO/WQ-1: Violate (or cause the violation of) any water quality standards or waste discharge requirements;

HYDRO/WQ-2: 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; or

HYDRO/WQ-3: 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.

3.7.3.3 Preferred Alternative

Impact HYDRO/WQ-1: ***Construction and operation of the Preferred Alternative would potentially violate (or cause the violation of) water quality standards.***

The pipeline would be installed using an open trench construction method as described in Section 2.2.1 (Project Description) and Section 3.5 (Geology and Soils). Trenching would occur within both West Fork of

Glen Annie and Glen Annie creeks. Temporary diversion of surface and subsurface creek flow, using temporary culverts and/or groundwater dewatering, would be required at the creek crossings. Heavy equipment would be required to complete these activities.

Pipeline construction activities at and adjacent to the creek crossings could result in impairment of water quality. As discussed in Section 3.5, Geology and Soils, construction would potentially result in erosion-induced runoff of sediment to these adjacent waterways. In addition, as discussed in Section 3.6, Hazards and Hazardous Materials, accidental spills or leaks of pollutants such as fuels, lubricants, and hydraulic fluid during equipment operation, refueling, or maintenance have the potential to enter these creeks. Other potential construction related contaminants include solid and sanitary wastes, concrete truck washout, construction chemicals, and construction debris. Any of these contaminants would potentially impair the quality of surface water runoff. Impacts of small spills would be adverse, short-term, and less than significant because such spills would generally be minor and localized, enabling clean-up prior to such substances entering West Fork Glen Annie and Glen Annie creeks. Larger spills that enter the creek could have short-term, significant impacts on water quality. Therefore, impacts would be *significant but feasibly mitigated.*

Mitigation Measures

Implementation of **Mitigation Measure GEO-2** (Section 3.5), requiring implementation of erosion control measures during pipeline construction, and **Mitigation Measure HAZ-1** (Section 3.6), requiring implementation of a Construction Related Storm Water Pollution Prevention Plan, would reduce potential surface water quality impacts.

Residual Impacts

With implementation of the standard erosion and spill control measures related to construction specified in **Mitigation Measure GEO-2** and **Mitigation Measure HAZ-1,** residual impacts would be *less than significant*.

Impact HYDRO/WQ-2: ***Construction and operation of the Preferred Alternative 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.***

Water use for project construction would be restricted primarily to dust control. Groundwater within the underlying bedrock formations would not be used for the project; water would be supplied by COMB. In addition, proposed pipeline operations would provide a more reliable source of water from Lake Cachuma, particularly during the summer and fall, which would decrease reliance on groundwater supplies from coastal Santa Barbara groundwater basins. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with groundwater use would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact HYDRO/WQ-3: ***Construction of the Preferred Alternative 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.***

The pipeline would be installed using an open trench construction method across the West Fork of Glen Annie and Glen Annie creeks. This would cause a temporary alteration of the drainage pattern through temporary diversion of creek flow, if any surface flow is present during construction. Stream channel topography, surface flow within the creek, and topography of the pipeline corridor would be restored to normal conditions, to the extent possible, subsequent to construction, resulting in no permanent alteration of drainage patterns. In addition, surface runoff would not be increased, as paving would not occur as part of the project. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with alteration of surface runoff would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.7.3.4 Alternative A (Parallel Pipeline)

Impact HYDRO/WQ-1: ***Construction of Alternative A would potentially violate (or cause the violation of) water quality standards.***

Construction of the Alternative A pipeline alignment would use the same open trench construction methods as for the Preferred Alternative, including at the creek crossings. These crossings would be at the same locations for both alternatives.

The potential for impairment of water quality in West Fork of Glen Annie and Glen Annie creeks would be the same as for the Preferred Alternative, and impacts of larger spills of pollutants could have short-term, significant impacts on water quality. Therefore, impacts would be *significant but feasibly mitigated.*

Mitigation Measures

Implementation of **Mitigation Measure GEO-2** (Section 3.5) and **Mitigation Measure HAZ-1** (Section 3.6) would reduce potential surface water quality impacts.

Residual Impacts

With implementation of the standard erosion and spill control measures related to construction specified in **Mitigation Measure GEO-2** and **Mitigation Measure HAZ-1,** residual impacts would be *less than significant*.

Impact HYDRO/WQ-2: ***Construction and operation of Alternative A 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.***

Water use for project construction would be restricted primarily to dust control, as described for the Preferred Alternative. In addition, proposed pipeline operations would provide a more reliable source of water from Lake Cachuma, particularly during the summer and fall, which would decrease reliance on groundwater supplies from coastal Santa Barbara groundwater basins. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with groundwater use would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact HYDRO/WQ-3: ***Construction of Alternative A 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 that would result in flooding on- or off-site.***

Pipeline construction through the two stream crossings would be the same as for the Preferred Alternative, and the topography would be restored upon completion of the work. The majority of the Alternative A pipeline alignment would traverse the hilly terrain adjacent to the existing pipeline (Figure 2-5); only a portion of this alignment would be within the existing roadway. The Alternative A pipeline corridor would be restored to pre-project contours, to the extent possible, throughout its length, and drainage patterns would not be permanently altered. Surface flow within the creek would be restored to normal conditions subsequent to construction. In addition, surface runoff would not be increased, as paving would not occur as part of the project. Therefore, impacts would be *less than significant*.

Mitigation Measures

As impacts associated with alteration of surface runoff would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.7.3.5 Alternative B (Non-Parallel Pipeline)

Impact HYDRO/WQ-1: ***Construction and operation of Alternative B would potentially violate (or cause the violation of) water quality standards.***

Construction of the Alternative B pipeline alignment would use the same open trench construction methods as for the Preferred Alternative, including at the creek crossings. The West Fork of Glen Annie Creek crossing would be at the same location as for the Preferred Alternative; however, the crossing of Glen Annie Creek would be approximately 325 feet (99 meters) feet upstream of that crossing proposed for the Preferred Alternative. The west creek bank at the Alternative B location is very tall and steep, and this would require considerable excavation of the creek bank for pipeline installation.

The potential for impairment of water quality in Glen Annie Creek would be slightly greater than for the Preferred Alternative because the larger soil disturbance and steep topography at the creek crossing would result in a greater potential for erosion and sediment runoff to the creek prior to soil stabilization with vegetation. As described for the Preferred Alternative, impacts of small spills would be adverse, short-term, and less than significant, while larger spills that enter either creek could have short-term, significant impacts on water quality. Therefore, impacts would be *significant but feasibly mitigated.*

Mitigation Measures

Implementation of **Mitigation Measure GEO-2** (Section 3.5), requiring adherence to erosion control measures during pipeline construction, and **Mitigation Measure HAZ-1** (Section 3.6), requiring implementation of a Construction Related Storm Water Pollution Prevention Plan, would reduce potential surface water quality impacts.

Residual Impacts

With implementation of the standard erosion and spill control measures related to construction specified in **Mitigation Measure GEO-2** and **Mitigation Measure HAZ-1,** residual impacts would be *less than significant*.

Impact HYDRO/WQ-2: ***Construction and operation of Alternative B 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.***

As for the Preferred Alternative, water use for project construction would be restricted primarily to dust control. In addition, proposed pipeline operations would provide a more reliable source of water from Lake Cachuma as described for the Preferred Alternative. Therefore, impacts would be *less than significant.*

Groundwater impacts associated with construction and operation of the Alternative B alignment would be similar to those associated with the Preferred Alternative, as construction of the pipeline in either alignment would result in *less than significant* impacts with respect to groundwater use.

Mitigation Measures

As impacts associated with groundwater use would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact HYDRO/WQ-3: ***Construction of Alternative B 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 that would result in flooding on- or off-site.***

Pipeline construction through the West Fork of Glen Annie Creek would be the same as for the Preferred Alternative. At the Glen Annie Creek crossing, the construction methods would be the same but the upstream location would require additional grading of the steep west bank. However, the pipeline corridor and stream channel at that location would be restored to stable conditions that would not alter drainage patterns. The remainder of the pipeline corridor would be restored to pre-project contours, to the extent feasible. Surface flow within the creek would be restored to normal conditions subsequent to construction. In addition, surface runoff would not be increased, as paving would not occur as part of the project. Therefore, impacts would be *less than significant*.

Surface water runoff impacts associated with construction and operation of the Alternative B alignment would be similar to those associated with the Preferred Alternative, as construction of the pipeline in both alignments would generally be the same with respect to surface water runoff.

Mitigation Measures

As impacts associated with alteration of surface runoff would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.7.3.6 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 stream crossings. SPTT, Glen Anne, and Corona Del Mar turnout structures, as well as the Glen Anne meter are substantially corroded; therefore, these structures would need to be replaced as part of the site improvements. Additionally, existing downstream degradation of all stream crossings would require substantial improvements to protect the pipeline.

Similar to the Preferred Alternative, construction related impacts described in **Impact HYDRO/WQ-1** associated with potential petroleum and/or hazardous materials spills into Glen Annie and West Fork Glen Annie creeks would occur. However, impacts would be less than those associated with the Preferred Alternative, due to substantially less construction and no construction within the creek bottoms.

Similarly, less than significant construction- and operations-related impacts described in **Impacts HYDRO/WQ-2 and HYDRO/WQ-3** would occur under this alternative. However, impacts would be less than those associated with the Preferred Alternative, due to substantially less construction.

Mitigation Measures

Implementation of **Mitigation Measure GEO-2** (Section 3.5), requiring adherence to erosion control measures during pipeline construction, and **Mitigation Measure HAZ-1** (Section 3.6), requiring implementation of a Construction Related Storm Water Pollution Prevention Plan, would reduce potential surface water quality impacts.

Residual Impacts

The residual impact would be *less than significant*.

3.7.3.7 No Action Alternative

Similar to existing conditions, operation and maintenance of existing SCC facilities would have *no impact* on hydrology and water quality. In the event of a structure failure at the SPTT or pipeline failure at either of the creek crossings, release of a large volume of water would result in substantial erosion and deposition of soil in the creeks. For a failure at the SPTT, water would flow into West Fork of Glen Annie Creek and then into Glen Annie Reservoir. A pipeline failure at the West Fork would have essentially the same effects on the creek. A pipeline failure at the main stem of Glen Annie Creek would result in erosion and soil deposition downstream to Goleta Slough. Such an event would have temporary impacts to water quality in the creeks that would be *significant and unavoidable*. Repair of the failed structure and erosion would also cause short-term soil disturbances similar to those associated with construction of the Preferred Alternative pipeline. Impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Continued operation and maintenance of the existing facilities would have no impacts and no mitigation is necessary. Implementation of **Mitigation Measure GEO-2** (Section 3.5), requiring adherence to erosion control measures, and **Mitigation Measure HAZ-1** (Section 3.6), requiring implementation of a Construction Related Storm Water Pollution Prevention Plan, would reduce potential surface water quality impacts during structure and erosion repair. No mitigation is feasible for a structure failure.

Residual Impacts

The residual impact would be *less than significant* for repair activities and *significant and unavoidable* for structure failure. There would be no residual impact from continued regular operations and maintenance.

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3.8 LAND USE

This section discusses existing land uses at and adjacent to the proposed project site and determines proposed project compatibility with existing and surrounding land uses.

3.8.1 Environmental Setting

The project site is located in Glen Annie Canyon, north of the City of Goleta, in Santa Barbara County, California. The project site has a County Comprehensive Plan land use designation of AG-II-100 (Agricultural, 100-acre minimum parcel size) and AC (Agricultural Commercial), and the existing zoning designation under County Ordinance Article III is AG-II-100 (Agricultural, 100-acre minimum parcel size).

The existing project site land uses consist of primarily remote, open land, with limited agriculture (i.e., avocado and citrus orchards), water distribution facilities, and a Southern California Edison power transfer sub-station. Onsite agricultural operations consist of daily farming activities including irrigation, weed abatement, road maintenance, irrigation maintenance, crop spraying, tree trimming, crop picking, and nighttime frost protection measures. These activities typically occur seven days a week and up to 24 hours per day. Existing SCC pipeline maintenance and operational activities include periodic checks of the cathodic protection system, annual inspection of the air valves and blowoff valves, annual inspection of the right-of-way for encroachments, and annual internal inspections.

3.8.2 Impacts and Mitigation

3.8.2.1 Methodology

This analysis evaluates land use consistency and compliance of the proposed project with adopted plans and policies governing land use and development on the project site, including the County of Santa Barbara Comprehensive Plan and its Elements, the Zoning Ordinance, and other applicable plans.

The land use analysis also evaluates the potential for the proposed project to introduce incompatible land uses relative to existing surrounding land uses or activities. This analysis includes an evaluation of the extent to which off-site land uses may be affected by physical interruption or disruption, or the extent to which other environmental impacts also constitute land use impacts.

3.8.2.2 Significance Criteria

Impacts on land use would be considered significant under the following circumstances:

LU-1: Create structures and/or land uses incompatible with existing land use;

LU-2: Disrupt or divide the physical arrangement of an established community; or

LU-3: Conflict with any applicable land use plan, applicable habitat conservation plan, or natural community conservation plan.

3.8.2.3 Preferred Alternative

Impact LU-1: ***The Preferred Alterative pipeline alignment would not result in incompatibilities with existing land uses.***

The existing land use designation for lands within the Preferred Alternative alignment is AG-II-100 and AC, both of which designate agricultural uses. The Preferred Alternative involves construction and operation of a

water supply pipeline that would cross both private and public lands. When crossing private land, the pipeline would be placed within a permanent easement obtained from the landowner. Easements provide the non-property owner the right to make specific use of land owned by another person. Easements are granted by the owner of the property to the person using the property. The right to construct an underground pipeline is a common utility easement. During construction, a temporary construction easement would be required to accommodate the equipment, trench, and construction activities. The temporary construction easement would be a maximum of 100 feet (30.5 meters) wide, and a minimum of 50 feet (15.2 meters) wide, depending on topographic or other constraints. The temporary easement would also include extra space for staging areas. During operations, COMB personnel would periodically check appurtenant structures, such as blowoff valves and air release valves, to ensure operability within the permanent easement.

The majority of the Preferred Alternative pipeline route is located within USA Property or USA Easements (Figure 2-3). As these lands are owned by Reclamation and/or within an existing easement, no additional easements would be required. Approximately 150 feet (46 meters) of pipeline would border the existing USA Easement at the southernmost point of the proposed pipeline route. This easement would need to be extended in order to accommodate for both the temporary construction and permanent easements that would be required during construction and operation. Additionally, approximately 800 feet (244 meters) of pipeline runs through private land near the pipeline terminus at the CDMWTP. Both a temporary construction and permanent easement would be required to accommodate this pipeline segment.

Easements are legal agreements that provide the non-property owner the right to make specific use of land owned by another entity. The right to construct an underground pipeline is a common utility easement. For the Preferred Alternative, an easement would be granted by the adjacent private landowners to COMB in order to allow construction of the proposed pipeline across their property. As the easement would ensure the conditional use of private property, impacts on existing land uses would be *less than significant*.

Mitigation Measures

As impacts on the existing land use would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact LU-2: ***Construction of the Preferred Alternative pipeline alignment would not disrupt or divide any established communities.***

Construction of the Preferred Alternative pipeline alignment would not disrupt or divide any established communities because no communities are located within the project area. The only residential structures within the project vicinity are two ranch houses located at least 250 feet (99 meters) from the Preferred Alternative pipeline alignment. The temporary construction easement for the Preferred Alternative would be a maximum of 100 feet (30.5 meters) wide. In areas with topographic or other constraints, the width could be as narrow as 50 feet (15.2 meters). In addition to the temporary construction easement, staging areas would be provided along the pipeline route for equipment, supplies, and vehicle parking. Neither of the ranch house structures would be located within the temporary construction easement or the staging areas; therefore, they would not be disrupted by project construction. As no established communities would be disrupted by construction of the Preferred Alternative, there would be *no impact*.

Mitigation Measures

As there would be no impact on established communities, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

Impact LU-3: ***The Preferred Alternative 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.***

Construction and operation of the Preferred Alternative pipeline alignment would not result in inconsistencies with plans and policies contained in the Santa Barbara County Comprehensive Plan. Without mitigation, some inconsistencies would exist with regards to vegetation removal, grading activities, and noise generation; however, implementation of the resource specific mitigation measures included in the various resource sections contained in this EIS/EIR (i.e., Biological Resources, Cultural Resources, Geology and Soils, and Noise) would ensure compliance with plans and policies. All applicable plans and policies are discussed in Section 3.8.3, and related mitigation measures are described. No existing habitat conservation plans or natural community conservation plans apply to the project area. As resource specific mitigation measures would ensure consistency with the plans and policies contained in the Santa Barbara County Comprehensive Plan, impacts on land use would be *less than significant*.

Mitigation Measures

As impacts on land use would be less than significant with implementation of resource specific mitigation measures, no additional land use mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.8.2.4 Alternative A (Parallel Pipeline)

Impact LU-1: ***The Alternative A pipeline alignment would not result in incompatibilities with the existing land use.***

The existing land use designation for lands within the Alternative A alignment is AG-II-100 and AC, both of which designate agricultural uses. As described for the Preferred Alternative, Alternative A involves construction and operation of a water supply pipeline that would cross both private and public lands and would require easements from private landowners. On federal lands, no easements would be required, but the width of the work area would be the same as on private land. During operations, COMB personnel would periodically check appurtenant structures, such as blowoff valves and air release valves, to ensure operability.

The majority of the Alternative A pipeline alignment is located within USA Property or USA Easements (Figure 2-3). As these lands are owned by Reclamation and/or within an existing easement, no additional easements would be required. However, approximately 150 feet (46 meters) of pipeline would border the existing USA Easement at the southernmost point of the proposed pipeline route. This easement would need to be extended in order to accommodate for both the temporary construction and permanent easements that would be required during construction and operation. Under Alternative A, the adjacent private landowners would enter into an easement with COMB that would authorize the construction of the proposed pipeline across their property. As the easement would ensure the conditional use of private property, impacts on existing land uses would be *less than significant*.

Mitigation Measures

As impacts on the existing land use would be *less than significant*, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact LU-2: ***Construction of the Alternative A pipeline alignment would not disrupt or divide any established communities.***

Similar to the Preferred Alternative, construction of the Alternative A pipeline alignment would not disrupt or divide any established communities because no communities are located within the project area. The only residential structures within the project vicinity are two ranch houses located at least 500 feet (152 meters) from the proposed Alternative A alignment. In addition to the temporary construction easement, staging areas would be provided along the pipeline route for equipment, supplies, and vehicle parking. Neither of the ranch house structures would be located within the temporary construction easement or the staging areas; therefore, they would not be disrupted by project construction. As no established communities would be would be disrupted by construction of Alternative A, there would be *no impact*.

Mitigation Measures

As there would be no impacts on established communities, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

Impact LU-3: ***The proposed Alternative A 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.***

As described for the Preferred Alternative, construction and operation of the Alternative A pipeline alignment would not result in inconsistencies with plans and policies contained in the Santa Barbara County Comprehensive Plan. Without mitigation, some inconsistencies would exist with regards to vegetation removal, grading activities, and noise generation; however, implementation of the resource specific mitigation measures included in the various resource sections contained in this EIR/EIS (i.e., Biological Resources, Cultural Resources, Geology and Soils, and Noise) would ensure compliance with plans and policies. All applicable plans and policies are discussed below in Section 3.8.3, and related mitigation measures are described. No existing habitat conservation plans or natural community conservation plans apply to the project area. As resource specific mitigation measures would ensure consistency with Santa Barbara County Comprehensive Plan plans and policies, impacts on land use would be *less than significant*.

Mitigation Measures

As impacts on land use would be less than significant with implementation of resource specific mitigation measures, no additional land use mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.8.2.5 Alternative B (Non-Parallel Pipeline)

Impact LU-1: ***The Alternative B pipeline alignment would not result in incompatibilities with the existing land use.***

The existing land use designation for lands within the Alternative B alignment is AG-II-100 and AC, both of which designate agricultural uses. The Alternative B pipeline route would cross both private and public lands. Both permanent and temporary easements would be required for the pipeline segments crossing private land, as described for the Preferred Alternative. On federal lands, no easements would be required.

Approximately 2,400 feet (732 meters) of the Alternative B pipeline alignment would be located within privately owned land (Figure 2-3). This pipeline segment, located within the lower half of the pipeline route towards the CDMWTP, would require both temporary construction and permanent easements. Under Alternative B, the adjacent private landowners would enter into an easement with COMB that would authorize the construction of the proposed pipeline across their property. As the easement would ensure the conditional use of private property, impacts on existing land uses would be *less than significant*.

The remainder of the pipeline alignment would be located within USA Property and USA Easements. As these lands are owned by Reclamation and/or within an existing easement, no additional easements would be required.

Mitigation Measures

As impacts on the existing land use would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact LU-2: ***Construction of the Alternative B pipeline alignment would not disrupt or divide any established communities.***

The Alternative B alignment does not pass through or adjacent to any established communities, as previously described for the Preferred Alternative. The only residential structures within the Alternative B vicinity are two ranch houses located at least 250 feet (99 meters) from the proposed Alternative B alignment. Neither of the ranch house structures would be located within the temporary construction easement or staging areas; therefore, they would not be disrupted by project construction or operation. As no established communities would be would be disrupted by construction of Alternative B, there would be *no impact*.

Mitigation Measures

As there would be no impacts on established communities, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

Impact LU-3: ***The proposed Alternative B 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.***

Similar to the Preferred Alternative, construction and operation of the Alternative B pipeline alignment would not result in inconsistencies with plans and policies contained in the Santa Barbara County Comprehensive Plan. Without mitigation, some inconsistencies would exist with regards to vegetation removal, grading activities, and noise generation; however, implementation of the resource specific mitigation measures included in the various resource sections contained in this EIR/EIS (i.e., Biological Resources, Cultural Resources, Geology and Soils, and Noise) would ensure compliance with plans and policies. All applicable plans and policies are discussed below in Section 3.8.3, and related mitigation measures are described. No existing habitat conservation plans or natural community conservation plans apply to the project area. As resource specific mitigation measures would ensure consistency with Santa Barbara County Comprehensive Plan plans and policies, impacts on land use would be *less than significant*.

Mitigation Measures

As impacts on land use would be less than significant with implementation of resource specific mitigation measures, no additional land use mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.8.2.6 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 stream crossings. All maintenance and operational activities associated with the No Project Alternative would occur within the existing easement surrounding the established pipeline alignment route, and incompatibilities with existing land uses would not occur. Similar to described for the three project alternatives, there are no established communities in the project vicinity; only two residential structures are located at least 500 feet (152 meters) from the existing pipeline. The No Project Alternative would therefore not disrupt or divide any established communities. Lastly, as no substantial construction or change in operations would result under this alternative, no inconsistencies with applicable land use and conservation plans and policies contained in the Santa Barbara County Comprehensive Plan would result. The No Project Alternative would have *less than significant* impacts on land use.

Mitigation Measures

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

Residual Impacts

The residual impact would be *less than significant*.

3.8.2.7 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 land use. 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. Construction to repair the failed structure would occur within the existing easement, would not disrupt existing communities, and would be consistent the Santa Barbara County Comprehensive Plan. Therefore, there would be *no impact* resulting from these activities under the No Action Alternative. Repairs of environmental damage caused by the water release would be outside the existing easement. For failure of the SPTT, agricultural land use downslope to Glen Annie Reservoir could be temporarily affected due to erosion and soil deposition. Similarly, failure of the pipeline at the main stem Glen Annie Creek crossing would have the potential to damage agricultural lands adjacent to the creek if flooding were to occur in planted areas. These effects on land use would be temporary, and impacts would be *less than significant*. The effects of water supply disruption on local communities are addressed in Section 3.12.4.

Mitigation Measures

As there would be no impact on land use, no mitigation is necessary.

Residual Impacts

There would be no residual impact.

3.8.3 Consistency with Plans and Policies

This section provides a preliminary analysis of the proposed project's consistency with County plans and policies. A final determination of project consistency with plans and policies will be made by County decision-makers. The Santa Barbara County Comprehensive Plan polices and recommendations discussed below are applicable to the project site.

3.8.3.1 Land Use Element

Land Use Designation and Zoning

The project site has land use designations of AG-II-100 and AC, and is zoned AG-II-100. The adjacent private landowners would enter into an easement with COMB that would authorize the construction and operation of the proposed pipeline on their property.

Comment: Consistent. Easements are legal agreements that provide the non-property owner the right to make specific use of land owned by another entity. For the proposed project, COMB would enter into an easement agreement with the respective private property owners that would allow construction and operation of the pipeline across their property. As the easement would ensure the conditional use of private property, the proposed project would be consistent with the existing land use and zoning designations.

Hillside and Watershed Protection Policies

***Hillside and Watershed Protection Policy #1*:** Plans for development shall minimize cut and fill operations. Plans requiring excessive cutting and filling may be denied if it is determined that the development could be carried out with less alteration of the natural terrain.

Comment: Consistent. The pipeline would be installed using an open trench construction method. The trench would be excavated, soil would be temporarily stockpiled adjacent to the trench, the pipe would be placed in the trench, and the trench would finally be backfilled and compacted. The width of the construction 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. Proposed construction activities would minimize cut and fill operations to the extent feasible, resulting in a temporary alteration of the topography, which would be restored upon project completion.

***Hillside and Watershed Protection Policy #2*:** All development shall be designed to fit the site topography, soils, geology, hydrology, and any other existing conditions and be oriented so that grading and other site preparation is kept to an absolute minimum. Natural features, landforms, and native vegetation, such as trees, shall be preserved to the maximum extent feasible. Areas of the site which are not suited to development because of known soil, geologic, flood, erosion or other hazards shall remain in open space.

*Comment: Consistent. As discussed in Section 2.3, the amount of grading would depend primarily on the topography because the work space needs to be fairly level. Areas of steeper slopes will require more grading; however, grading will be kept to a minimum. Specifically, side slopes have been avoided where feasible. The project has incorporated proposed pipeline alignments into existing roads alongside slopes, where feasible, to minimize grading. Implementation of **Mitigation Measures BIO-1.1, BIO-1.3, BIO -3,** and **BIO-5** (Section 3.3) would preserve or protect natural vegetation, including the Santa Barbara honeysuckle, special status species, and oak trees. Additionally, **Mitigation Measures BIO-1.2, BIO-1.4, BIO-2.1, BIO-2.2,** and **BIO-4a** (Section 3.3) would restore natural vegetation and plant communities to the extent feasible both on- and off-site.*

***Hillside and Watershed Protection Policy #3*:** For necessary grading operations on hillsides, the smallest practical area of land shall be exposed at any one time during development, and the length of exposure shall be kept to the shortest practicable amount of time. The clearing of land should be avoided during the winter rainy season and all measures for removing sediments and stabilizing slopes should be in place before the beginning of the rainy season.

*Comment: Consistent. Construction would be scheduled to avoid grading and filling activities during the rainy season, as described in Section 2.3.3. Due to the high erosion potential of onsite soils and steep terrain, backfilling would be complete prior to rains or the contractor would be prepared to stabilize disturbed soils and stockpiles from erosion prior to any forecast rain. Additionally, implementation of **Mitigation Measure GEO-2** (Section 3.5) would reduce the erosion potential through the use of energy dissipation measures, sedimentation basins, straw bale/filter fabric barriers, erosion control matting, water bars, and race wattles.*

Hillside and Watershed Protection Policy #4: Sediment basins (including debris basins, desilting basins, or silt traps) shall be installed on the project site in conjunction with the initial grading operations and maintained through the development process to remove sediment from runoff waters. All sediment shall be retained onsite unless removed to an appropriate dumping location.

*Comment: Consistent. **Mitigation Measure GEO-2** requires that sedimentation basins be used for dewatering discharge points to prevent excess downstream sedimentation. These basins would be constructed prior to dewatering and regularly maintained during construction, including after storm events, to ensure all basins remain in good working order.*

Hillside and Watershed Protection Policy #5: Temporary vegetation, seeding, mulching, or other suitable stabilization methods shall be used to protect soils subject to erosion that have been disturbed during grading or development. All cut and fill slopes shall be stabilized as rapidly as possible with planting of native grasses and shrubs, appropriate non-native plants, or with accepted landscaping practices.

*Comment: Consistent. **Mitigation Measure GEO-2** requires that straw bale/filter fabric barriers, backed by wire fencing for strength, be installed at the base of disturbed slopes to reduce short-term erosion*

impacts prior to plant growth. After final grading, a Revegetaion Plan (Section 2.3.2) would be implemented to restore disturbed areas to pre-project condition, as described in ***Mitigation Measure BIO-1.2, BIO-2.1, BIO-2.2,*** *and* ***BIO-4a*** *(Section 3.3). Grasses, herbs, shrubs, and smaller trees would be planted within disturbed areas.*

Hillside and Watershed Protection Policy #7: Degradation of the water quality of groundwater basins, nearby streams, or wetlands shall not result from development of the site. Pollutants, such as chemicals, fuels, lubricants, raw sewage, and other harmful waste, shall not be discharged into or alongside coastal streams or wetlands either during or after construction.

Comment: Consistent. ***Mitigation Measures GEO-2*** *(Section 3.5) and* ***HAZ-1*** *(Section 3.6) require implementation of a SWPPP. These plans would include a description of BMPs, including spill prevention measures, spill containment equipment, and monitoring requirements. Additionally, as described in Section 3.6, the following pollution prevention measures would be followed: if rain occurs when concrete is poured, plastic sheets will be spread and secured over the concrete; concrete trucks will be washed out in a designated area where the material cannot run off into the stream or percolate into the groundwater; equipment will be inspected and maintained prior to working in or immediately adjacent to West Fork or main stem of Glen Annie Creek; and a Hazardous Materials Business Plan would be prepared prior to equipment use on the site and followed for project construction.*

Streams and Creeks Policies

Streams and Creeks Policy #1: All permitted construction and grading within stream corridors shall be carried out in such a manner as to minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.

Comment: Consistent. ***Mitigation Measure GEO-2*** *(Section 3.5) ensures that erosion, sedimentation, and runoff would be controlled through the use of a SWPPP, energy dissipation measures, sedimentation basins, straw bale/filter fabric barriers, erosion control matting, water bars, and rice wattles. Additionally,* ***Mitigation Measure HAZ-1*** *(Section 3.6), also requiring a SWPPP, would further minimize impacts from increased runoff, sedimentation, biochemical degradation, or thermal pollution.*

Historical and Archaeological Sites Policies

Historic and Archaeological Policy #1: All available measures, including purchase, tax relief, purchase of development rights, etc., shall be explored to avoid development on significant historic, prehistoric, archaeological, and other classes of cultural sites.

Comment: Consistent. The project would be located in an associated with archaeological sites CA-SBA-1775 and CA-SBA-3923. Mitigation Measure CR-1 would determine if any significant archaeological sites are located in the project vicinity through the requirement of a Phase 2 significance evaluation. Should significant archaeological sites be found, the site would either be avoided or a Phase 3 data recovery would be performed. This measure would avoid development on significant archaeological sites, ensuring consistency with this policy.

Historic and Archaeological Policy #2**:** When developments are proposed for parcels where archaeological or other cultural sites are located, project design shall be required which avoids impacts to such cultural sites if possible.

Comment: Consistent. The project could result in the partial destruction of intact cultural remains associated with archaeological sites CA-SBA-1775 and CA-SBA-3923. ***Mitigation Measure CR-1*** *would*

require that a Phase 2 significance evaluation be conducted at each site to determine NRHP/CRHR eligibility. Further, if a site is found to be eligible for the NRHP/CRHR, then Mitigation ***Measure CR-1*** *recommends avoidance through project redesign. As this measure would avoid impacts to cultural sites through evaluation and avoidance, implementation would ensure consistency with this policy.*

Historic and Archaeological Policy #3: When sufficient planning flexibility does not permit avoiding construction on archaeological or other types of cultural sites, adequate mitigation shall be required. Mitigation shall be designed to accord with guidelines of the State Office of Historic Preservation and the State of California Native American Heritage Commission.

Comment: Consistent. The project could damage archaeological sites CA-SBA-1775 and CA-SBA-3923. ***Mitigation Measure CR-1*** *recommends avoidance of any sites found to be eligible for the NRHP/CRHR; however, if avoidance is not feasible, then a Phase 3 data recovery excavation is required. Additionally, this measure would require preconstruction meetings to inform construction personnel about the protocol to follow should artifacts be uncovered and monitoring of ground disturbing construction. Lastly, this measure would require that construction activities be halted in the event that archaeological resources are discovered.* ***Mitigation Measure CR-1*** *would provide adequate mitigation in the event that avoidance of cultural sites is not feasible, therefore ensuring consistency with this policy.*

Historic and Archaeological Policy #4: Off-road vehicle use, unauthorized collection of artifacts, and other activities other than development which could destroy or damage archaeological or other cultural sites shall be prohibited.

Comment: Consistent. Vehicle use would only occur along designated roadways and within temporary construction easements. Construction easements would be evaluated for NRHP/CRHR eligibility as part of ***Mitigation Measure CR-1*** *to ensure that no archeological sites would be damaged during project construction. Should a site be determined as NRHP/CRHR eligible, then either avoidance or data recovery would occur, thereby preserving any archaeological artifacts. In addition, this measure would require a preconstruction meeting to inform construction personnel bout common types of artifacts that may be uncovered during construction, the importance of cultural resources, and reporting requirements and responsibilities. This meeting would prevent unauthorized collection of artifacts. Implementation of* ***Mitigation Measure CR-1*** *would ensure consistency with this policy.*

Historic and Archaeological Policy #5: Native Americans shall be consulted when development proposals are submitted which impact significant archaeological or cultural sites.

Comment: Consistent. Consultation with local Native Americans regarding project components would be performed prior to project construction activities. In addition, ITAs would be analyzed to determine potential impacts to tribal lands and resources.

Other Open Land Policies

Other Open Land Policy #1: Preservation of open lands shall be encouraged under the Williamson Act.

Comment: Consistent. Numerous parcels along the project route are part of the Williamson Act. The contract acts as an agreement between landowners and counties to voluntarily restrict land to agricultural and compatible uses. According to the County Agricultural Commissioner, underground utility line construction is an allowable, compatible use under the Williamson Act (personal communication, William Gillette 2007), therefore ensuring consistency with this policy.

Visual Resources Policies

Visual Resources Policy #2: In areas designated as rural on the land use plan maps, the height, scale, and design of structures shall be compatible with the character of the surrounding natural environment, except where technical requirements dictate otherwise. Structures shall be subordinate in appearance to natural landforms; shall be designed to follow the natural contours of the landscape; and shall be sited so as not to intrude into the skyline as seen from public viewing places.

Comment: Consistent. The proposed project would not introduce any new structures that would be incompatible with the character of the surrounding natural environment. The proposed water supply pipeline would be located underground and would not be visible from any public viewing places.

3.8.3.2 Seismic Safety and Safety Element

Objectives

Objective #1: Avoid construction of buildings of all types and most structures on or across historically active or active faults. The appropriate setback distances from the trace of the fault would be variable, depending on the conditions, but normally would be a minimum of at least fifty feet on either side of the sheared zone.

Comment: Consistent. The nearest known active faults to the project site include the Los Carneros Fault, located approximately 0.4 mile (0.6 kilometer) to the south, the Glenn Annie Fault, located approximately 1.1 miles (1.8 kilometers) to the south, and the Santa Ynez Fault, located approximately 5 miles(8 kilometers) to the north (Dibblee 1987a, 1987b; Jennings 1994). No potentially active or active faults have been identified on the project site.

Objective #2: Because active fault zones are not suitable for construction sites, they should be developed for non-structural uses or left in an undeveloped natural state. In view of the normally narrow width of the zone (100 feet minimum) in which building should be avoided, the zone would be a suitable location for trails or narrow green belts, possibly adjacent to residential or commercial areas.

Comment: Consistent. As discussed above, no potentially active or active faults have been identified on the project site. Surface fault rupture is not anticipated along the pipeline alignment, as no known active faults traverse the project site and the site does not lie within an Alquist-Priolo Fault Zone.

Fire Hazard Recommendations

Fire Hazard Recommendation #2: All land development (including grading and clearing) in high fire hazard or extreme fire hazard areas should be subject to conditional use permit regulations and review by the County Fire Prevention Officer, and where appropriate, by responsible federal or state agencies.

Comment: Consistent. The project vicinity has been characterized as a very high fire hazard zone (California Department of Forestry 2007). However, the project would include implementation of a Fire Prevention Plan (Section 2.3.2) that would be reviewed by the County Fire Prevention Officer and any responsible federal or state agencies. As the Fire Prevention Plan would be reviewed by the parties required by Fire Hazard Recommendation #2, the project would be consistent with this policy.

Fire Hazard Recommendation #3: The County should require that land development proposals in each of the fire hazard areas shown on the County-wide Fire Hazards map be accompanied by detailed plans for fire prevention and control prepared in accordance with prescribed County regulations. Separate criteria for the preparation of these plans should be prescribed for each of the three fire hazard areas in consultation with

responsible federal and state agencies. Once these criteria have been adopted, existing development should be evaluated to determine whether it conforms with the regulations. Owners whose property does not comply with the regulations should be required to make necessary improvements within a reasonable time, or to submit an alternate plan for fire prevention and control that is acceptable to the County Fire Prevention Officer.

*1. Comment: Consistent. As the project site is located within a very high fire hazard area, the project has been designed to ensure compliance with this recommendation through implementation of a Fire Prevention Plan (Section 2.3.2). Implementation of the Fire Prevention Plan would ensure compliance with Public Resource Code Section 4291 and County Fire Department requirements for construction activities in high-fire hazard areas. The Fire Prevention Plan would prevent the likelihood of fire by requiring that s*moking occurs only in enclosed vehicles or areas cleared of vegetation, no open fires are permitted, vehicle operation and parking is limited to the cleared work area, portable tools with internal combustion engines are equipped with spark arrestors, construction crews are trained in fire prevention and response, all vehicles in the work area are equipped with a minimum 2 lb fire extinguisher, procedures are established for reporting wildfires (including radio and telecommunication protocols), and compliance with California's Fire Laws.

3.8.3.3 Noise Element

Policy #1: In the planning of land use, 65 dB Day-Night Average Sound Level should be regarded as the maximum exterior noise exposure compatible with noise-sensitive uses unless noise mitigation features are included in project designs.

Comment: Consistent. Proposed project operation would not result in noise levels exceeding 65 dB; however, project construction would result in significant, short-term sources of noise. Implementation of ***Mitigation Measures NOISE-1.1*** *through* ***NOISE-1.3****, as described in Section 3.9, would reduce construction related noise levels to below 65 dB, thereby ensuring consistency.*

3.8.3.4 Environmental Resources Management Element (ERME)

ERME Factors

Existing croplands with a moderate or low soil series rating or on Class III and IV soils. Even though these may not be as productive as prime soils lands, for similar reasons these agricultural lands should be preserved insofar as possible.

Comment: Consistent. During project construction, an avocado orchard would be disturbed. However, this orchard would be replanted after construction is complete as part of the proposed project, therefore preserving the cropland and ensuring consistency with the ERME.

3.9 NOISE

This section addresses the existing noise environment associated with the project site and surrounding area and analyzes the changes that would result from development of the proposed project.

3.9.1 Fundamentals of Noise

Vibrations, traveling as waves through air from a source, exert a force perceived by the human ear as sound. Sound pressure level (referred to as sound level) is measured on a logarithmic scale in decibels (dB) that represent the fluctuation of air pressure above and below atmospheric pressure. Because this is a logarithmic scale, a doubling of sound energy results in a 3 dB increase in noise levels. A noise level change of less than 3 dB is considered imperceptible to the human ear.

An individual's noise exposure occurs over a period of time. Noise level is a measure of noise at a given instant in time. Community noise sources vary continuously, being the product of many noise sources at various distances, all of which constitute a relatively stable background or ambient noise environment. The background (or ambient) noise level gradually changes throughout a typical day, corresponding to distant noise sources such as traffic volume as well as changes in atmospheric conditions.

Noise levels are generally higher during the daytime and early evening when traffic (including airplanes), commercial, and industrial activity is the greatest. Noise sources experienced during night-time hours, however, when background levels are generally lower can be potentially more conspicuous and irritating to the receiver. In order to evaluate noise in a way that considers periodic fluctuations experienced throughout the day and night, noise measurements are weighted and added over a 24-hour period to reflect magnitude, duration, frequency, and time of occurrence. The acoustical scale and units of measurement developed to represent the "average" sound over a 24-hour period, as used in this EIS/EIR, include the following:

- *A-weighted decibel* (dBA) is a decibel logarithmic scale that more heavily weights frequencies to which the human ear is sensitive.
- *Equivalent sound level* (L_{EQ}) is the constant level that, over a given time period, transmits the same amount of acoustic energy as the actual time-varying sound. Equivalent sound levels are the basis for both the day-night average sound levels *(*L_{DN}) and Community Noise Equivalent Level (CNEL) scales.
- *Day-night average sound levels (*L_{DN}*)* are a measure of the cumulative noise exposure of the community. The L_{DN} value results from a summation of hourly L_{DN}'s over a 24-hour time period, with an increased weighting factor applied to the nighttime period between 10:00 P.M. and 7:00 A.M. This noise rating scheme takes into account those subjectively more annoying noise events which occur during the normal sleeping hours.
- *Community Noise Equivalent Level (CNEL)* is a decibel scale that weights noise that occurs during the evening (7 P.M. to 10 P.M.) by 5 dBA and during the night (10 P.M. to 7 A.M.) by 10 dBA to account for increased sensitivity to noise after dark. Because of the weighting factors applied, the CNEL value at a given location will always be greater than the L_{DN} value. However, the results of numerous noise source measurements have shown that CNEL and L_{DN} values consistently are within 1.0 dBA of each other. Consequently, CNEL and L_{DN} values are sometimes used interchangeably in planning analyses. By contrast, L_{EQ} values have been found to be consistently less than CNEL and L_{DN} measurements taken over the same 24-hour period.

3.9.1.1 Sensitive Receptors

Whether a sound is considered unpleasant depends on the individual who hears the sound and the setting and circumstance in which the sound is heard. While performing certain tasks, people expect and accept certain sounds that may be considered unpleasant under other circumstances. For example, if a person works in an

office, sounds from office machines are generally acceptable and not considered unduly unpleasant or unwanted. By comparison, when resting or relaxing, these same sounds may be intolerable. Because individuals' tolerance for noise varies by setting and context, some land uses are more sensitive to changes in the noise environment. Residences, motels and hotels, schools, libraries, churches, parks, and outdoor recreation areas are generally more sensitive to noise than are commercial and industrial land uses.

3.9.1.2 Human Perception of Noise Level Change

Under controlled conditions, the human ear is able to discern changes in sound levels of 1 dBA when exposed to steady, mid-frequency "pure tone" signals. In a normal noise environment outside of controlled conditions, an individual barely detects changes in sound levels that are less than 2 dBA. Changes between 2 and 3 dBA may be perceived by some individuals who are extremely sensitive to changes in noise. However, it is recognized that changes of more than 3 dBA are generally perceptible; the human ear perceives a 10 dBA increase as a doubling of sound.

3.9.1.3 Distance Attenuation

Noise sources are classified in two forms: (1) point sources, such as stationary equipment; and (2) line sources, such as a roadway with a large number of pass-by sources (motor vehicles). Sound generated by a point source typically diminishes (attenuates) at a rate of 6 dBA for each doubling of distance from the source to the receptor at acoustically "hard" sites and 7.5 dBA at acoustically "soft" sites. A "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt or concrete surfaces, and very hard-packed soils. An acoustically "soft" or absorptive site is characteristic of unpaved, vegetated ground. For example, a 60 dBA noise level measured at 50 feet (15 meters) from a point source at an acoustically hard site would be 54 dBA at 100 feet (31 meters) from the source and 48 dBA at 200 feet (61 meters) from the source. A noise level generated over an acoustically "soft" site would attenuate from a 60 dBA noise level measured at 50 feet (15 meters) from a point source to 52.5 dBA at 100 feet (31 meters) from the source and 45 dBA at 200 feet (61 meters) from the source.

3.9.1.4 Structural Attenuation

Sound levels can also be attenuated by man-made or natural barriers. Solid walls, berms, or elevation differences typically reduce noise levels by 5 to 10 dBA. Structures can also provide noise reduction by insulating interior spaces from outdoor noise. The exterior-to-interior noise attenuation provided by typical California building structures range between 17 and 30 dBA with open and closed windows, respectively (Table 3.9-1).

Table 3.9-1. Outside-to-Inside Noise Attenuation, dB

Building Type	*Open Windows*	*Closed Windows*
Residences	17	25
Schools	17	25
Churches	20	30
Hospitals/Offices	17 to 20	25 to 30
Theaters	17	25

Source: Transportation Research Board, National Research Council, 2000. *Highway Noise: A Design Guide for Highway Engineers.* National Cooperative Highway Research Program Report 117.

3.9.2 Environmental Setting

The project site and nearby vicinity are primarily exposed to noise generated by traffic from nearby roadways, with intermittent noise exposure from surrounding agriculture operations, the CDMWTP, the SCE transmission lines and substation, and maintenance of existing pipeline facilities. The primary noise sources currently affecting the project area are vehicle noise on Glen Annie Road, over 2,000 feet (610 meters) from the project site. Little traffic presently exists on Glen Annie Road, which is the only roadway within the project vicinity, and vehicular noise levels are therefore minimal. The SCE substation, an operational noise source, is located over 1,500 feet (457 meters) from all proposed pipeline alignments.

3.9.2.1 Noise Sensitive Receptors

Noise sensitive receptors within the project vicinity include two farmhouse residences located approximately 500 feet (152 meters) or more from the existing pipeline alignment. These residences are located approximately 500 feet (152 meters) from the Alternative A alignment, and 250 feet (76 meters) from the Preferred Alternative and Alternative B alignments. No schools, hospitals, churches, or other noise sensitive receptors are located within the project vicinity.

3.9.3 Regulatory Setting

3.9.3.1 Santa Barbara County Comprehensive Plan

Policy 1 of the Santa Barbara County Comprehensive Plan Noise Element prescribes exterior noise level limits. Specifically, this policy sets a 65 dB Day-Night Average Sound Level as the maximum exterior noise exposure compatible with noise-sensitive uses.

3.9.4 Impacts and Mitigation

3.9.4.1 Methodology

Assessment of noise impacts is based on the following: (1) current motor vehicle noise conditions near the project site; and (2) review of various site parameters including the traffic volume, vehicle mix and speed, the roadway configuration, the distance to the receiver, and the acoustical characteristics of the site.

3.9.4.2 Significance Criteria

The Santa Barbara County Noise Thresholds (1993) are based on the County Comprehensive Plan Noise Element (Santa Barbara County 1993). The proposed project would result in a significant noise impact if it would result in one or more of the following conditions:

NOISE-1: Generate short-term noise levels exceeding 65 CNEL that could affect sensitive receptors;

NOISE-2: Generate long-term exterior noise levels exceeding 65 dB CNEL and/or interior noise levels exceeding 45 dB CNEL that could affect sensitive receptors; or

NOISE-3: Substantially increase the existing noise levels of adjacent areas.

The industry criteria for significance recognizes that once the threshold level has been passed, any noticeable change above that level (a 3 dBA increase) results in further degradation of the noise environment. A clearly noticeable change of 5 dBA in the noise environment, regardless of whatever acceptability threshold is reached, is also a significant impact because people will respond to such change in noise level regardless of the absolute level of the noise.

Construction Impacts (Short-Term)

Noise impacts from construction of the proposed project are a function of the noise generated by construction equipment, the equipment location, the sensitivity of nearby land uses, and the timing and duration of the noise-generating activities. Construction activity for the proposed project was examined for the following activities: (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 EPA has compiled data regarding the noise-generating characteristics of specific types of construction equipment (Table 3.9-2). Noise levels from the sources shown in Table 3.9-2 decrease with distance from the construction site at a rate of approximately 6 dBA per doubling of distance.

Table 3.9-2. Construction Equipment Noise Levels

Equipment Type	*"Typical" Equipment dBA at 50 ft*	*"Quiet"[1] Equipment dBA at 50 ft*
Air Compressor	81	71
Backhoe	85	80
Concrete Pump	82	80
Concrete Vibrator	76	70
Truck, Crane	88	80
Dozer	87	83
Generator	78	71
Loader	84	80
Paver	88	80
Pneumatic Tools	85	75
Pile Driver	100	NA
Water Pump	76	71
Power Hand Saw	78	70
Shovel	82	80
Trucks	88	83

Note:
1. Quieted equipment: with enclosures, mufflers, or other noise-reducing features.

Source: EPA 1971

3.9.2.3 Preferred Alternative

Impact 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 levels in the immediate vicinity of the construction area would increase during proposed project construction activities. Noise sensitive receptors (adjacent residences) would potentially perceive short-term noise increases during the following activities: (1) delivery of construction equipment, pipe, and construction materials; (2) activities that would occur in the construction staging areas near the residences; and (3) pipeline construction. The intensity of potential noise impacts would depend upon the proximity of the noise receiver to the area under construction, the number and type of construction equipment operating each day, and the length of time each piece of equipment would be in use. These short-term noise impacts associated with construction activities could produce noise levels up to 88 dBA measured 50 feet (15 meters) from the noise source (Table 3.9-2) resulting from the operation of construction equipment, including a bulldozer, excavator, loader, water truck, 10-wheeler truck, and diesel welder. These noise levels would exceed the short-term 65

dBA CNEL threshold at the residences when construction activities are within approximately 800 feet (244 meters) of the residences. This would occur over approximately 1,800 feet (549 meters) of the pipeline route and would be a *significant but feasibly mitigated impact*.

Mitigation Measures

The following measures would minimize short-term construction noise impacts.

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.

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

MONITORING: COMB personnel shall spot check and respond to complaints.

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.

Plan Requirements and Timing: The notification clause shall be included on construction plans. The measure shall be implemented prior to and during construction.

MONITORING: COMB shall verify notification according to the construction plans in the field during construction.

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.

Plan Requirements and Timing: Stockpiling and vehicle staging areas shall be designated on the construction plans. Stockpiling and staging areas shall remain in the designated location throughout construction activities.

MONITORING: COMB personnel shall perform site inspections to ensure compliance.

Residual Impacts

With implementation of **Mitigation Measures NOISE-1.1 through NOISE-1.3** construction equipment noise impacts would be *less than significant*.

Impact NOISE-2: ***Operation of the Preferred Alternative would not generate long-term exterior or interior noise levels that would affect sensitive receptors.***

Operation of the Preferred Alternative would not expose the nearby residential sensitive receptors to long-term exterior noise levels exceeding 65 dB CNEL and/or interior noise levels exceeding 45 dB CNEL. Noise levels associated with operation of the Preferred Alternative pipeline alignment would be similar to the existing conditions described in Section 3.9.1, Environmental Setting. Operational activities would not substantially increase traffic trips on adjacent roadways; therefore, corresponding roadway noise levels would not substantially increase. Routine pipeline maintenance, including 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, would generate sporadic, short-term sources of noise. Such short-term noise sources associated with routine maintenance would not contribute substantially to the long-term exterior or interior 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 CNEL and 45 db CNEL, respectively, Preferred Alternative operational noise impacts on sensitive receptors would be *less than significant*.

Mitigation Measures

As impacts on long-term noise levels would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact NOISE-3: ***Preferred Alternative pipeline operations would not substantially increase ambient noise levels of adjacent areas.***

As discussed under **Impact NOISE-2**, operation of the Preferred Alternative would not substantially increase ambient noise levels of adjacent areas. Operation of a second pipeline would not cause ambient noise levels to increase substantially (i.e., by 3 dBA 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. Proposed project operations would not generate substantial traffic trips along Glen Annie Road, and roadway noise would therefore not increase significantly. 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. Therefore, impacts of the Preferred Alternative on ambient noise levels would be *less than significant*.

Mitigation Measures

As impacts related to ambient noise level changes would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.9.2.4 Alternative A (Parallel Pipeline)

Impact NOISE-1: ***Alternative A construction activities would result in substantial, short-term increases in existing ambient noise levels over 65 dBA CNEL within the project vicinity.***

Noise levels in the immediate vicinity of the construction area would increase during Alternative A construction activities as described for the Preferred Alternative, and noise sensitive receptors (adjacent residences) would potentially perceive short-term noise increases. The pipeline route would be approximately 250 feet (76 meters) farther from the two residences at its closest point compared to the Preferred Alternative pipeline alignment. These short-term noise impacts associated with construction activities could produce noise levels up to 88 dBA measured 50 feet (15 meters) from the noise source (Table 3.9-2) resulting from the operation of construction equipment, including a bulldozer, excavator, loader, water truck, 10-wheeler truck, and diesel welder. These noise levels would exceed the short-term 65 dBA CNEL threshold at the residences when construction activities are within about 800 feet (244 meters) of the residences. This would occur over approximately 1,200 feet (366 meters) of the pipeline route and would be a *significant but feasibly mitigated impact*.

Mitigation Measures

Implementation of **Mitigation Measures NOISE-1.1 through NOISE-1.3** would be required to reduce impacts associated with short-term increases in ambient noise levels during construction.

Residual Impacts

With implementation of **Mitigation Measures NOISE-1.1 through NOISE-1.3**, residual impacts would be *less than significant*.

Impact NOISE-2: ***Alternative A operations would not generate long-term exterior or interior noise levels that would affect sensitive receptors.***

Alternative A pipeline operations would be the same as for the Preferred Alternative and not expose the nearby residential sensitive receptors to long-term exterior noise levels exceeding 65 dB CNEL and/or interior noise levels exceeding 45 dB CNEL as described for the Preferred Alternative. As long-term noise levels would not increase such that exterior and interior noise levels would exceed 65 dB CNEL and 45 db CNEL, respectively, Alternative A operational noise impacts on sensitive receptors would be *less than significant*.

Mitigation Measures

As impacts on long-term noise levels would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact NOISE-3: ***Alternative A pipeline operations would not substantially increase ambient noise levels of adjacent areas.***

As discussed under **Impact NOISE-2** and **Impact NOISE-3** for the Preferred Alternative, Alternative A operations would not substantially increase ambient noise levels of adjacent areas. Therefore, Alternative A impacts on ambient noise levels would be *less than significant*.

Mitigation Measures

As impacts related to ambient noise level changes would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.9.2.5 Alternative B (Non-Parallel Pipeline)

Impact NOISE-1: ***Alternative B construction activities would result in substantial, short-term increases in existing ambient noise levels over 65 dBA CNEL within the project vicinity.***

Alternative B construction related noise generation would be similar to that previously described for the Preferred Alternative, and the pipeline alignment would be in the same location near the residences. Impacts would therefore be the same, *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measures NOISE-1.1 through NOISE-1.3** would be required to reduce impacts associated with short-term increases in ambient noise levels during construction.

Residual Impacts

With implementation of **Mitigation Measures NOISE-1.1 through NOISE-1.3**, residual impacts would be *less than significant*.

Impact NOISE-2: ***Alternative B pipeline operations would not generate long-term exterior or interior noise levels that would affect sensitive receptors.***

Noise impacts on sensitive receptors resulting from Alternative B operations would be the same as those described for the Preferred Alternative, and noise impacts on sensitive receptors would be *less than significant*.

Mitigation Measures

As impacts on long-term noise levels would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

Impact NOISE-3: ***Alternative B pipeline operations would not substantially increase ambient noise levels of adjacent areas.***

As discussed under **Impact NOISE-2** and **Impact NOISE-3** for the Preferred Alternative, Alternative B operations would not substantially increase ambient noise levels of adjacent areas. Therefore, Alternative B impacts on ambient noise levels would be *less than significant*.

Mitigation Measures

As impacts related to ambient noise level changes would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.9.2.6 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 stream crossings. Construction activities under the No Project Alternative would consist of replacing the SPTT and Glen Anne meter and turnout structures, as well as substantial improvements to or replacement of all stream crossings due to downstream degradation. These activities would result in substantial, short-term increases in existing ambient noise levels over 65 dBA CNEL at the residences when construction activities are within approximately 800 feet (244 meters) of the residences (i.e., for Glen Anne turnout and meter and West Fork of Glen Annie Creek crossing). Therefore, impacts would be *significant but feasibly mitigated*. Regular maintenance activities, including inspection of the air release valves and blowoff valves for operability, annual inspection of the right-of-way for encroachments, and upgrading and maintenance of the turnouts and Glen Anne meter, would

generate sporadic, short-term sources of noise that would not contribute substantially to the long-term exterior or interior noise levels that would affect sensitive receptors. Accordingly, operational noise sources associated with this alternative would be similar to existing conditions and would not substantially increase ambient noise levels of adjacent areas. Impacts on ambient noise levels during No Project Alternative operations would be *less than significant.*

Mitigation Measures

Implementation of **Mitigation Measures NOISE 1.1 through NOISE-1.3** would be required to reduce impacts associated with short-term increases in ambient noise levels during construction.

Residual Impacts

The residual impact would be *less than significant*.

3.9.2.7 No Action Alternative

Under the No Action Alternative, operation and maintenance of the existing facilities would continue as in the past with *no impact* on ambient noise levels. The SPTT or pipeline at either of the stream crossings would ultimately fail and need to be repaired along with the erosion resulting from release of water from such a failure. These activities would produce equipment noise similar to that during construction of the Preferred Alternative, but only at the repair location. Only failure of the pipeline at the West Fork of Glen Annie Creek would result in repair activities within 800 feet (244 meters) of the residences.

Mitigation Measures

As no impact of operations related to ambient noise level changes would occur, no mitigation is necessary. For repair of failed structures Implementation of **Mitigation Measures NOISE 1.1 through NOISE-1.3** would be required to reduce impacts associated with short-term increases in ambient noise levels during construction.

Residual Impacts

The residual impact would be *less than significant*.

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3.10 TRANSPORTATION AND CIRCULATION

(NOTE: Outstanding Data Needs/Points of Clarification are indicated as **underlined/bold text.**)

The following section addresses the potential transportation and circulation impacts associated with construction and operation of a second water supply pipeline with appurtenant facilities.

3.10.1 Environmental Setting

3.10.1.1 Street Network

The circulation system adjacent to the project site consists of regional highways, arterial streets (i.e., a major road used for through traffic), and collector streets (i.e., a street that connects neighborhood traffic to the major arterial street system).

U.S. Highway 101 (U.S. 101), located south of the project site, is a four-lane, north-south freeway within the project area. U.S. 101 is a principal route between the City of Santa Barbara, the adjacent City of Goleta, and Santa Maria (northbound), and Carpinteria and Ventura (southbound). Access between the project site and U.S. 101 would be provided via the Glen Annie freeway interchange.

Glen Annie Road, located south of the site, is the primary access route to the project site. Glen Annie is a two-lane, north-south roadway that extends from U.S. 101 northward to its existing terminus. South of U.S. 101, Glen Annie Road turns into Storke Road, a four-lane roadway that provides access to Hollister Avenue and El Colegio Road.

Cathedral Oaks Road, located south of the site, is a two-lane, east-west roadway that runs through the City of Goleta and becomes Foothill Road east of State Route 154.

Level of Service (LOS) is an indicator of the operating condition of a roadway as represented by traffic congestion, delay, and volume-to-capacity (V/C) ratio. LOS A through F are used to rate roadway operations, with LOS A indicating very good free-flow operation and LOS F indicating poor, congested operations (Appendix D). Traffic flow on street networks is most constrained at intersections. Therefore, a detailed analysis of traffic flow must examine the operating conditions of critical intersections during peak travel periods. The City of Goleta and Santa Barbara County consider LOS C as the minimum standard for intersection operations during the peak hour periods. The relationship between V/C ratio and LOS for signalized intersections is shown in Table 3.10-1. Based on peak-hour traffic volumes, V/C ratios, and average intersection control delays, the corresponding LOS has been determined for each project area intersection. The intersections' LOS are summarized in Table 3.10-2.

Table 3.10-1. Level of Service and V/C Ratio Descriptions

V/C Ratio	*LOS*	*Traffic Conditions*
< 0.60	A	Decribes primarily free-flow conditions at average travel speeds. Vehicles are seldom impeded in their ability to maneuver in the traffic stream. Delay at intersections is minimal.
0.61 - 0.70	B	Represents reasonable unimpeded operations at average travel speeds. The ability to maneuver in the traffic stream is slightly restricted and delays are not bothersome.
0.71 - 0.80	C	Represents stable operations; however, ability to change lanes and maneuver may be more restricted than LOS B and long queues are experienced at intersections.
0.81 to 0.90	D	Congestion occurs, and a small change in volumes increases delays substantially.
0.91 to 1.00	E	Severe congestion occurs with extensive delays, and low travel speeds occur.
> 1.00	F	Characterize arterial flow at extremely low speeds, and intersection congestion occurs with high delays and extensive queuing.

Source: City of Goleta 2006.
Notes: LOS is commonly used as a qualitative description of intersection operation and is based on the capacity of the intersection and the volume of traffic using the intersection. Intersection capacity analysis evaluates the operation of an intersection using a range of LOS from LOS A (free-flow conditions) to LOS F (severely congested conditions) based on corresponding V/C ratios shown in the table.

Table 3.10-2. Existing Intersection Levels of Service

Intersection	*Control Type*	*P.M. Peak Hour*	
		LOS	V/C OR DELAY (SECONDS) [1]
U.S. 101 SB Ramps/Glen Annie/Storke Road	Signal	A	0.51
U.S. 101 NB Ramps/Glen Annie Road	Signal	B	0.65
Glen Annie Road/Cathedral Oaks Road	Signal	B	0.62

Source: City of Goleta 2006.
Note:
1. Data are expressed at V/C ratios for signalized intersections during the P.M. peak hour.

The data presented in Table 3.10-2 indicate that the study-area intersections operate at LOS B or better during the P.M. peak hour period. These service levels are considered acceptable based on the City and County LOS C design standards.

3.10.2 Regulatory Setting

Regulations, analysis methodologies, and transportation/circulation policies used to analyze project impacts were obtained from the City of Goleta General Plan/Coastal Land Use Plan Transportation Element and the Santa Barbara County General Plan.

3.10.3 Impacts and Mitigation

3.10.3.1 Methodology

Impacts were assessed by quantifying differences between current and future conditions without the project and future conditions with the project. Future traffic forecasts for the roadways within the project area were obtained directly from the *City of Goleta General Plan/ Coastal Land Use Plan Transportation Element* (City of Goleta 2006). The Transportation Element includes existing 2005 P.M. peak hour traffic volumes and future traffic volumes that were used to forecast and evaluate future traffic conditions with full General Plan buildout on selected intersections and roadways within the city. These forecasts were developed through the use of the Goleta Travel Model, which is a single-mode, P.M. peak period model that addresses auto travel based on VISUM model software. Future no-project traffic conditions were estimated by adding traffic due to proposed local development projects and regional traffic growth that is not attributable to the project. These volumes represent baseline conditions (i.e., future conditions without the project).

Congestion Management Plan Analysis

The Santa Barbara County Association of Governments (SBCAG) has developed a set of traffic impact thresholds to assess the impacts of land use decisions made by local jurisdictions on regional transportation facilities located within the Congestion Management Plan (CMP) roadway system. The following guidelines were developed by SBCAG to determine the significance of project-generated traffic on regional CMP system.

1. For any roadway or intersection operating at LOS A or B, a decrease of two levels of service resulting from the addition of project-generated traffic.
2. For any roadway or intersection operating at LOS C, project-added traffic that results in a LOS D or worse.
3. For intersections within the CMP system with existing congestion, the following table defines significant impact thresholds:

Level of Service	*Project-Added Peak Hour Trips*
D	20
E	10
F	10

4. For freeway or highway segments with existing congestion, the following table defines significant impact thresholds:

Level of Service	*Project-Added Peak Hour Trips*
D	100
E	50
F	50

3.10.3.2 Significance Criteria

Due to the project site's access locations along Glen Annie Road within the City of Goleta, the City of Goleta traffic impact thresholds (the same standards used by Santa Barbara County Public Works Department) were used to assess the significance of the potential transportation and circulation impacts generated by the project. Based on these thresholds, impacts on transportation and circulation would be considered significant under the following circumstances:

TRANS-1: The project would increase the V/C ratio at local intersections by the following values:

Significant Changes in Levels of Service	
INTERSECTION LEVEL OF SERVICE (INCLUDING PROJECT)	INCREASE IN V/C OR TRIPS GREATER THAN
LOS A	0.20
LOS B	0.15
LOS C	0.10
LOS D	15 trips
LOS E	10 Trips
LOS F	5 Trips

TRANS-2: Project traffic would utilize a substantial portion of an intersection's capacity where the intersection is currently operating at acceptable levels of service, but with cumulative traffic would degrade to or approach LOS D (V/C 0.80) or lower. Substantial is defined as a minimum changes of 0.03 for an intersection that would operate from 0.80 to 0.85, a change of 0.02 for an intersection that would operate from 0.86 to 0.90, and a change of 0.01 for an intersection that would operate greater than 0.90 (LOS E or worse);

TRANS-3: The addition of project traffic to a roadway that has design features (e.g., narrow width, road-side ditches, sharp curves, poor sight distance, or inadequate pavement structure) would result in a potential safety problem; or

TRANS-4: Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways.

3.10.3.3 Preferred Alternative

Impact TRANS-1.1: ***Preferred Alternative construction 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. Truck traffic would access the site via the U.S. 101/Glen Annie Road interchange, and proceed north along Glen Annie Road to the private access road. Proposed construction activities include (1) site preparation (i.e., clearing, grubbing, and grading), and (2) pipeline construction. 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).

It is anticipated that the majority of construction materials (i.e., pipe, bedding material [sand], and concrete structures) would be provided by local suppliers; however, approximately 52 tractor-trailer truck trips would be required to transport the 48-inch (122 centimeter) pipe from outside the local area. Approximately 1,100 truck trips would be required to transport 8,100 cy of bedding material from local sand and gravel pits. In addition, approximately seven concrete truck trips would be required for construction of the blowoff valve and air release valve structures. These construction activities would require up to ten daily truck trips to import construction materials. Up to 18workers (18 trips per day) would support construction activities. Most trips for delivery of construction materials and worker trips would be outside peak hours.

As stated in Table 3.10-2, all intersections impacted by construction activities operate at LOS B or better. The maximum number of construction vehicle trips, estimated at 28 trips per day with few peak hour trips, would occur during project construction. 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, and would be substantially less than the 0.15 degradation threshold for V/C as identified in significance criterion TRANS-1. Therefore, project construction traffic would not substantially increase vehicular volumes at any intersection within the project area during the typical commute peak periods; impacts on ground transportation and circulation would be *less than significant*.

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels during construction, no mitigation measures would be required.

Residual Impacts

The residual impact would be *less than significant*.

Impact TRANS-1.2: ***Preferred Alternative operations would not substantially increase intersection V/C ratios within the project area.***

The project would be accessed via Glen Annie Road to the private access road that continues along the pipeline route from the terminus of Glen Annie Road. 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. Maintenance activities include periodic checks of the cathodic protection system, annual inspection of the air valves and blowoff valves, annual inspection of the right-of-way for encroachments, and annual internal inspections. Preferred Alternative operations would require up to two employee vehicular trips per week. Intersections in the project vicinity have sufficient capacity (i.e., currently operate at LOS B or better) to accommodate project operations. As employee vehicular trips associated with project operations would not affect existing LOS or increase V/C ratios at any intersections within the project vicinity by the threshold values identified in criterion TRANS-1, impacts on transportation would be *less than significant*.

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels during Preferred Alternative operations, no mitigation is required.

Residual Impacts

The residual impact would be *less than significant*.

Impact TRANS-2: ***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 intersection LOS values are included in Table 3.10-3. As the intersections in the project vicinity are projected to operate at LOS C or better during the P.M. peak hour, the addition of few if any project-generated P.M. peak hour trips at any project area intersection would not decrease the projected future LOS to LOS D. Therefore, project-generated trip impacts on intersection operations would be *less than significant*.

Table 3.10-3. Projected Future Intersection Levels of Service

Intersection	*Control Type*	*P.M. Peak Hour*	
		LOS[1]	**V/C OR DELAY (SECONDS)[1][2]**
U.S. 101 SB Ramps/ Glen Annie/Storke Road	Signal	B	0.63
U.S. 101 NB Ramps/ Glen Annie Road	Signal	C	0.77
Glen Annie Road/ Cathedral Oaks Road	Signal	B	0.69

Source: City of Goleta 2006.
Notes:
1. Projected future traffic volumes were based on a "worse case" scenario that assumes full buildout of the City of Goleta General Plan with no planned transportation system improvements.
2. Data are expressed at vc ratios for signalized intersections during the P.M. peak hour.

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels with project implementation, no mitigation is required.

Residual Impacts

The residual impact would *be less than significant.*

Impact 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).***

Proposed construction activities would require use of heavy equipment for excavation, equipment delivery, and pipe installation. These construction activities would require up to six daily truck trips to import construction equipment and materials. Construction truck traffic would access the site via the U.S. 101/Glen Annie Road interchange, and proceed north along Glen Annie Road to the private access road. North of the Glen Annie Road/Cathedral Oaks Road intersection, Glen Annie Road narrows and consists of an asphalt surface that is in poor condition; portions of this roadway segment have extensive cracking and subsidence. Accordingly, transport of heavy construction equipment/materials along this roadway segment could further

exacerbate existing inadequate roadway conditions, increasing the potential for safety problems. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

The following measure is required to minimize potential safety impacts associated with transport of construction equipment and materials along the Glen Annie Road segment with existing inadequate roadway conditions.

TRANS-3 Damage caused by the Project to the Glen Annie Road segment located north of the Glen Annie Road/Cathedral Oaks Road intersection shall be repaired.

Plan Requirements and Timing: The requirement for the contractor to repair Glen Annie Road following construction shall be placed in the contractor bid solicitation package. This requirement shall be included in the contractor's scope of work for the project.

MONITORING: COMB shall inspect in the field to ensure compliance with final contract specifications.

Residual Impacts

With implementation of **Mitigation Measure TRANS-3**, the residual impact would be *less than significant*.

Impact TRANS-4: ***The Preferred Alternative would not exceed level of service standards for CMP intersections in the project area.***

The following intersections in the project vicinity are identified by the SBCAG as CMP intersections: U.S. 101 SB Ramps/Glen Annie/Storke Road intersection; and U.S. 101 NB Ramps/Glen Annie Road intersection. As discussed in **Impact TRANS-1.1** and **TRANS-1.2**, all CMP intersections are forecast to operate at LOS C or better with project-added traffic (Table 3.10-3). The Preferred Alternative would not increase traffic volumes and/or congestion at any CMP intersections by the threshold values identified by SBCAG. Accordingly, the Preferred Alternative would have a *less than significant* impact on CMP intersection operations in the project area.

In addition, Table 3.10-3 also indicates all CMP intersections would operate at LOS C or better under projected future traffic volumes + project traffic conditions. There are no CMP intersection impacts under these conditions.

Mitigation Measures

As CMP intersections in the project vicinity would continue to operate at acceptable levels with project implementation, no mitigation is required.

Residual Impacts

The residual impact would *be less than significant.*

3.10.3.4 Alternative A (Parallel Pipeline)

Impact TRANS-1.1: ***Alternative A construction would not substantially increase intersection V/C ratios within the project vicinity.***

Alternative A construction activities, including site preparation (i.e., clearing, grubbing, and grading) and pipeline construction, would be similar to those described for the Preferred Alternative, would have approximately the same schedule, and would require the same amount of labor and materials.

As stated in Table 3.10-2, all intersections impacted by construction activities operate at LOS B or better. The maximum number of construction vehicle trips, estimated at 28 trips per day with few peak hour trips, would be the same as for the Preferred Alternative. Therefore, project construction traffic would not substantially increase vehicular volumes at any intersection within the project area during the typical commute peak periods; impacts on ground transportation and circulation would be *less than significant.*

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels during construction, no mitigation is required.

Residual Impacts

The residual impact would be *less than significant*.

Impact TRANS-1.2: ***Alternative A operations would not substantially increase intersection V/C ratios within the project area.***

Operation of Alternative A would be the same as for the Preferred Alternative, and truck deliveries and employee vehicular trips would not affect existing LOS or increase V/C ratios at any intersections within the project vicinity by the threshold values identified in criterion TRANS-1. Therefore, impacts on transportation would be *less than significant*.

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels during Alternative A operations, no mitigation is required.

Residual Impacts

The residual impact would be *less than significant*.

Impact TRANS-2: ***Construction and operation of the Alternative A pipeline would not generate additional vehicular trips that would adversely affect intersection capacities in the project vicinity.***

As the intersections in the project vicinity are projected to operate at LOS C or better during the P.M. peak hour (Table 3.10-3), the addition of few if any project-generated P.M. peak hour trips at any project area intersection would not decrease the projected future LOS to LOS D. Therefore, project generated trip impacts on intersection operations would be *less than significant*.

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels with project implementation, no mitigation is required.

Residual Impacts

The residual impact would *be less than significant.*

Impact 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)****.*

Proposed construction activities would require use of the same heavy equipment for excavation, equipment delivery, and pipe installation as in the Preferred Alternative. Transport of heavy construction equipment/materials along this roadway segment could further exacerbate existing inadequate roadway conditions, increasing the potential for safety problems. Therefore, impacts would be *significant but feasibly mitigated*.

Mitigation Measures

Implementation of **Mitigation Measure TRANS-3** would minimize potential safety impacts associated with transport of construction equipment and materials along the Glen Annie Road segment with existing inadequate roadway conditions.

Residual Impacts

With implementation of **Mitigation Measure TRANS-3**, the residual impact would be *less than significant.*

Impact TRANS-4: ***Alternative A would not exceed level of service standards for CMP intersections in the project area.***

As described for the Preferred Alternative, Alternative A would not increase traffic volumes and/or congestion at any CMP intersections by the threshold values identified by SBCAG. Accordingly, Alternative A would have a *less than significant* impact on CMP intersection operations in the project area.

In addition, Table 3.10-3 also indicates all CMP intersections would operate at LOS C or better under projected future traffic volumes + project traffic conditions. There are no CMP intersection impacts under these conditions.

Mitigation Measures

As CMP intersections in the project vicinity would continue to operate at acceptable levels with project implementation, no mitigation is required.

Residual Impacts

The residual impact would *be less than significant.*

3.10.3.5 Alternative B (Non-Parallel Pipeline)

Impact TRANS-1.1: ***Alternative B construction would not substantially increase intersection V/C ratios within the project vicinity.***

Alternative B construction activities including site preparation (i.e., clearing, grubbing, and grading) and pipeline construction would be similar to those described for the Preferred Alternative, would have approximately the same schedule, and would require the same amount of labor and materials.

As stated in Table 3.10-2, all intersections impacted by construction activities operate at LOS B or better. The maximum number of construction vehicle trips, estimated at **28** trips per day with few if any peak hour

trips. Therefore, project construction traffic would not substantially increase vehicular volumes at any intersection within the project area during the typical commute peak periods; impacts on ground transportation and circulation would be *less than significant.*

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels during construction, no mitigation is required.

Residual Impacts

The residual impact would be *less than significant*.

Impact TRANS-1.2: ***Alternative B operations would not substantially increase intersection V/C ratios within the Project area.***

Operation of Alternative B would be the same as for the Preferred Alternative, and truck deliveries and employee vehicular trips would not affect existing LOS or increase V/C ratios at any intersections within the project vicinity by the threshold values identified in criterion TRANS-1. Therefore, impacts on transportation would be *less than significant*.

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels during Alternative B operations, no mitigation is required.

Residual Impacts

The residual impact would be *less than significant*.

Impact TRANS-2: ***Construction and operation of the Alternative B pipeline would not generate additional vehicular trips that would adversely affect intersection capacities in the project vicinity.***

Projected future project area intersection LOS values are included in Table 3.10-3. As the intersections in the project vicinity are projected to operate at LOS C or better during the P.M. peak hour, the addition of few if any project-generated P.M. peak hour trips at any project area intersection would not decrease the projected future LOS to LOS D. Therefore, project generated trip impacts on intersection operations would be less than significant.

Mitigation Measures

As intersection capacities in the project vicinity would continue to operate at acceptable levels with project implementation, no mitigation is required.

Residual Impacts

The residual impact would *be less than significant.*

Impact 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).***

Proposed construction activities would require the same use of heavy equipment for excavation, equipment delivery, and pipe installation as in the Preferred Alternative. Transport of heavy construction equipment/materials along this roadway segment could further exacerbate existing inadequate roadway conditions, increasing the potential for safety problems. Therefore, impacts would be *significant but feasibly mitigated.*

Mitigation Measures

Implementation of **Mitigation Measure TRANS-3** would minimize potential safety impacts associated with transport of construction equipment and materials along the Glen Annie Road segment with existing inadequate roadway conditions.

Residual Impacts

With implementation of **Mitigation Measure TRANS-3,** the residual impact would be *less than significant.*

Impact TRANS-4: ***Alternative B would not exceed level of service standards for CMP intersections in the project area.***

As described for the Preferred Alternative, Alternative B would not increase traffic volumes and/or congestion at any CMP intersections by the threshold values identified by SBCAG. Accordingly, Alternative B would have a *less than significant* impact on CMP intersection operations in the project area.

In addition, Table 3.10-3 also indicates all CMP intersections would operate at LOS C or better under projected future traffic volumes + project traffic conditions. There are no CMP intersection impacts under these conditions.

Mitigation Measures

As CMP intersections in the project vicinity would continue to operate at acceptable levels with project implementation, no mitigation is required.

Residual Impacts

The residual impact would be *less than significant.*

3.10.3.6 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 stream crossings. Under the No Project Alternative, regular maintenance activities (i.e., inspection of the air valves and blowoff valves and annual inspection of the right-of-way for encroachments), replacement of the SPTT and Glen Anne meter and turnout structures would result in minimal increases in traffic (i.e., truck trips) within the project vicinity. As intersections in the project vicinity have sufficient capacity (i.e., currently operate at LOS B or better) to accommodate the nominal increases in traffic generated by regular maintenance activities and construction of site improvements, the No Project Alternative would have *less than significant* impacts on transportation and circulation.

Mitigation Measures

As impacts on transportation and circulation would be less than significant, no mitigation is necessary.

Residual Impacts

The residual impact would be *less than significant*.

3.10.3.7 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 transportation and circulation. 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. These activities would result in fewer trip generations than during construction of the Preferred Alternative, as construction activities would be limited to the repair location, resulting in *less than significant impacts*. However, transport of heavy construction equipment/materials along the Glen Annie Road segment could further exacerbate existing inadequate roadway conditions, increasing the potential for safety problems. Therefore, impacts would be *significant but feasibly mitigated.*

Mitigation Measures

Implementation of **Mitigation Measure TRANS-3** would minimize potential safety impacts associated with transport of construction equipment and materials along the Glen Annie Road segment with existing inadequate roadway conditions.

Residual Impacts

The residual impact would be *less than significant*.

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3.11 INDIAN TRUST ASSETS

Indian Trust Assets (ITAs) are legal interests in property held in trust by the U.S. for federally-recognized Indian tribes or individual Indians. An Indian trust has three components: (1) the trustee, (2) the beneficiary, and (3) the trust asset. ITAs can include land, minerals, federally-reserved hunting and fishing rights, federally-reserved water rights, and in-stream flows associated with trust land. Beneficiaries of the Indian trust relationship are federally-recognized Indian tribes with trust land; the U.S. is the trustee. By definition, ITAs cannot be sold, leased, or otherwise encumbered without approval of the U.S. The characterization and application of the U.S. trust relationship have been defined by case law that interprets Congressional acts, executive orders, and historic treaty provisions.

Consistent with President William J. Clinton's 1994 memorandum, "Government-to-Government Relations with Native American Tribal Governments," Reclamation assesses the effect of its programs on tribal trust resources and federally-recognized tribal governments. Reclamation is tasked to actively engage federally-recognized tribal governments and consult with such tribes on a government-to-government level (59 Federal Register 1994) when its actions affect ITAs. The U.S. Department of the Interior (DOI) Departmental Manual Part 512.2 ascribes the responsibility for ensuring protection of ITAs to the heads of bureaus and offices (DOI 1995). Part 512, Chapter 2 of the Departmental Manual states that it is the policy of the DOI to recognize and fulfill its legal obligations to identify, protect, and conserve the trust resources of federally recognized Indian tribes and tribal members. All bureaus are responsible for, among other things, identifying any impact of their plans, projects, programs, or activities on ITAs; ensuring that potential impacts are explicitly addressed in planning, decision, and operational documents; and consulting with recognized tribes who may be affected by proposed activities. Consistent with this, Reclamation's Indian trust policy states that Reclamation will carry out its activities in a manner which protects ITAs and avoids adverse impacts when possible, or provides appropriate mitigation or compensation when it is not. To carry out this policy, Reclamation incorporated procedures into its NEPA compliance procedures to require evaluation of the potential effects of its proposed actions on trust assets (Reclamation July 2, 1993). Reclamation is responsible for assessing whether the South Coast Conduit/Upper Ranch Reliability Project would have the potential to affect ITAs. Reclamation will comply with procedures contained in Departmental Manual Part 512.2, guidelines, which protect ITAs.

The closest ITA is the Santa Ynez Reservation, located approximately 15 miles (24 km) northwest of the project site. Therefore, the footprint of the proposed facilities and associated construction would not affect ITAs.

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3.12 OTHER RESOURCE ISSUES

This section discusses potential impacts on environmental issue areas determined to be minor and adverse, but less than significant, or no impact as required under NEPA and CEQA Guidelines Section 15126. These impacts on agricultural resources, mineral resources, public services, utilities/service systems, recreation, and socioeconomics are described below. For some resources, however, impacts of the No Action Alternative could be significant if facility failure occurred due to lack of necessary site improvements.

3.12.1 Agricultural Resources

3.12.1.1 Environmental Setting

The project route is primarily open land with topography ranging from moderately steep to very steep. The area has historically been used for avocado and citrus orchards. Current agricultural activities within the project vicinity include avocado and citrus orchards (personal communication, Stephanie Stark 2007). The existing pipeline is located within an avocado orchard in the vicinity of the SPTT. An existing citrus orchard is located south of the existing pipeline at the base of the hill near the main stem of Glen Annie Creek.

Per the USDA Soil Conservation Service's *Soil Survey, Santa Barbara County, California, South Coastal Part*, onsite soils consist of the Lodo-Sespe complex, Todos-Lodo complex, and the Todos clay loam, which have Class VII, VI, and IV irrigated soil capability ratings, respectively. The County Agricultural Resources Significance Threshold Guidelines consider Class I and Class II soils (as defined by the USDA Soil Conservation Service) agriculturally prime; therefore, soils in the project area are not considered prime. Some of the existing agricultural activities do, however, occur on lands that have been designated as Unique Farmland, which is land other than Prime Farmland or Farmland of Statewide Importance that has a good combination of soil quality, location, growing season, and moisture supply needed to produce sustained yields of a specific crop, as defined by the Department of Conservation. The avocado orchard is located within land designated as Unique Farmland; approximately 680 feet of the existing pipeline traverses Unique Farmland. Additionally, the existing citrus orchard is located in an area designated as Prime Farmland, or land having the best combination of physical and chemical characteristics for the production of crops. However, no portion of the existing pipeline traverses Prime Farmland.

Numerous parcels along the project route are part of the Williamson Act Agricultural Preserve contract, also known as the California Land Conservation Act. This contract is designed to "preserve agricultural and open space and discourage premature and unnecessary conversion to urban uses" (Division of Land Resource Protection 2007). The contract acts as an agreement between landowners and counties to voluntarily restrict land to agricultural and compatible uses. According to the County Agricultural Commissioner, underground utility line construction is an allowable, compatible use under the Williamson Act (personal communication, William Gillette 2007).

3.12.1.2 Preferred Alternative Impacts

Construction of the Preferred Alternative pipeline would temporarily displace a small portion of the avocado orchard located near the SPTT. Approximately 1,300 feet (396 meters) (or 3 acres [1.2 hectares], including construction easement areas) of the Preferred Alternative alignment would traverse land designated as Unique Farmland. Additionally, Prime Farmland (i.e., citrus orchard) is located adjacent to this alignment at the base of the hill near the main stem of Glen Annie Creek; however, as proposed construction easements/staging areas would not occur within this area, no impacts on Prime Farmland would occur during Preferred Alternative construction activities. Upon completion of all construction activities, the topsoil within the avocado orchard would be replaced and restored to pre-project conditions, as described in Section 2.3.1. The avocado trees removed during construction could then be replanted by the landowner using the compensation

negotiated with COMB when the construction easement was obtained. As no agricultural areas would be permanently removed or disrupted, impacts on agricultural resources under the Preferred Alternative would be *less than significant*.

3.12.1.3 Alternative A (Parallel Pipeline) Impacts

As for the Preferred Alternative, the Alternative A pipeline would temporarily displace the same small portion of the avocado orchard located near the SPTT. Approximately 680 feet (207 meters) (or 1.5 acres [0.6 hectare], including construction easement areas) of the Alternative A alignment would traverse land designated as Unique Farmland. The same Prime Farmland (i.e., citrus orchard) is located adjacent to this alignment near the main stem of Glen Annie Creek; however, as proposed construction easements/staging areas would not occur within this area, no impacts on Prime Farmland would occur during Alternative A construction activities. As described for the Preferred Alternative, topsoil would be replaced and the landowner could replant the avocado trees removed. As no agricultural areas would be permanently removed or disrupted, impacts to agricultural resources under Alternative A would be *less than significant*.

3.12.1.4 Alternative B (Non-Parallel Pipeline) Impacts

As for the Preferred Alternative, the Alternative B pipeline would temporarily displace the same small portion of the avocado orchard located near the SPTT. Approximately 1,300 (396 meters) (or 3 acres [1.2 hectares], including construction easement areas) of the Alternative B alignment would traverse land designated as Unique Farmland. As described for the Preferred Alternative, topsoil would be replaced and the landowner could replant the avocado trees removed. No Prime Farmland is located adjacent to the Alternative B pipeline alignment. As no agricultural areas would be permanently removed or disrupted, impacts to agricultural resources under Alternative B would be *less than significant*.

3.12.1.5 No Project Alternative Impacts

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 stream crossings. As no agricultural areas would be permanently removed or disrupted, *no impacts* to agricultural resources under the No Project/ Alternative would occur.

3.12.1.6 No Action Alternative Impacts

The No Action Alternative would only include continuation of regular (annual) maintenance and operational activities that are currently implemented. Failure of the existing pipeline due to lack of necessary site improvements could result in discharge of a large volume of water from the SPTT or the pipeline at either of the two creek crossings with erosion and deposition of soils downslope of the failure. This could affect at least a portion of the avocado orchard and possibly of the citrus orchard. Impacts to agricultural resources would depend on the location of the facility failure. In the most likely case, the damage would result in *less than significant impacts* and would be repaired by COMB during pipeline repair activities. If a large proportion of the topsoil were lost in either orchard (worst case scenario), impacts could be *significant but feasibly mitigated* by replacement of the topsoil.

3.12.2 Mineral Resources

3.12.2.1 Environmental Setting

The pipeline alignment is located within an area which has not been mapped with respect to the potential for mineral resources, such as Portland cement concrete aggregate or other mineral commodities (CDMG 1989).

There are no oil or gas fields in the vicinity of the project site (California Division of Oil, Gas, and Geothermal Resources 1999).

3.12.2.2 Preferred Alternative Impacts

The Preferred Alternative pipeline alignment 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. There are no oil or gas fields in the vicinity of the project site. However, due to the low potential for unknown mineral resources to exist within the project area, impacts would be *less than significant*.

3.12.2.3 Alternative A (Parallel Pipeline) Impacts

Impacts associated with the Alternative A route would be similar to those described for the Preferred Alternative, as neither alignment is within an area of known mineral resources. The Alternative A pipeline alignment 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. There are no oil or gas fields in the vicinity of the project site. However, due to the low potential for unknown mineral resources to exist within the project area, impacts would be *less than significant*.

3.12.2.4 Alternative B (Non-Parallel Pipeline) Impacts

Impacts associated with the Alternative B route would be similar to those described for the Preferred Alternative, as neither alignment is within an area of known mineral resources. The pipeline alignment would be located within an area which has not been mapped with respect to the potential for mineral resources, such as Portland cement concrete aggregate or other mineral commodities. There are no oil or gas fields in the vicinity of the project site. However, due to the low potential for unknown mineral resources to exist within the project areas, impacts would be *less than significant*.

3.12.2.5 No Project Alternative Impacts

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 stream crossings. No known oil and gas fields or other mineral resources are located within the project vicinity. However, due to the low potential for unknown mineral resources to exist within the project areas, impacts would be *less than significant*.

3.12.2.6 No Action Alternative Impacts

A continuation of regular maintenance and operational activities, with no site improvements, would occur under the No Action Alternative. Failure of the existing facilities would have *less than significant* impacts on mineral resources because none are known to be present and the potential is low for any to be present and affected by facility failure or repairs.

3.12.3 Public Services

3.12.3.1 Environmental Setting

The proposed project site is located within Glen Annie Canyon, north of the City of Goleta, in the unincorporated area of Santa Barbara County. The area is predominantly vegetated by expanses of chaparral, coastal scrub, and non-native grassland, all of which are highly flammable plant communities that burn

periodically. The project vicinity has been characterized as a very high fire hazard zone (California Department of Forestry and Fire Protection 2007). Fire protection services for the area are provided by the Santa Barbara County Fire Department. The project site would be served by County Fire Department Station No. 14, located approximately 3 miles south of the project area at 320 North Los Carneros Road. The station has three emergency personnel on staff, and is equipped with two fire engines. The County Fire Department Station No. 14 response zone encompasses the unincorporated areas south of Los Padres National Forest, north of Hollister Avenue, east of Glen Annie Road, and west of Fairview Avenue. The Santa Barbara County Sheriff would provide police protection services to the project site. School services for the area are provided by the Goleta Union School District.

3.12.3.2 Preferred Alternative Impacts

Construction and operation of the Preferred Alternative would not result in increased demands or otherwise affect police protection or schools. Construction activities, especially welding, would increase the potential for fires in areas with flammable vegetation that exist along the pipeline route. This potential would increase the need for fire protection during construction activities. However, implementation of the Fire Protection Plan during construction activities (Section 2.3.2), 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*.

3.12.3.3 Alternative A (Parallel Pipeline) Impacts

Similar to the Preferred Alternative, construction and operation of Alternative A would not result in increased demands on or otherwise affect police protection or schools. Construction activities, especially welding, would increase the potential for fires in areas with flammable vegetation that exist along the pipeline route. This potential could increase the need for fire protection during construction activities. However, the Fire Protection Plan would be implemented as described for the Preferred Alternative. Therefore, impacts on public services would be *less than significant*.

3.12.3.4 Alternative B (Non-Parallel Pipeline) Impacts

Similar to the Preferred Alternative, construction and operation of Alternative B would not result in increased demands on or otherwise affect police protection or schools. As described for the Preferred Alternative, construction activities (i.e., welding) would increase the potential for fires in areas with flammable vegetation along the pipeline route. However, the Fire Protection Plan would be implemented as described for the Preferred Alternative. Therefore, impacts on public services would be *less than significant*.

3.12.3.5 No Project Alternative Impacts

Impacts associated with the No Project Alternative would be similar to those associated with the Preferred Alternative, as site improvements would not generate a significant increase in the demand for police protection or schools. However, site improvements would occur, including replacing the SPTT, Glen Anne and Corona del Mar turnout structures, and Glen Anne meter, which could temporarily increase the demands on fire protection services through increased fire risk associated with welding activities. As the No Project Alternative would require implementation of a Fire Protection Plan as described for the project (Section 2.3.2), impacts to public services would be *less than significant*.

3.12.3.6 No Action Alternative Impacts

Continued operation and maintenance of SCC facilities as in the past would have *no impact* on public services. Failure of the SPTT or pipeline at one of the stream crossings, however, could require assistance

from the fire department and/or sheriff. The assistance would be a temporary and would not result in a permanent need for more fire or police protection personnel. Impacts would be *less than significant*. The need for public schools would not be affected by facility failure.

3.12.4 Utilities/Service Systems

3.12.4.1 Environmental Setting

The proposed project site is located within Glen Annie Canyon, north of the City of Goleta, in the unincorporated area of Santa Barbara County. The project site is located outside of the Goleta West Sanitary District, and is within the GWD service area. The Santa Barbara County Public Works Department administers solid waste collection and diversion services for the project area. Allied Waste is the service provider for solid waste pick-up and disposal.

3.12.4.2 Preferred Alternative Impacts

The Preferred Alternative would not result in an increased demand for wastewater services. Portable toilets would be used during construction and would be serviced by the company providing the toilets. Preferred Alternative construction would result in an increase in the amount of waste (i.e., construction debris and vegetation) 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 (Section 2.3.2), requiring recycling of construction materials and use of recycled materials during construction, would ensure compliance with the *Santa Barbara County Environmental Thresholds and Guidelines Manual* (1995). Therefore, 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. Furthermore, the Preferred Alternative would improve the reliability of the local water supply through construction of the new pipeline but would not increase the annual water supply from Lake Cachuma because the total amount of water that can be delivered per year is based on water right agreements and not pipeline capacity. 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*.

3.12.4.3 Alternative A (Parallel Pipeline) Impacts

Impacts associated with the Alternative A pipeline would be the same as those described for the Preferred Alternative: *no impact* to wastewater services, *less than significant impacts* to solid waste facilities, and *less than significant impacts* to water services.

3.12.4.4 Alternative B (Non-Parallel Pipeline) Impacts

Impacts associated with the Alternative B pipeline would be the same as those described for the Preferred Alternative: *no impact* to wastewater services, *less than significant impacts* to solid waste facilities, and *less than significant impacts* to water services.

3.12.4.5 No Project Alternative Impacts

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 stream crossings. Regular maintenance activities including inspection of the air release valves and blowoff valves for operability and annual inspection of the right-of-way for encroachments, and site improvements such as upgrading and maintenance of the Glen Anne and Corona Del Mar turnout structures and Glen Anne meter would result in no impacts on utilities/service systems. Furthermore, as replacement of the SPTT, Glen Anne and Corona Del Mar turnout structures, and Glen Anne meter would result in no or very short duration interruption of water services to surrounding areas, *less than significant impacts* on water services would occur. Water supply reliability would not be increased but would remain about the same because the second pipeline would not be built.

3.12.4.6 No Action Alternative Impacts

Continued maintenance activities would have *no impact* on utilities/service systems. If the SPTT or pipeline at either creek crossing failed, water deliveries to the South Coast from Lake Cachuma would be stopped for two to four weeks while the failed structure is repaired. This would have *significant and unavoidable impacts* on water services until the repairs are completed and the SCC is back in service.

3.12.5 Recreation

3.12.5.1 Environmental Setting

The County of Santa Barbara has more than 900 acres of parks and open spaces and 84 miles of trails and coastal access easements. The following County parks and open space areas are located within 5 miles of the project site: Isla Vista Park; Goleta Beach Park; Tucker's Grove Park; Live Oak Camp; Cachuma Lake Recreation Area; University Circle; Tarragona; Calle Barquero; Kellogg Tennis Courts; Lassen; Patterson; Rhodes; Roads End; Tabano Hallow; and Thunderbird. The project site is presently undeveloped and has no established easements providing recreational access.

3.12.5.2 Preferred Alternative Impacts

The Preferred Alternative would increase the operational flexibility, reliability, and the conveyance capacity of the SCC between the SPTT and the CDMWTP to accommodate peak demand levels and to allow maintenance of the pipeline. Accordingly, 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.

3.12.5.3 Alternative A (Parallel Pipeline) Impacts

Similar to the Preferred Alternative, Alternative A pipeline construction and operations would not affect existing recreational facilities or result in increased demands for recreation facilities. As no existing recreational facilities would be affected by Alternative A, *no impacts* on recreation would occur.

3.12.5.4 Alternative B (Non-Parallel Pipeline) Impacts

Similar to the Preferred Alternative, Alternative B pipeline construction and operations would not affect existing recreational facilities or result in increased demand for recreation facilities. No existing recreational facilities would be affected by Alternative B; therefore, *no impacts* on recreation would occur.

3.12.5.5 No Project Alternative Impacts

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 stream crossings. Regular maintenance activities including inspection of the air release valves and blowoff valves for operability, annual inspection of the right-of-way for encroachments, and upgrading and maintenance of the Glen Anne and Corona Del Mar turnout structures and Glen Anne meter would result in *no impacts* on recreational facilities.

3.12.5.6 No Action Alternative Impacts

Continued operation and maintenance of the existing facilities would have *no impact* on recreation. Failure of the SPTT or pipeline at either of the creek crossings also would have *no impact* on existing recreation facilities.

3.12.6 Socioeconomics

Socioeconomics addresses the topics of population, employment, and housing. The project area is located in unincorporated Santa Barbara County north of the City of Goleta. Population and housing are addressed for Santa Barbara County and census tract 29.07, which contains the project area. Employment is addressed for Santa Barbara County as a whole. Agricultural production in the county and the project area are also addressed. Findings contained in section 3.12.1 Agricultural Resources, were reviewed to identify the potential for any economic effects related to changes in agricultural production.

3.12.6.1 Environmental Setting

Santa Barbara County contained 399,327 persons and 142,901 housing units in 2000. Census tract 29.07, which contains the project area, contained 3,924 persons and 1,380 housing units. Employment in Santa Barbara County in April 2008 was 210,000 persons (U.S. Census Bureau 2008). The unemployment rate in April 2008 was 4.6 percent or 10,100 persons (CEDD 2008). Current agricultural land uses within the project vicinity include avocado and citrus orchards (see section 3.12.1 Agricultural Resources for additional information on agriculture, also farmland designations). The value of gross agricultural production in Santa Barbara County in 2007 exceeded $1.1 billion, an 8.5 percent increase from 2006. Fruit and nut crops comprised more than 38,888 acres or approximately 5.3 percent of the 722,076 acres in agricultural production in the county. The annual value of fruit and nut crops in the county exceeded $449 million or approximately 40.7 percent of the county's total agricultural production value (SBCACO 2008).

3.12.6.2 Preferred Alternative Impacts

The Preferred Alternative would increase the operational flexibility, reliability, and the conveyance capacity of the SCC between the SPTT and the CDMWTP to accommodate peak demand levels and to allow maintenance of the pipeline. It would also reduce the risk of economic impacts from failure of the existing single pipeline. The Preferred Alternative would result in temporary construction jobs and purchases of equipment, materials, and supplies needed to build the second parallel pipeline. The Preferred Alternative would be beneficial to the local economy as would operations and maintenance activities. Construction would last approximately 11 months and would begin in 2009. Construction of the Preferred Alternative pipeline would temporarily displace a small portion of the avocado orchard located near the SPTT. Avocado trees removed during construction could be replanted by the landowner using the compensation negotiated with COMB for the construction easement (see section 2.2.1, Pipeline). 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. Socioeconomics impacts would be *less than significant*.

3.12.6.3 Alternative A (Parallel Pipeline) Impacts

Alternative A would have the same start and end points, pipe size, and appurtenant facilities as the Preferred Alternative, but would follow a different alignment (Figure 2-3). Similar to the Preferred Alternative, Alternative A would result in temporary construction jobs and purchases of equipment, materials, and supplies, and would be beneficial to the local economy. It would reduce the risk of economic effects from failure of the single existing pipeline. The Alternative A pipeline would temporarily displace the same small portion of the avocado orchard located near the SPTT. As described for the Preferred Alternative, topsoil would be replaced and the landowner could replant the avocado trees removed. No agricultural areas would be permanently removed or disrupted. Socioeconomic impacts from Alternative A would be *less than significant*.

3.12.6.4 Alternative B (Non-Parallel Pipeline) Impacts

Alternative B would have the same start and end points, pipe size, and appurtenant facilities as the Preferred Alternative, but would follow a different alignment (Figure 2-3). Similar to the Preferred Alternative, Alternative B would result in temporary construction jobs and purchases of equipment, materials, and supplies, and would be beneficial to the local economy. It would reduce the risk of economic effects from failure of the single existing pipeline. Similar to the Preferred Alternative, the Alternative A pipeline would temporarily displace the same small portion of the avocado orchard located near the SPTT. As described for the Preferred Alternative, topsoil would be replaced and the landowner could replant the avocado trees removed. No agricultural areas would be permanently removed or disrupted. Socioeconomic impacts from Alternative B would be *less than significant*.

3.12.6.5 No Project Alternative Impacts

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 stream crossings. The No Project Alternative would most likely result in a reduction in construction-related economic benefits compared to the Preferred Alternative and would not be as beneficial with regard to overall reliability. No agricultural areas would be permanently removed or disrupted. Socioeconomic impacts of the No Project Alternative would be less than significant.3.12.6.6 No Action Alternative Impacts

The No Action Alternative would not result in the construction-related economic benefits of the Preferred Alternative or other build alternatives. This alternative has a greater potential to result in failure of the existing pipeline due to lack of necessary site improvements, which could, in turn, result in water discharges, erosion, and deposition of soils down slope that could adversely affect at least a portion of the avocado orchard and possibly the citrus orchard. Depending on the location of the failure, impacts to agriculture could range from less than significant to significant but feasibly mitigated to less than significant and would not have long-term effects on agricultural production. Socioeconomic impacts of the No Action Alternative would be *less than significant*.