3.8 Hydrology and Water Quality

Issues (and Supporting Information Sources):	*Potentially Significant Impact*	*Less Than Significant with Mitigation Incorporation*	*Less Than Significant Impact*	*No Impact*
8. HYDROLOGY AND WATER QUALITY— Would the project:				
a) Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
c) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site?	☐	☒	☐	☐
d) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site?	☐	☒	☐	☐
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☒	☐
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map?	☐	☐	☐	☒
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?	☐	☐	☒	☐
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☒	☐
j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow?	☐	☐	☒	☐

3.8.1 Environmental Setting

This section discusses the existing environmental and regulatory setting of the Proposed Project, identifies potential impacts related to construction, operation and maintenance of the Proposed Project, and proposes mitigation measures for those impacts determined to be significant. Setting information in this section was compiled from the Proponent's Environmental Assessment (PEA) (ICF Jones & Stokes, 2009), resource agency websites and databases, and Geographic Information System (GIS) data.

Climate and Precipitation

San Benito and Monterey Counties experience a Mediterranean climate characterized by cool, wet winters and warm, dry summers. The wet season typically extends from November through April with mean annual precipitation ranging from about 12 inches in the Hollister area, increasing to about 18 inches closer to the coast in Monterey County (Daly and Taylor, 1998). Generally, precipitation increases along with elevation and proximity to the coastline. The majority of precipitation typically falls in the form of moderate to heavy rain during winter storms lasting less than 24 hours.

Regional Drainage Patterns

The project area lies within the Central Coast hydrologic region. Topographic features in the region are dominated by sub-parallel coastal mountain ranges and intervening valleys. Monterey and San Benito Counties are largely composed of three ranges which, from east to west, are the Diablo, Gabilan, and Santa Lucia Ranges. Except for rivers with large watershed areas (such as the Salinas and Pajaro Rivers), drainages in the region are typically dry during the summer and early fall; although occasionally seeps and springs may provide perennial flows to some streams. The Hollister Tower Segment of the Proposed Project crosses the northern tip of the Gabilan Range, the crest of which separates the Salinas River watershed to the southwest from the Pajaro River watershed to the northeast.

Pajaro River Watershed

Most of the Proposed Project (i.e., the Hollister Pole Segment and the northern half of the Hollister Tower Segment) lies within the Pajaro River watershed. The Pajaro River watershed covers 1,263 square miles and overlaps four counties: Santa Cruz, Santa Clara, Monterey, and San Benito. Its elevation ranges from sea level to approximately 4,900 feet amsl. The mouth of the Pajaro River is near Watsonville, where it empties into Monterey Bay just north of Elkhorn Slough. The San Benito River, which parallels much of the Hollister Pole Segment, joins the Pajaro River approximately 2.5 miles north of Anzar Junction near Highway 101, and drains over half of its watershed area.

Salinas River Watershed

The Salinas River is the largest water system in Central Coast Region. The Salinas River watershed is bounded by the Santa Lucia Mountains to the west and the Gabilan Mountains to the east. The Salinas River is 155 miles long and roughly bisects the county, terminating in Monterey Bay near Moss Landing. The Salinas River delivers approximately 282,000 acre-feet per year (AFY) of water to the Pacific Ocean at Moss Landing. Most of the water (approximately 90 percent) is delivered during periods of peak precipitation, between mid-December and April. The southern half of the Hollister Tower Segment is located within a subwatershed of the Salinas River, drained by Gabilan Creek.

Surface Water Quality

The watersheds described above are broadly impacted by pollutants originating from non-point sources such as regional agricultural activities, grazing practices, urbanization and hydromodication; as well as certain point sources such as mining and waste water treatment operations. Common pollutants include excess sediment loads, nutrients, nitrate and fecal coliform.

Section 303(d) List of Impaired Water Bodies and TMDLs

In accordance with Section 303(d) of the Clean Water Act, state governments must present the U.S. EPA with a list of "impaired water bodies," defined as those water bodies that do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology.

Placement of a water body on the Section 303(d) List of Impaired Water Bodies acts as the trigger for developing a Total Maximum Daily Load (TMDL) pollution control plan for each water body and associated pollutant/stressor on the list. The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating water quality standards. The TMDL serves as the means to attain and maintain water quality standards for the impaired water body to support designated and potential beneficial uses identified in the Basin Plan (see *Section 3.8.2, Regulatory Setting*). During each Section 303(d) listing cycle, the water bodies on the list are prioritized, and a schedule is established for completing the TMDLs. Listed impaired water bodies in the vicinity of the Proposed Project alignment are presented in **Table 3.8-1**, including the status of TMDL preparation and approval.

Groundwater Hydrology

The project alignment crosses two groundwater basins, as designated by the Department of Water Resources (DWR, 2004): the Gilroy-Hollister Valley Groundwater Basin and the Salinas Valley Groundwater Basin. The basins are divided by faults, rifts, mountain ranges, and rivers.

Gilroy-Hollister Valley Groundwater Basin

The majority of the Hollister Pole Segment lies within the Gilroy-Hollister Valley Groundwater Basin, which is comprised of water-bearing Holocene and Pleistocene alluvium as well as the Pliocene Purisima Formation at depth. A number of municipal and agricultural wells utilize the basin as a source of water supply (DWR, 2010). Present groundwater levels vary between 40 feet below ground surface (bgs) at the east end of the San Juan Valley to about 20 feet bgs on the west end of the valley (SBCWD, 2009). Generally, groundwater levels have risen over 100 feet in the past 35 years due to delivery of imported surface water and the construction of the Hernandez Reservoir. A water quality analysis indicates the groundwater in the basin is somewhat hard and contains significant concentrations of sulfate and chloride.

TABLE 3.8-1
SECTION 303(d) LIST OF IMPAIRED WATER BODIES

Water Body[a]	Pollutant	Status of TMDL Preparation and Approval[b]	Potential Sources
Pajaro River Watershed			
San Benito River	Fecal Coliform	Planned (2011)	Source unknown
	Sedimentation/siltation	Approved (2007)	Agriculture
			Nonpoint source
			Resource extraction
Pajaro River	Boron	Planned (2019)	Source unknown
	Fecal Coliform	Planned (2011)	Natural sources
			Nonpoint sources
			Pasture grazing-riparian and/or upland
	Nitrate	Approved (2006)	Source unknown
	Nutrients	Approved (2006)	Agricultural runoff and return flows
			Urban runoff/storm sewers
			Watewater – land disposal
			Nonpoint sources
	Sedimentation/siltation	Approved (2007)	Agriculture – storm runoff
			Channelization and erosion
			Hydromodification
			Range grazing-riparian and/or upland
			Surface mining and resource extraction
			Streambank modification/destabilization
Salinas River Watershed			
Gabilan Creek	Fecal Coliform	Planned (2007)	Urban runoff/storm sewers
			Natural sources
			Nonpoint sources|
	Nitrate as Nitrate (NO3)	Planned (2019)	Source unknown
Alisal Creek	Fecal Coliform	Planned (2007)	Agriculture
			Natural sources
			Nonpoint sources
			Urban runoff/storm sewers
	Nitrate	Planned (2007)	Source unknown
Tembladero	Ammonia	Planned (2019)	Source unknown
Slough	Fecal Coliform	Planned (2007)	Agriculture
			Natural sources
			Pasture grazing-riparian and/or upland
			Urban runoff/storm sewers
	Nutrients	Planned (2006)	Multiple agricultural sources
	Pesticides	Planned (2008)	Multiple agricultural sources

NOTES:

[a] Water bodies are listed and restricted to those that are hydrologically connected to the disturbance areas of the Proposed Project, and are grouped by watershed.

[b] The date of planned TMDL completion is provided in the 303(d) lists from the SWRCB. Although the planned date of completion has been passed for many of the TMDL projects, approved TMDLs have not been completed as of February 2010.

SOURCE: SWRCB, 2007.

Salinas Valley Groundwater Basin

The southern end of the Hollister Tower Segment lies within the Salinas Valley Groundwater Basin (Langley Area Sub-Basin). From oldest to the youngest, the water-bearing units of the subbasin are the Pliocene Purisima Formation, the Plio-Pleistocene Paso Robles Formation, the Pleistocene Aromas Red Sands, Quaternary terrace deposits, Holocene alluvium, and Holocene sand dunes. The groundwater in this basin is heavily used for agriculture and municipal supplies and has experienced problems related to overdraft, including a groundwater depression in the center of the basin and associated seawater intrusion along coastal areas. Groundwater beneath the Granitic Ridge portion of the subbasin has been affected by elevated nitrate levels in shallow aquifers.

Flood Hazards

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program to provide subsidized flood insurance for those communities that comply with FEMA regulations. FEMA has mapped 100-year flood zones (also known as a 1% annual chance flood) in the project area associated with the San Benito River and San Juan Creek, a tributary to the San Benito River that passes through San Juan Bautista (FEMA, 2009). The flood zone associated with San Juan Creek occurs adjacent to San Juan Highway at poles 13/10 through 13/19. The new river alignment would span the flood zone associated with the San Benito River between poles 14/15 and 15/00. Several existing poles—to be topped or abandoned—are currently within the San Benito River floodplain. The Hollister Tower Segment does not cross any flood zones as defined by FEMA.

3.8.2 Regulatory Setting

Federal and State Water Quality Policies

The statutes that govern the activities under the Program that affect water quality are the federal Clean Water Act (CWA) (33 U.S.C. § 1251) and the Porter-Cologne Water Quality Control Act (Porter-Cologne) (Water Code § 13000 et seq.). These acts provide the basis for water quality regulation in the study area.

The California Legislature has assigned the primary responsibility to administer and enforce statutes for the protection and enhancement of water quality to the State Water Resources Control Board (SWRCB) and its nine Regional Water Quality Control Boards (RWQCBs). The SWRCB provides state-level coordination of the water quality control program by establishing statewide policies and plans for the implementation of State and federal regulations. The nine RWQCBs throughout California adopt and implement water quality control plans that recognize the unique characteristics of each region with regard to natural water quality, actual and potential beneficial uses, and water quality problems. The RWQCB adopts and implements a Water Quality Control Plan that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed in the plan (Water Code §13240-13247).

Beneficial Use and Water Quality Objectives (CWA Section 303)

The Central Coast Regional Water Quality Control Board (CCRWQCB) is responsible for the protection of the beneficial uses of waters on the central coast, including the study area. The CCRWQCB uses its planning, permitting, and enforcement authority to meet this responsibility and has adopted the Water Quality Control Plan for the Central Coast (Basin Plan) to implement plans, policies, and provisions for water quality management. The CCRWQCB published the most recent version of the Basin Plan in January 1994 (CCRWQCB, 1994).

In accordance with State policy for water quality control, the CCWQCB employs a range of beneficial use definitions for surface waters, groundwater basins, marshes, and mudflats that serve as the basis for establishing water quality objectives and discharge conditions and prohibitions. The Basin Plan has identified existing and potential beneficial uses supported by the key surface water drainages throughout its jurisdiction (CCWQCB, 1994). **Table 3.8-2** identifies beneficial uses designated in the Basin Plan for the surface water bodies and groundwater basins relevant to the study area. The Basin Plan also includes water quality objectives that are protective of the identified beneficial uses; the beneficial uses and water quality objectives collectively make-up the water quality standards for a given region and Basin Plan (CCRWQCB, 1994). Within the study area, agricultural supply is an important and prevalent beneficial use of surface water and groundwater. The CCRWQCB is charged with protecting the quality of surface water and groundwater that may be diverted or extracted (or otherwise captured) and used for agricultural supply.

TABLE 3.8-2
DESIGNATED BENEFICIAL USES OF WATER BODIES IN THE PROJECT AREA

Water Body[a]	Designated Beneficial Uses
Pajaro River Watershed	
San Benito River	MUN, AGR, IND, GWR, REC-1, REC-2, WILD, WARM, SPWN, FRESH, COMM
Pajaro River	MUN, AGR, IND, GWR, REC-1, REC-2, WILD, COLD, WARM, MIGR, SPWN, FRESH, COMM
Salinas River Watershed	
Gabilan Creek	MUN, AGR, GWR, REC-1, REC-2, WILD, WARM, SPWN, COMM
Alisal Creek	MUN, AGR, GWR, REC-1, REC-2, WILD, COLD, WARM, SPWN, COMM
Groundwater Basins	
Gilroy-Hollister Valley	AGR, MUN, IND
Salinas Valley	AGR, MUN, IND
Pajaro Valley	AGR, MUN, IND

NOTES:

[a] Water bodies are listed and restricted to those that are hydrologically connected to the disturbance areas of the Proposed Project, and are grouped by watershed.

Beneficial Uses Key:
MUN (Municipal and Domestic Supply); AGR (Agricultural Supply); REC-1 (Body Contact Recreation); REC-2 (Noncontact Recreation); WARM (Warm Freshwater Habitat); COLD (Cold Freshwater Habitat); MIGR (Fish Migration); SPWN (Fish Spawning); WILD (Wildlife Habitat); NAV (Navigation); GWR (Groundwater Recharge); FRSH (Freshwater Replenishment); RARE (Preservation of Rare and Endangered Species); SHELL (Shellfish Harvesting); COMM (Ocean, Commercial, and Sport Fishing); EST (Estuarine Habitat); IND (Industrial Service Supply); PROC (Industrial Process Water Supply).

SOURCE: CCRWQCB, 1994.

The objective of the federal CWA is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters." Under CWA section 303(d), the State of California is required to develop a list of impaired water bodies that do not meet water quality standards and objectives. Table 3.8-1 provides details on the impaired water bodies that cross or are downstream of the project disturbance areas. For those water bodies failing to meet standards, states are required to establish total maximum daily loads (TMDL). A TMDL defines how much of a specific pollutant a given water body can tolerate and still meet relevant water quality standards.

Dredge and Fill Permit (CWA Section 404)

Section 404 of the CWA requires a permit from the United States Army Corps of Engineers (Corps) prior to discharging dredged or fill material into waters of the United States, unless such a discharge is exempt from CWA section 404. The term "waters of the United States" as defined in the Code of Federal Regulations (40 CFR 230.3[s]) includes all navigable waters and their tributaries.

Water Quality Certification (CWA Section 401)

Section 401 of the CWA requires that an applicant for any federal permit (e.g., a Corps 404 permit) obtain certification from the State that the discharge will comply with other provisions of the CWA and with State water quality standards. For the study area, the CCRWQCB or SWRCB (in the case of activities associated with water diversions) must provide the water quality certification required under section 401 of the CWA. PG&E would contact the relevant federal agency(s) in order to determine whether the federal agency(s) would take jurisdiction on a specific project and require a permit; if a federal permit is required then PG&E would also be required to obtain water quality certification from the CCRWQCB.

NPDES Program (CWA Section 402)

The CWA was amended in 1972 to provide that the discharge of pollutants to waters of the United States from any point source is unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. The 1987 amendments to the CWA added section 402(p), which establishes a framework for regulating municipal and industrial storm water discharges under the NPDES Program. In November 1990, the U.S. Environmental Protection Agency (USEPA) published final regulations that establish storm water permit application requirements for discharges of storm water to waters of the United States from construction projects that encompass five or more acres of soil disturbance. Regulations (Phase II Rule) that became final on December 8, 1999, expanded the existing NPDES Program to address storm water discharges from construction sites that disturb land equal to or greater than one acre and less than five acres (small construction activity).

General Construction Permit (Order 99-08-DWQ)

While federal regulations allow two permitting options for storm water discharges (individual permits and General Permits), the SWRCB has chosen to adopt only one Statewide General Permit at this time that would apply to all storm water discharges associated with construction

activity.[1] This General Permit requires all dischargers where construction activity disturbs one acre or more, to:

- Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that would prevent all construction pollutants from contacting storm water and with the intent of keeping all products of erosion from moving off site into receiving waters.
- Eliminate or reduce non-storm water discharges to storm sewer systems and other waters of the nation.
- Perform inspections of all BMPs.

This General Permit is implemented and enforced by the nine RWQCBs. The CCRWQCB administers the stormwater permitting program in the section of San Benito and Monterey Counties that includes the study area. Dischargers are required to submit a Notice of Intent (NOI) to obtain coverage under this General Permit and annual reports identifying deficiencies of the BMPs and how the deficiencies were corrected. Dischargers are responsible for notifying the relevant RWQCB of violations or incidents of non-compliance.

On September 2, 2009, the SWRCB adopted the NPDES General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (construction general permit, Order No. 2009-0009). Order No. 2009-0009 becomes effective July 1, 2010, supersedes Order No. 99-08 and also applies to construction sites that include one or more acre of soil disturbance. Notable changes in the new permit include the following:

- A risk-based permitting approach that includes requirements specific to three overall levels of risk, determined based on the potential for the project to cause sedimentation as well as the sensitivity of the receiving water to sedimentation.
- The new general permit specifies both numerical and qualitative effluent limitations and receiving water monitoring to demonstrate compliance with permit conditions.
- The new general permit specifies minimum qualifications for a qualified SWPPP developer and qualified SWPPP practitioner.

The new permit implements changes addressed at improving the effectiveness of site BMPs, ensuring that qualified personnel are designing and implementing water quality protection measures during construction, and increasing monitoring, reporting and accountability.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act (codified in the Water Code §13000 *et seq*.) is the basic water quality control law for California. As mentioned above, it is implemented by the SWRCB and the nine RWQCBs. The SWRCB establishes Statewide policy for water quality control and provides oversight of the RWQCBs' operations. In addition to other regulatory responsibilities, the

[1] SWRCB Order No. 99-08-DWQ National Pollutant Discharge Elimination System General Permit No. CAS000002.

RWQCBs have the authority to conduct, order, and oversee investigation and cleanup where discharges or threatened discharges of waste to waters of the State[2] could cause pollution or nuisance, including impacts to public health and the environment.

Dredge/Fill Activities and Waste Discharge Requirements

Actions that involve or are expected to involve dredge or fill, and discharge of waste, are subject to water quality certification under section 401of the CWA and/or waste discharge requirements under the Porter-Cologne Act. The SWRCB's Division of Water Rights processes section 401 water quality certifications on projects that involve water diversions (California Code of Regulations, title 23, § 3855). Chapter 4, Article 4 of the Porter-Cologne Act (Water Code § 13260-13274), states that persons discharging or proposing to discharge waste that could affect the quality of waters of the State (other than into a community sewer system) shall file a Report of Waste Discharge with the applicable RWQCB. For discharges directly to surface water (waters of the United States) an NPDES permit is required, which is issued under both State and federal law; for other types of discharges, such as waste discharges to land (e.g., spoils disposal and storage), erosion from soil disturbance, or discharges to waters of the State (such as isolated wetlands), Waste Discharge Requirements (WDRs) are required and are issued exclusively under State law. The WDR application process is generally the same as for CWA section 401 water quality certification, though in this case it does not matter whether the particular project is subject to federal regulation. PG&E would contact the CCRWQCB and file a Report of Waste Discharge; the CVRWQCB would then determine whether an issuance or a waiver of WDR is required.

Waiver for Dewatering and Discharge to Land (CCRWQCB Resolution R3-2008-0010)

The CCRWQCB has adopted a waiver of WDR (Resolution R3-2008-0010) for specific types of low-threat discharges to the land surface with the Central Coast region. Among the activities covered by this waiver includes sediment removal (which can result in the discharge of leachate from the saturated sediment) for in-stream construction projects or minor stream alterations, as well as treated groundwater. Waivers serve much the same purpose as general permits (i.e., they are intended to describe a range of protective measures that could be applied to a broad category of activities). PG&E would apply for and obtain this waiver from the CCRWQCB in the event installation of culverts or other in-stream activity requires the removal and temporary stockpile of sediment.

Streambed Alteration Agreement (Fish and Game Code Section 1602)

The California Department of Fish and Game requires a project applicant to obtain a Streambed Alteration Agreement (SAA) pursuant to Fish and Game Code Section 1602 if a project will: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit

[2] "Waters of the state" are defined in the Porter-Cologne Act as "any surface water or groundwater, including saline waters, within the boundaries of the state." (Water Code, § 13050 (e))

or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.

Local

Relevant general plan policies are summarized below:

San Benito County General Plan

Policy 8 – Development in drainage basins: It is the County's policy to minimize development/uses within drainage basins that could alter the path of watercourses and impede groundwater recharge.

Action

1. Continually monitor mining operations to determine whether mitigation measures are needed.
2. Limit cut-and-fill of watercourses for flood control improvements.
3. Prohibit dumping into creek beds and watercourses and require property owners to clean up existing unauthorized dumps.

Policy 9 – Water quality improvement: It is the policy of the County to cooperate with the Regional Water Quality Control Board to improve water quality problems identified for the County, to maintain water quality on all drainage, and to develop policies and programs for the protection and enhancement of habitat for fish on major tributaries to the Pajaro River (San Benito River, Pacheco Creek) and water quality in the Silver Creek watershed.

Action

1. The County recognizes the value of watershed and natural recharge areas and will update its Grading Ordinance.
2. Because the County recognizes the value of watershed areas, and the direct relationship between hillside development and the loss of such watershed areas, the County will prohibit development on hillsides where slopes are 30% or greater in all areas of the County unless no alternative exists.
3. Pursue funding sources for resolution of water quality problems including Federal and State grants, assessment districts, etc.
4. Continue to compile information on water bodies that have limited information including but not limited to Tequisquita Slough, Clear Creek, Laguna Creek, and Tres Pinos Creek.
5. Proposals that include parking for 50 or more cars shall be required to install and maintain oil and grease separators in storm drain systems and include annual maintenance of separators and a sweeping program for the lot.

Policy 43 – Reduce effects of flooding from development: It is the County's policy to take measures to reduce potential effects of flooding from new development and encourage flood control improvements.

Action

1. Continue to cooperate with the City of Hollister for the collection of fees and development of flood control improvements for tributaries to the San Felipe Lake drainage basin.
2. It is the County's policy to require new development affecting the Enterprise Road drainage area to provide funding and/or physical improvements to reduce flooding.
3. Drainage systems shall be designed to reduce the velocity and volume of storm water runoff off site to predevelopment levels for a 10-year storm interval.

Monterey County General Plan

Objective 5.1: Protect and preserve watersheds and recharge areas, particularly those critical for the replenishment of reservoirs and aquifers.

5.1.1 Vegetation and soil shall be managed to protect critical watershed areas.

5.1.2 Land use and development shall be accomplished in a manner to minimize runoff and maintain groundwater recharge in vital water resource areas.

Objective 5.2: Preserve vegetation where necessary to protect water ways from bank erosion and siltation.

5.2.1 Owners of property adjacent to waterways or responsible agencies shall be encouraged to maintain healthy vegetation along the drainage course, or provide other suitable means of preventing bank erosion or siltation.

5.2.2 The County shall establish special procedures for land use, building locations, grading operations, and vegetation removal adjacent to all waterways and significant water features.

Objective 16.4: Identify existing and potential erosion hazards, and prepare and implement plans to control the amount of erosion and siltation.

16.4.1 The County shall adopt and enforce a comprehensive erosion control ordinance.

16.4.2 The County should establish an active erosion control education program for the general public and building and agricultural trades in cooperation with the Resource Conservation Districts and the Soil Conservation Service.

Objective 21.2: Enhance the quality of water in the County by regulating the type, location, and intensity of land use, and grading operations.

21.2.1 The County shall require all new and existing development to meet federal, State, and County water quality regulations.

21.2.2 The County shall allow only those land uses which do not pollute the groundwater system beyond acceptable limits.

3.8.3 Applicant Proposed Measures

PG&E proposes the following applicant proposed measures (APMs) to minimize impacts related to hydrology and water quality. The impact analysis in this MND assumes that these APMs would be implemented to reduce impacts related to hydrology and water quality discussed below.

APM HYDRO-1: Prepare and Implement a Storm Water Pollution Prevention Plan. PG&E or its contractor will prepare and implement a SWPPP to prevent construction-related erosion and sediments from entering nearby waterways. The SWPPP will include a list of BMPs to be implemented in areas with potential to drain to tributaries of the Salinas River in Monterey County or to the San Benito River in San Benito County. These BMPs will be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. BMPs to be implemented as part of the project-specific SWPPP may include, but are not limited to, the following control measures:

- Temporary erosion control measures (such as silt fences, staked straw bales/wattles, silt/sediment basins and traps, check dams, geofabric, sandbag dikes, grass buffer strips, high infiltration substrates, grassy swales, and temporary revegetation or other ground cover) will be employed to control erosion from disturbed areas.

- Drainage facilities in downstream offsite areas will be protected from sediment using BMPs consistent with CCRWQCB requirements.

- Vegetative cover will be established on the disturbed areas as soon as possible after disturbance.

APM HYDRO-2: Develop and implement a Spill Prevention Control and Countermeasure Plan. PG&E or its contractor will develop and implement an SPCCP to minimize the potential for, and effects of, spills of hazardous, toxic, or petroleum substances during all construction activities. The SPCCP will be completed and included in the SWPPP before any construction activities begin. PG&E will routinely inspect the construction areas to verify that the control measures specified in the SPCCP are properly implemented and maintained. PG&E will notify its contractors immediately if there is a noncompliance issue and will require compliance.

If an appreciable spill has occurred, a detailed analysis will be performed by a Registered Environmental Assessor to identify the likely cause of contamination. This analysis will conform to American Society for Testing and Materials (ASTM) standards and will include recommendations for reducing or eliminating the source or mechanisms of contamination. Based on this analysis, PG&E and its contractors will select and implement additional measures to control contamination, with a performance standard that groundwater quality and surface water quality must be returned to baseline conditions.

APM HYDRO-3: Perform a drainage study and implement a drainage plan. A drainage study will be performed for any area that crosses a waterway and requires a conveyance structure (culvert) for grading of new construction maintenance roads. The study will include calculations for the potential increases in stormwater runoff from related construction activities. The study also will identify critical drainage paths, and PG&E will implement drainage improvements to minimize the risk of flooding to downstream areas. The drainage plan will require that PG&E or its contractor will be responsible for proper

maintenance of the drainages and any BMP associated with each drainage. Implementation of these measures will ensure that altered drainage patterns from project-related construction activities do not significantly affect erosion or sedimentation.

3.8.4 Environmental Impacts and Mitigation Measures

a) Violate any water quality standards or waste discharge requirements: *LESS THAN SIGNIFICANT WITH MITIGATION.*

Construction

Construction activities associated with the Proposed Project could increase the turbidity or otherwise degrade the water quality of receiving stream channels or other surface waterways. Activities that disturb the ground near or within a stream channel (e.g., clearing and grading) could make soils and sediments more susceptible to erosion by altering their existing structure or state. Depending on the distance and ground slope, some portion of the eroded material could eventually be delivered to a receiving stream channel or other type of waterway over a relatively short time period (e.g., during the next rain event). In this case, increased erosion rates would likely lead to increased sediment concentrations and turbidity levels in the receiving stream channel and have a potentially adverse impact on the beneficial uses identified by the CCRWQCB (1994). Further, moderate increases in surface runoff from construction areas could initiate or exacerbate an erosion and sediment delivery problem. An increase in the runoff rate from a construction area may result from temporarily decreasing ground surface resistance to overland flow (e.g., clearing of native vegetation or slope grading), decreasing the infiltration capacity of the soil by means of compaction (e.g., with heavy equipment), or by increasing the velocity of runoff (e.g., concentrating flow into manmade features or into existing rills or gullies). In addition, if construction equipment or workers inadvertently release pollutants (e.g., hydraulic fluid or petroleum) on site, these compounds could be entrained by runoff and discharged into receiving channel(s) causing water quality degradation. The extent of erosion or pollution that could occur at any given construction site varies depending on soil type, vegetation/cover, and weather conditions.

Most elements of the Proposed Project that would require construction involve only short-term (i.e., within a single season) construction activities, and thus the associated potential impacts would be short-lived in nature. Actions associated with the Proposed Project that include notable construction components include removal and installation of towers, installation of new poles, installation of temporary shoo-fly connections, preparation of wire stringing sites, installation of access roads, and development of material staging yards. Specific construction activities referenced under this potential impact include, but are not limited to, clearing and grading, excavation work, and the stockpiling of soil or sediments. The Proposed Project would disturb a total of approximately 85 acres, of which approximately 0.5 acre would remain permanently disturbed following completion of construction activities. The area of disturbance would not be concentrated in one or two locations, but rather spread throughout the entire Proposed Project area at discrete locations along the alignment; this would reduce the magnitude of the overall potential impact with respect to erosion and sediment delivery and also make it easier to control or prevent these potential problems.

PG&E has committed to two Applicant Proposed Measures (APMs) to reduce the effects of construction activities on water quality. Under HYDRO-1 and HYDRO 2, PG&E would prepare and implement a Storm Water Pollution Prevention Plan (SWPPP) as well as a Spill Prevention Control and Countermeasure Plan (SPCCP). The SWPPP would include a list of Best Management Practices (BMPs) to be implemented in areas with potential to drain to tributaries of Gabilan Creek in Monterey County or to the San Benito River (and its tributaries) in San Benito County. These BMPs would include such measures as scheduling practices to avoid earthwork during periods of heavy rainfall, minimizing the amount of time soils are exposed to wind and rain, and stabilizing and protecting soils prior to anticipated rainfall events and after construction would be completed. In addition, the SWPPP requires that construction sites employ sedimentation and erosion control BMPs such as containment of the site within silt fences and coir rolls, installation of slope breaks (e.g. straw waddles) near drainages and road crossings, and it would require that existing vegetation be preserved to the maximum extent feasible. These BMPs would be selected to achieve maximum sediment removal and represent the best available technology that is economically achievable. Preparation of a SWPPP must be consistent with the requirements of the General Construction Permit as described in the regulatory setting section.

The SPCCP would specify control measures to minimize the potential for, and effects of, spills of hazardous, toxic, or petroleum substances during all construction activities. It would be completed and included in the SWPPP before any construction activities begin and PG&E would routinely inspect the construction areas to verify that the control measures specified in the SPCCP are properly implemented and maintained. Common control measures in a SPCCP include storing hazardous materials and placing sanitary facilities and waste disposal locations away from sensitive areas, placing drip pans under parked vehicles, maintaining clean and sanitary work areas, and properly disposing of hazardous substances and construction/demolition wastes. In the event of an appreciable spill, a detailed analysis would be performed by a Registered Environmental Assessor to identify the likely cause of contamination and additional measures to control contamination would be selected and implemented, with a performance standard that groundwater quality and surface water quality must be returned to baseline conditions.

Another potential water quality issue as a result of construction would be the possible discharge of groundwater from construction dewatering into nearby surface waters. Regionally, groundwater levels are estimated to vary between 20 and 40 feet below ground surface (bgs) (SBCWD, 2009), and dewatering may be necessary in areas of shallow groundwater close to the San Benito River and ephemeral creeks, or potentially for installation of TSPs, which would require augered holes up to 30 feet deep. In these cases, groundwater would most likely be discharged to the land surface or into the nearest creek or storm drain. The Central Coast Regional Water Quality Control Board (CCRWQCB) typically issues a general waiver(s), which itself contains specific provisions for these types of low-threat discharges. The groundwater would be pumped from the shallow aquifer and would likely be the same or similar in quality as the water in the adjacent creek or river. Further, if discharged to the land surface, a portion (if not all) of the groundwater would likely just return to the aquifer by way of infiltration; thus, water quality impacts from construction dewatering are unlikely.

The SWPPP and SPCCP to be implemented as part of the Proposed Project would insure that the impacts of construction activities on the water quality of nearby water bodies are significantly reduced or avoided. Further, the newly adopted construction general permit, as described in the regulatory setting section, will take effect prior to construction of the Proposed Project. The new permit includes stricter provisions, including a risk assessment and implementation of specific BMPs based on site soil conditions and the sensitivity of the receiving water body. The APMs and permit requirements will ensure that the impacts to water quality during construction are *less than significant*. However, as discussed below, permanent disturbance areas associated with new and improved access roads will require that additional mitigation measures be implemented.

Operation and Maintenance

Operation and maintenance activities and long-term effects associated with the Proposed Project would result in minimal effects on water quality. Maintenance procedures would not change as a result of the Proposed Project, and very little new, permanent soil disturbance would occur. However, any remaining disturbance areas and new access roads could result in sedimentation or turbidity increase in local receiving waters.

A total of 0.25 miles of new access roads would be installed, and 1.53 miles of existing access road would be re-graded, some very near to or across existing unnamed tributary channels. In addition, approximately nine temporary drainage crossings (e.g. bridges, steel plates, or construction mats) and one culvert will be installed across tributary drainages which eventually drain to Gabilan Creek or the San Benito River. Because installation of drainage crossings could directly affect drainage courses, discussion relevant to installation of drainage crossings is provided in item c). The potential long term impacts on water quality due to new or improved roads are discussed below.

In general, roads commonly lead to increases in the volume of surface runoff as well as increases in erosion and sediment delivery. This is attributable to the fact that road installation substantially reduces the infiltration capacity of soils and disturbs the existing soil structure, making the soil more susceptible to erosion and entrainment by runoff. The beneficial uses of the surface water channels within the Proposed Project area are protected by the water quality standards outlined in the Basin Plan (CCRWQCB, 1994) as well as an existing sediment TMDL for the San Benito and Pajaro Rivers (SWRCB, 2007); these beneficial uses could be adversely affected by increased sedimentation and turbidity levels resulting from the erosion and delivery of sediment from the proposed new access roads.

The existing measures required of PG&E (e.g., the General Permit, water quality certification, and/or possibly WDR) are sufficient to reduce potential construction-related water quality impacts to a less than significant level. Though, with respect to long-term impacts associated with the proposed new access roads, the required measures are not necessarily sufficient. Therefore, Mitigation Measure 3.8-1 would be required to specifically address the potential water quality impacts associated with proposed new roads.

Mitigation Measure 3.8-1: For all segments of new access roads that would be within 300 feet of an existing surface water channel and traverse a ground slope greater than two percent, the following protective measures shall be installed:

- Permanent access roads shall be in-sloped with a rock-lined ditch on the inboard side;
- Water bars, or a similar drainage feature, shall be installed at 150 foot intervals (so as to reduce the effective, connected length of the access road to 150 feet).

Significance after Mitigation: Less than Significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted): *LESS THAN SIGNIFICANT IMPACT.*

There is no element of the Proposed Project that would interfere with groundwater recharge. Added impervious surfaces would be minimal and would consist solely of tubular steel pole (TSP) foundations and tower footings; and these would not represent continuous surfaces that could divert rainfall away from recharge areas.

As discussed in item a), dewatering activities may be required during construction. This activity, if required, could temporarily affect groundwater levels in the shallow groundwater zones. Pole/tower placement, installation of temporary shoo-fly connections, construction of foundations for TSPs, or other construction-related activities near an ephemeral stream or creek and at lower elevations on the valley floor adjacent to the San Benito River may require groundwater dewatering. However, municipal and domestic wells located in the study area generally pump groundwater from deeper aquifers (SBCWD, 2009) and would not be affected by dewatering activities in the shallow groundwater zone. Furthermore, any effects related to lowering the shallow groundwater table would be temporary since dewatering would be required for only a limited period during construction activities. Therefore, if groundwater dewatering would be required, it would be localized, temporary in duration, limited to the shallow groundwater zone, and it would not affect municipal and domestic wells in the study area. As a result, impacts related to the depletion of groundwater resources would be less than significant.

c) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river, or by other means, in a manner that would result in substantial erosion or siltation on- or off-site: *LESS THAN SIGNIFICANT WITH MITIGATION*.

Most creeks and streams would be spanned by the proposed power lines, and tower/pole footings would generally be placed upslope of drainages and creeks. However, both temporary and permanent access roads for the proposed project may intersect ephemeral drainages, requiring disturbance of drainage courses. Under the California Fish and Game Code, the California Department of Fish and Game (CDFG) has jurisdiction over any activity that could affect the

bank or bed of any stream that has value to fish and wildlife. If any changes are proposed along a creek or waterway within its jurisdiction, a streambed alteration agreement (SAA) would be required under California Fish and Game Code Section 1602. Further, the CCRWQCB would require Clean Water Act (CWA) Section 401 water quality certification or Waste Discharge Requirements (WDRS) for the installation of conveyance structures. The CCWRCB includes a general waiver for in-stream sediment removal activities on condition that the project sponsor submits a report of waste discharge and comply with certain conditions, such as doing the work during the dry season, and preventing sediment leachate from discharging to the surface water. The SAA and CCRWQCB requirements include reasonable measures necessary to help protect water quality and aquatic resources.

Temporary Impacts

Grading, drilling, and other earthwork during construction of the Proposed Project would result in soil disturbance that could temporarily alter drainage patterns and increase the hazard of erosion or siltation and flooding on- or off-site. As discussed in item a), erosion and siltation would be of most concern for construction of facilities, staging areas, and access roads in hilly terrain. The SWPPP to be implemented as part of the Proposed Project (further described in item a) of this checklist), particularly the erosion control measures, would minimize the potential for construction of the Proposed Project to cause substantial erosion or siltation onsite or offsite.

In a number of locations, PG&E proposes to install a crossing and conveyance structure across intermittent and ephemeral drainage features. In most cases, the crossings would consist of a temporary steel plate laid over the drainage feature. This would allow passage of construction equipment and vehicles without direct impacts to the drainage from compaction or erosion. In a couple cases, a temporary bridge and/or construction mat will be used to protect the affected drainage. Temporary drainage crossings will be removed when construction activities cease. Placement of crossing structures may require disturbance of approximately 0.0171 acres across nine drainages for minor grading of creek banks and approaches to assure a flat and well-placed steel plate (ICF Jones & Stokes, 2010). However, such disturbances would be restored following construction and would be subject to BMPs prescribed in the project-specific SWPPP. For these reasons, temporary drainage crossings would not result in the alteration of the course of a stream and would have a less than significant impact with respect to flooding, substantial erosion and siltation.

Permanent Impacts

The only permanent stream alteration would be from the installation of a permanent corrugated metal pipe culvert along the Hollister pole segment (pole 18/14), which would require disturbance of approximately 0.045 acres of an ephemeral drainage that is tributary to the San Benito River (ICF Jones & Stokes, 2010). If improperly designed or sized, culverts can often result in flooding or erosion issues. Culverts typically serve to constrict the cross-sectional area and increase the velocity of large flows, which can increase flooding and sedimentation upstream (e.g., backwater) as well as bed and bank erosion downstream. As discussed in the setting (Tables 3.8-1 and 3.8-2), the San Benito River has beneficial use designations for fish spawning and warm freshwater habitat, and sedimentation/siltation is identified as a significant impairment. Without proper design and installation, culverts could result in a net increase in sediment and silt being delivered downstream.

Pursuant to APM HYDO-3, PG&E proposes to perform a drainage study and implement a drainage plan as part of the Proposed Project for locations that would require the installation of a conveyance structure. The study would include calculations for the potential increases in stormwater runoff from related construction activities and would also identify critical drainage paths. Based on the plan, PG&E would implement drainage improvements to minimize the risk of flooding to downstream areas. The drainage plan would require that PG&E or its contractor be responsible for proper maintenance of the drainages and any associated BMPs. Additional mitigation related to the drainage plan is required to adequately address possible flooding and erosion issues related to culvert installation. Mitigation Measure 3.8-2 requires that the drainage study include design and performance criteria that explicitly address the processes of erosion and flooding in order to reduce potential impacts to less than significant.

Implementation of the APM-HYDRO-3, Mitigation Measure 3.8-2, as well as adherence to the above regulatory provisions, would ensure that altered drainage patterns from Proposed Project-related construction and operation activities do not significantly affect erosion, siltation, or flooding on- or off-site. Therefore, impacts of the Proposed Project on existing drainage pattern would be less than significant.

> **Mitigation Measure 3.8-2:** The drainage study, as proposed by PG&E in APM-HYDRO-3, shall provide sizing recommendations to ensure each culvert can pass a 10-year storm event without being submerged, and design recommendations to ensure that culvert installation would result in no net increase in erosion and sedimentation during peak flows. Sizing and design recommendations for each culvert shall consider the individual drainage characteristics of the stream (e.g., slope, watershed area, and substrate) and may include any combination of features necessary to achieve no net increase in erosion and sediment transport. Such features may include the following:
>
> - Downstream armoring with gravel or gabions, coupled with appropriate roughness features or characteristics, so as to dissipate and slow flows exiting the culvert and leaving the modified stream segment;
> - A wide culvert that retains the natural stream bed and roughness elements without notably increasing flow depth;
> - Design length and slope of culvert to maintain existing topography
>
> The drainage study and associated sizing and design recommendation shall be reviewed and approved by a Professional Engineer, Hydrologist, or similarly qualified individual.

d) Substantially alter the existing drainage pattern of a site or area through the alteration of the course of a stream or river or, by other means, substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site: *LESS THAN SIGNIFICANT WITH MITIGATION*.

The discussion under item c) also addresses the potential from project construction and operation to result in flooding on or off-site. As discussed above, implementation of APM-HYDRO-3, Mitigation Measure 3.8-2, and the required regulatory approvals and permits, would ensure that

altered drainage patterns from Project-related construction and operation activities would have a less than significant impact of flooding.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff: *LESS THAN SIGNIFICANT IMPACT.*

Storm drain systems in the Cities of Hollister and San Juan Bautista collect and convey stormwater runoff associated with impervious surfaces. Most of the systems drain to nearby streams and creeks. In rural areas, stormwater drainage is not controlled and travels in natural drainage courses to ephemeral receiving waters. Project operation and maintenance would not involve discharge of water and thus the Proposed Project would not create additional runoff and would have no affect on existing storm drain systems. In addition, added impervious surfaces would be minimal and would consist solely of TSP foundations and tower footings, and these would not represent continuous impervious surfaces that could divert rainfall or contribute to additional sources of polluted runoff to streams or storm drain systems. Access roads would not be paved and would not represent impermeable surfaces. Nevertheless, access roads decrease the natural infiltration capacity of the soil through grading and compaction, thereby providing possible increases in storm water received by local drainages. The effect of access roads with respect to polluted runoff (sediment and siltation) is provided under criterion a), above. For these reasons, the affect of the Proposed Project on the available capacity of existing storm drains or providing substantial additional sources of polluted runoff would be less than significant.

f) Otherwise substantially degrade water quality: *NO IMPACT*.

The main water quality concerns that would be associated with the Proposed Project involve erosion and siltation or release of hazardous materials during construction operations. These impacts have been discussed under item a) and item c). No water quality impacts of the Proposed Project other than those that have already been discussed above are reasonably foreseeable.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other authoritative flood hazard delineation map: *NO IMPACT*.

The Proposed Project would not involve the construction of housing. No impact would occur.

h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows: *LESS THAN SIGNIFICANT IMPACT*.

FEMA has mapped 100-year flood zones in the project area associated with the San Benito River and San Juan Creek, a tributary to the San Benito River that passes through San Juan Bautista (FEMA, 2009). The flood zone associated with San Juan Creek occurs adjacent to San Juan Highway at poles 13/10 through 13/19. The new river alignment would span the flood zone associated with the San Benito River between poles 14/15 and 15/00. Several existing poles,

which will be topped, are currently within the San Benito River floodplain. The Hollister Tower Segment does not cross any flood zones as defined by FEMA.

The Proposed Project would not affect 100-year flood zones because it would occur within the existing ROW, and the poles that cross the FEMA flood zones would be in the same location as the existing structures. The only deviation from the existing right-of-way would be across the San Benito River floodplain. At this location, the transmission line would span the mapped flood zone from bank to bank. For these reasons, the Proposed Project will have no impact on flood flows within a 100-year flood hazard area.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam: *LESS THAN SIGNIFICANT IMPACT.*

The Hernandez and San Justo Reservoirs have dam inundation zones that are located in the San Juan Valley that could affect the Proposed Project (OEM, 2007). Catastrophic failure of a dam is an extremely unlikely event and dam safety regulations enforced by Department of Water Resources (DWR) Division of Safety of Dams require periodic inspections of dams and reservoirs for the purpose of determining their safety. Inspectors may require dam owners to perform work, maintenance, or implement controls if issues are found with the safety of a dam. If either the Hernandez or San Justo dams failed, the power poles or the temporary shoo-fly connections affected by the resulting flood flows are unlikely to be irrevocably damaged. The wind loading design requirements for power lines are very stringent and would likely prevent any poles from being toppled or carried away by flood flows. Following such an event, PG&E would conduct an inspection of all poles in the inundation zone and promptly repair or replace them. In the unlikely event a dam fails, it would represent an inspection and repair issue rather than a significant impact on the Proposed Project. Potential impacts are thus considered to be *less than significant*.

j) Expose people or structures to a significant risk of loss, injury or death involving inundation by seiche, tsunami, or mudflow: *LESS THAN SIGNIFICANT IMPACT*.

The area of the Proposed Project is distant from the coastline, is above 200 feet in elevation, and would not be affected by seiches or tsunamis. However, a mudflow could conceivably affect the Proposed Project in the event of heavy and prolonged rainfall. As discussed in item c) of Section 3.6, *Geology, Soils and Seismicity*, the Proposed Project would be unlikely to experience an increase in exposure to landslide hazards (including mudflows) because it would occur within PG&E's ROW and most poles and towers would be placed in approximately the same or similar location as the existing structures. New towers and poles in terrain prone to mudflows would be built using up-to-date building codes and modern engineering standards of care, and would be less likely to be damaged by a mudflow than the structures they are replacing. The only poles to be constructed outside of the existing ROW would be at the San Benito River crossing, which is largely flat and not prone to mudflows. For these reasons the impact is less than significant.

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