3.10 HYDROLOGY AND WATER QUALITY

This section addresses the effects on hydrology and water quality that would be caused by the proposed Tule Wind Project. This section identifies the affected environment/environmental setting, identifies any existing federal, state, and local water quality regulations, provides an analysis of the potential impacts, and recommends mitigation measures to avoid and reduce impacts as a result of the proposed project and alternatives. This section is based upon the information from the following: Tule Wind Project Water Supply Letter prepared by Geo-Logic Associates, September 2010; Draft Preliminary Storm Water Management Plan (SWMP) prepared by HDR Engineering, September 2010; and the Draft Preliminary Drainage Summary prepared by HDR Engineering, September 2010; and are included as **Appendix O**.

3.10.1 Affected Environment/Environmental Setting

Regional and Site Hydrology

According to the Draft Boulevard Subregional Plan and the Mountain Empire Subregional Plan (July 2009), the Boulevard area has two main drainages or watersheds, with the Tecate Divide separating the two. The majority of the project area discharges into the Salton Sea, and approximately one-sixth of the project area discharges to the west into the Pacific Ocean. The drainage to the east of the Tecate Divide ultimately flows into the Salton Trough and the Sea of Cortez, which is under the jurisdiction of the of the Colorado River Water Quality Control Board and the drainage to the west ultimately drains into the Tijuana Estuary and the Pacific Ocean, which is under the jurisdiction of the San Diego Regional Water Quality Control Board.

The California State Water Quality Board has a hierarchical naming and numbering system used to define watershed areas. A general description of these classifications is listed in **Table 3.10-1**. The drainages that are located within the project area are presented in **Table 3.10-2**.

Table 3.10-1. Watershed Descriptions

Watershed Name	Approximate Miles	Description
Hydrologic Region (HR)	12,735	The state is divided into ten hydrologic regions, which area large-scale topographic and geologic considerations.
Hydrologic Unit (HU)	672	Defined by surface drainage, map include a major rive, watershed, groundwater basin, or closed drainage.
Hydrologic Area (HA)	244	Major subdivision of hydrologic units; may be a major tributaries, ground water attributes, or stream components.
Hydrologic Sub-area (HAS)	195	A major segment of an HA with significant geographical characteristics or hydrological homogeneity

Source: CalWater 2007

Table 3.10-2. Project Drainages and Hydrologic Unit Summary

Drainage Name	Ultimate Discharge	Watershed	Hydrologic Area	Hydrologic Sub-Area	Hydrologic Unit
Direct Project Drainages					
Tule Creek	Carrizo Creek	Anza Borrego	Jacumba	McCain	722.71
Walker Creek	Carrizo Creek	Anza Borrego	Jacumba	McCain	722.71
Canebrake Wash	Carrizo Creek	Anza Borrego	Agua Caliente	Canebrake	722.63
Bow Willow Creek	Carrizo Creek	Anza Borrego	Agua Caliente	Carrizo	722.61
Carrizo Creek	San Felipe Creek	Anza Borrego	Agua Caliente	Carrizo	722.61
La Posta Creek	Cottonwood Creek	Tijuana	Cameron	Cameron	911.70
Miller Creek	Campo Creek	Tijuana	Campo	Clover Flat	911.83
Indirect Downstream Project Drainages					
San Felipe Creek	Salton Sea	Anza Borrego	Ocotillo Lower Felipe	Ocotillo Lower Felipe	722.20
Cottonwood Creek	Tijuana River	Tijuana	Cottonwood Morena Barrett Lake Potrero	Cottonwood Morena Barrett Lake Barrett	911.60, 911.50, 911.30, 911.23
Tijuana River	Pacific Ocean	Tijuana	Potrero Tijuana Valley	Marron Water Tanks San Ysidro	911.21, 911.12, 911.11

Source: Cal Water 2007

The project area has 19 drainage basins, for a total of 33,919 acres of total drainage basin area. A northeastern ridgeline crosses the easterly draining portions of the project, dividing the flows going to the Salton Sea with southwest flows draining into Tule Creek and northeast flows draining into Carrizo Wash, Bow Willow Creek, and Canebrake Wash. Approximately one-third of the project drains to Tule Creek via McCain Valley and Lark Canyon. Tule Creek flows are conveyed southeast into Tule Lake, which discharges into Tule Canyon, then converges with Carrizo Wash in Carrizo Gorge. A small portion of the project along the southeast, in close proximity to Interstate 8 (I-8), is conveyed into Walker Creek on the south side of I-8. Walker Creek conveys flows into Carrizo Wash. After picking up Walker Creek and Tule Creek, Carrizo wash flows northeasterly where it picks up discharges from Bow Willow Creek and Vallecito Creek, which flows from Canebrake Wash into Carrizo Wash. All flows in Carrizo wash are then conveyed into San Felipe Creek and the Salton Sea. The Salton Sea is approximately 45 miles downstream of the project.

Westerly draining flows (Simmons Canyon, Unnamed Western Wash, and Basin No. 300-1000) are conveyed into La Posta Creek, which conveys flows into Cottonwood Creek, discharging into Lake Morena. The dam at Lake Morena discharges back into Cottonwood Creek, which then discharges into Barrett Lake. Barrett Lake dam releases flows back into Cottonwood Creek, which discharges into the Tijuana River and into the Pacific Ocean. Cottonwood creek is a natural unconfined stream. Lake Morena is a minimum of approximately 14 miles downstream of the project.

Southerly draining flow (Basin No. 1100) is conveyed into Miller Creek, which conveys flows into Campo Creek, which then conveys into Tijuana River and into the Pacific Ocean. The hydrologic unit is 911.83. Both the Miller Creek and Campo Creek are natural streams.

Easterly draining hydrologic sub-areas include McCain (722.71), Carrizo (722.61), and Canebrake (722.63) hydrologic units. These easterly draining sub-areas are conveyed through Ocotillo Lower Felipe hydrologic sub area 722.20. Westerly draining project areas are located in the Cameron hydrologic sub-area 911.70. Cameron sub-area drains through the Cottonwood (911.60), Morena, Barrett Lake (911.50), Barrett (911.30), Marron (911.23), Water Tanks (911.12), and San Ysidro (911.11) hydrologic sub-areas before reaching the Pacific Ocean. **Table 3.10-2** contains a summary of drainages receiving runoff directly from project area and drainages indirectly receiving runoff from project area.

Based on the project location and the existing conditions, there are no dry weather flows for drainages. There are minimal existing rural developments within the project drainage basins that would generate flows during dry weather. Frequent site visits during the dry season confirmed that no flows were present in area drainages associated.

All basins have similar drainage patterns. Runoff sheet flows across the ground surface until it encounters rivulets which then discharge into larger streams which ultimately discharge easterly or westerly. Precipitation that falls on typical existing access roads sheet flows off the side of the roads where it is either collected in swales running parallel to the road or continues to sheet flow across the natural terrain. Swales carry runoff to streams crossing the access road, where they are then conveyed to major drainage features.

There are no major improvements to the drainage features within the basins. However, a number of culverts have been installed on portions of several of the basins to facilitate access roads across the smaller drainage features. An unnamed tributary to Tule Creek along the northeastern edge of the project crosses a number of public and private roads via culverts just east of the landing strip. A number access roads scattered throughout the drainage basins utilize a depressed on grade type crossing, where flows are conveyed across the top of the road, rather than constructing culverts to carry flows under the road (Arizona crossing). Ribbonwood road crosses a number of drainage features along the southwestern portion of the Project utilizing both culverts and Arizona type low flow crossings. Tule Creek crosses a number of existing access roads via culverts or Arizona type low flow crossings.

The project area is not located within a mapped regulatory floodplain. A number of drainage features cross the project area, but all are located in Federal Emergency Management Agency (FEMA) non-printed Flood Insurance Rate Map panels. Additionally, the project is not located in an area containing a dam, located adjacent to a lake capable of forming a seiche or a coastline capable of a tsunami.

Water Quality

The California Regional Water Quality Control Board designates beneficial uses for surface and groundwater. The following define the beneficial uses of water:

Municipal and Domestic Supply (MUN): Includes water use for community, military, or individual water supply systems including, but not limited to, drinking water supply. It should be noted that inland surface waters that meet the criteria mandated by the *Sources of Drinking Water Policy* are designated MUN. Unless otherwise designated by the Regional Board, all inland surface waters in the region are considered suitable or potentially suitable as a municipal and domestic water supply (San Diego RWQCB 1994).

Agricultural Supply (AGR): Includes water use for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for ranch grazing.

Industrial Service Supply (IND): Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, and oil well repressurization.

Ground Water Recharge (GRW): Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting salt water intrusion into fresh water aquifers.

Water Contact Recreation (REC1): Waters are used for recreational activities involving body contact with water where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and Scuba diving, surfing, white water activities, fishing and the use of natural hot springs.

Non-Contact Water Recreation (REC2): Waters are used for recreational activities involving proximity to water, but not normally involving body contact with water where ingestion of water would be reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, camping, boating, tide pool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

Warm Freshwater Habitat (***WARM***): Waters support warm water ecosystems that may include, but are not limited to, preservation and enhancement of aquatic habitats, vegetation, fish and wildlife, including invertebrates.

Wildlife Habitat (WILD): Waters support wildlife habitats that may include, but are no limited to, the preservation and enhancement of vegetation and prey species used by waterfowl and other wildlife.

Preservation of Rare, Threatened, or Endangered Species (RARE): Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened or endangered.

Table 3.10-3 lists the surface and groundwater beneficial uses for the waters located within the project area.

Table 3.10-3. Surface and Groundwater Beneficial Uses

Surface Waters	Hydrologic Unit Basin Number	MUN	AGR	IND	PROC	GWR	FRESH	POW	REC1	REC2	BIOL	WARM	COLD	WILD	RARE	SPWN
Inland Surface Waters																
Tule Creek, Walker Creek	722.71	P	X			X			X	X		X		X		
Bow Willow Creek, Carrizo Creek	722.61		X			X			X	X		X		X	X	
Ground Waters																
Anza-Borrego	722.00	X	X	X												

Source: http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/index.shtml
Note: *Excepted from Municipal
X - Existing Beneficial Use
P - Potential Beneficial Use

In accordance with Section 303(d) of the 1972 federal Clean Water Act (CWA), the State Water Resources Control Board (SWRCB) has established a list of "impaired water bodies." **Table 3.10-4** presents the water bodies which may be impacted due to the construction of the proposed project. Based on the distance of impaired water bodies from the project area and the opportunity for natural pollutant removal in conveyance features, only Morena Reservoir could be impacted by project development.

Table 3.10-4. Clean Water Act Section 303(d) List of Water Quality Identified Waterways

Name	Pollutant	Potential Source
Barrett Lake	Color Manganese pH Unknown Sources	Source unknown
Morena Reservoir	Color Manganese pH Unknown Sources	Source unknown
Salton Sea	Nutrients Salinity Selenium	Agriculture Return Flows Major Industry Point Source Out of State
Tijuana River	Eutrophic Indictor bacteria Low dissolved oxygen Pesticides Solids Synthetic Organics Trace Elements Trash	Nonpoint/Point Source
Tijuana River Estuary	Eutrophic Indicator bacteria Lead Low Dissolved Oxygen Nickel Pesticides Thallium Trash Turbidity	Nonpoint/Point Source Urban Runoff/Storm Sewers Unknown Nonpoint Source Wastewater

Source: San Diego and Colorado River State Water Resources Control Board 303(d) Lists

Currently, there are no Region 9 State Water Resources Control Board (SWRCB) special requirements for any water bodies that will be impacted by this project. Based on the available information there are no High Risk Areas within the Project limits. Comparison of the anticipated pollutants and the receiving water bodies' impairments indicates there are no primary pollutants of concern. Secondary pollutants of concern are sediment and oil and grease.

Groundwater

The eastern portion of San Diego County obtains their water supply from fractured crystalline rock aquifers. Aquifers with limited groundwater in storage (e.g., fractured rock aquifers) may experience shortages from large groundwater users, such as agriculture, or due to water companies. According to the County of San Diego Department of Planning and Land Use, the estimated long-term groundwater available in McCain Valley and the Boulevard area is a minimum storage of 99 percent. Additionally, the project is not listed within the County of San Diego designated Groundwater Impacted Basins per Section 67.721 of the County Groundwater Ordinance.

In the crystalline bedrock, groundwater will only be present in open joints, fractures and local shear zones, there being no primary porosity in the rocks present. Concentrations of ground water may be adjacent to mapped faults where more fracturing is present and where fault gouge along fault planes and shear zones may cause retardation of lateral and vertical flow of descending meteoric water and ground water.

Several mapped springs in the project area probably reflect water being conducted along joint and fracture systems where they intersect the ground surface, and may also include areas where faults cause local retention of ground water. Recharge of these systems comes through rainfall and snow melt. It is not known whether the mapped springs are perennial or intermittent. There are seven springs located within the project area, of which there are no springs located adjacent to a mapped fault, as shown in Section 3.8, Geology Soil and Minerals, **Figure 3.8-3**. Small local bodies of silt, sand, and gravel in intermittent stream drainages may also be seasonally saturated through rainfall and snow melt.

The drainage to west of the Tecate Divide was federally designated in 1993 as the Campo-Cottonwood Sole Source Aquifer. This designation allows the U.S. Environmental Protection Agency to review projects that are financially assisted by federal grants or federal loan guarantees to determine if the project will have the potential to contaminate the sole source aquifer.

The project is anticipated to obtain groundwater from three wells located on Rough Acres Ranch/Hamann Properties for dust suppression, roadway construction, and turbine foundation construction. Well water testing is currently being conducted by Geo-Logic Associates per the County of San Diego standards. According to Geo-Logic Associates, Estimate of Available Groundwater Memo, September 2010 (Appendix O), two supply wells on the project site have been identified as readily available for project use with the following gallons per minute production:

1. One well is located on Rough Acres Ranch approximately one to two miles north of I-8 between Ribbonwood Road and McCain Valley Road. Drilled in 2009, data provided on the well log for this well indicates that the estimated well yield is 60 gpm. A 72-hour constant rate aquifer pumping test was performed at this well at 50 gpm. Based on the current preliminary test data, there was very little response from pumping in the adjacent observation well, about 30 feet from the pumping well, and therefore it is reasonable to assume that sustained pumping at 50 gpm, at a minimum can be achieved from this well.

2. One well is located on the Ewiiaapaayp Reservation, about 7 miles north of I-8 on La Posta Road. A 72-hour constant rate aquifer pumping test was conducted at this well at 80 gpm. Based on the preliminary test results it is reasonable to assume that sustained pumping at 80 gpm is feasible at this well location.

There are four potential additional water supply sources available for the project. The State Correctional Facility is located about one half mile north of I-8 off McCain Valle Road. This correctional facility maintains two wells with estimated production of 45 and 65 gpm. The Live Oak Springs Resort located south of I-8 on Old Highway 80 about ¾-mile northwest of the intersection with Highway 94 may provide a source of water supply. This resort (and water company) operates a well that pumps about 40,000 gallons per day (25 to 30 gpm) and maintains a 100,000 gallon pond, and two large tanks with an additional 50,000 gallons of storage capacity. The Jacumba Community Service District (CSD) also has indicated that they are able to provide 20,000 to 40,000 gallons of water per day, equivalent to about 14 to 28 gpm. Finally, the City of El Centro has indicated that they are willing to sell wastewater plant effluent to the project for use during the construction phase.

Based on the currently available well data, the project site wells are estimated to provide 130 gpm (or about 200,000 gallons per day [continuously pumped 24 hours per day, 7 days per week]) of the peak 124 gpm (250,000 gallons) project-required water. The identified pumps have the adequate water supply for the project needs, although if additional water sources are required the identified backup water sources have been identified.

However, with off-site water from the State Correctional Facility, Live Oak Springs Resort, and Jacumba CSD for purchase, an additional 80,000 to 120,000 gallons of water per day, or approximately 55 to 83 gpm of water could be available to support the project water supply needs; ample water for the 9-month construction period. With these additional off-site sources, the combined on-site and off-site water could be equivalent to an estimated 213 gpm could be made available in support of the project. In addition, wastewater plant effluent may be available from the City of El Centro for purchase.

3.10.2 Regulatory Setting

Federal

Federal Emergency Management Agency

FEMA administers the National Flood Insurance Program to provide subsidized flood insurance to communities that comply with FEMA regulations limiting development in floodplains. FEMA also issues Flood Insurance Rate Maps that identify which land areas are subject to flooding. These maps provide flood information and identify flood hazard zones in the community. The standard for flood protection is established by FEMA, with the minimum level of flood protection for new development determined to be the one percent-annual exceedance probability (i.e., the 100-year flood event).

Clean Water Act Section 402(p)

The Federal Water Pollution Control Act (also known as the CWA) was amended in 1972 to prohibit discharge of any pollutant into Waters of the U.S. unless the discharge is authorized by a National Pollutant Discharge Elimination System (NPDES) Permit. Originally, the NPDES program focused on reducing pollutants from discharges from industrial process wastewater and municipal sewage treatment plants. In 1987, the CWA was amended to require the U.S. Environmental Protection Agency (EPA) to regulate storm water discharges through use of NPDES storm water permits. Section 402(p) of the CWA established a framework for regulating discharges under the NPDES program.

In California, the EPA has delegated authority to issue NPDES permits to the SWRCB. The SWRCB and nine RWQCBs carry out the regulation, protection, and administration of water quality. The state is

divided into nine regions related to water quality and quantity characteristics. Each RWQCB is required to adopt a Water Quality Control Plan that recognizes and reflects the regional differences in existing water quality, the beneficial uses of the region's ground and surface water, and local water quality conditions and problems. The Tule Wind Project is located within the San Diego RWQCB (Region 9), and the Colorado River RWQCB (Region 7).

Section 303(d) of the CWA

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point-source dischargers (municipalities and industries). Section 303(d) requires that the state develop a total maximum daily load (TMDL) for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL can also act as a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. The TMDL prepared by the state must include an allocation of allowable loadings to point and non-point sources, with consideration of background loadings and a margin of safety. The TMDL must also include an analysis that shows the linkage between loading reductions and the attainment of water quality objectives. The U.S. EPA must either approve a TMDL prepared by the state or, if it disapproves the state's TMDL, issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. After implementation of the TMDL, it is anticipated that the problems that led to placement of a given pollutant on the Section 303(d) list would be remediated.

National Pollutant Discharge Elimination System

The NPDES permit system was established in the federal CWA to regulate municipal and industrial discharges to surface waters of the U.S. Sections 401 and 402 of the CWA contain general requirements regarding NPDES permits. Section 307 of the CWA describes the factors that the federal EPA must consider in setting effluent limits for priority pollutants.

Non-point sources are diffuse and originate over a wide area rather than from a definable point. Non-point pollution often enters receiving water in the form of surface runoff, but is not conveyed by way of pipelines or discrete conveyances. As defined in the federal regulations, such non-point sources are generally exempt from federal NPDES permit program requirements. However, three types of non-point source discharges are controlled by the NPDES program: non-point source discharge caused by general construction activities, the general quality of stormwater in municipal stormwater systems, and discharges associated with industrial operations. The 1987 amendments to the CWA directed the U.S. EPA to implement the stormwater program in two phases. Phase I addressed discharges from large (population 250,000 or above) and medium (population 100,000 to 250,000) municipalities and certain industrial activities. Phase II addresses all other discharges defined by the EPA that are not included in Phase I.

In accordance with NPDES regulations, in order to minimize the potential effects of construction runoff on receiving water quality, the State requires that any construction activity affecting one acre or more must obtain a General Construction Activity Stormwater Permit. Permit applicants are required to prepare a stormwater pollution prevention plan (SWPPP) and implement Best Management Practices (BMPs), such as erosion and sediment control and non-stormwater management measures, to reduce construction effects on receiving water quality. Because construction of the project would collectively disturb more than one acre, the project would be subject to permit requirements and would develop and implement project-specific SWPPPs to minimize construction activity impacts.

Examples of typical BMPs implemented in SWPPPs include using temporary mulching, seeding, or other suitable stabilization measures to protect uncovered soils; storing materials and equipment to ensure that spills or leaks cannot enter the storm drain system or surface water; developing and implementing a spill prevention and cleanup plan; installing traps, filters, or other devices at drop inlets to prevent contaminants from entering storm drains; and using barriers, such as straw bales or plastic, to minimize the amount of uncontrolled runoff that could enter drains or surface water.

U.S. Environmental Protection Agency, Section 438 of Energy Independence and Security Act

Construction activities such as clearing, grading, trenching, and excavating disturb soils and sediment. If not managed properly, disturbed soils and sediments can easily be washed into nearby water bodies during storm events, where water quality is reduced. Section 438 of the Energy Independence and Security Act (EISA) (42 U.S.C. Section 17094) establishes into law new stormwater design requirements for Federal construction projects that disturb a footprint greater than 5,000 square feet of land. The project footprint consists of all horizontal hard surfaces and disturbed areas associated with the project development, including both building area and pavements such as roads, parking lots, and sidewalks. Note that these requirements do not apply to resurfacing of existing pavements. Under these requirements, predevelopment site hydrology must be maintained or restored to the maximum extent technically feasible with respect to temperature, rate, volume, and duration of flow. Predevelopment hydrology will be modeled or calculated using recognized tools and must include site-specific factors such as soil type, ground cover, and ground slope. Site design will incorporate stormwater retention and reuse technologies such as bioretention areas, permeable pavements, cisterns/recycling, and green roofs to the maximum extent technically feasible. Post-construction analyses will be conducted to evaluate the effectiveness of the as-built storm water reduction features. As stated in a Department of Defense (DOD) memorandum dated January 19, 2010, these regulations will be incorporated into applicable DOD Unified Facilities Criteria within 6 months (DOD 2010).

U.S. Environmental Projection Agency, Section 1424(e) of the U.S. Safe Drinking Water Act

The U.S. Safe Drinking Water Act (SDWA) regulations implementing the sole source aquifer statute were first proposed in 1977 for the Edwards Underground Reservoir. These regulations guided U.S. EPA in the subsequent designation of 64 sole source aquifers across the United States. The program allows the EPA environmental review of any project which is financially assisted by federal grants or federal loan guarantees. These projects are evaluated to determine whether they have the potential to contaminate a sole source aquifer. If there is such a potential, the project should be modified to reduce or eliminate the risk, or federal financial support may be withdrawn.

Ground Water Protection Strategy for States and Tribes: Wellhead Protection Program

The Wellhead Protection Program (WHP) was developed as a part of the Ground Water Protection Strategy for States and Tribes under the 1986 Amendments to the SDWA. The WHP includes: the delineation of WHP areas; detection of possible contamination; remediation and monitoring of contamination; contamination prevention; and public education and participation.

Source Water Assessment Program

The Source Water Assessment Program was developed as a 1996 amendment to the SDWA. The program establishes protection areas and zone delineation, an inventory of potentially contaminating activities, vulnerability analysis, protection area management and public education and participation.

Ewiiaapaayp Indian Reservation Integrated Resource Management Plan Point Source Control Program

The Point Source Control Program is a part of the water pollution control program and includes the following: the designation of beneficial water resource uses; the adoption of water quality criteria and standards; water quality monitoring and assessment; obtainment of permitting authority and water quality certification; development of waste discharge requirements; implementation of a regulatory and enforcement system; and promotion of education and participation.

Until the Tribe adopts water quality objectives, general surface water quality objectives established by the San Diego Basin Regional Water Quality Control Board are used by the Tribe to assess water quality.

Ewiiaapaayp Indian Reservation Integrated Resource Management Plan Safe Drinking Water Program

The Safe Drinking Water Program operates, maintains and manages the Reservation water systems so residents are provided with an efficient, cost-effective, self-sufficient and high quality water service. Water quality should also meet Safe Drinking Water Act regulations and Tribal water quality objectives,

State

California Water Code Division 7 (Porter-Cologne Act)

The California Water Code contains provisions regulating water and its use. Division 7 establishes a program to protect water quality and beneficial uses of the state water resources including groundwater and surface water. The SWRCB and RWQCB administer the program and are responsible for control and water quality. They establish waste discharge requirements, water quality control planning and monitoring, enforcement of discharge permits, and ground and surface water quality objectives.

California Regional Water Quality Control Board

The SWRCB and the RWQCBs are responsible for ensuring implementation and compliance with the provisions of the federal CWA and California's Porter-Cologne Water Quality Control Act. The project site is situated within the jurisdiction of the San Diego RWQCB (Region 9), and the Colorado River Water Quality Control Board (Region 7). The San Diego and the Colorado River RWQCB have authority to implement water quality protection standards through the issuance of permits for discharges to waters at locations within its jurisdiction.

Water quality objectives for the Tule Creek and Carrizo Creek are specified in the Basin Plan prepared by the RWQCB in compliance with the federal CWA and the Porter-Cologne Act. The Basin Plan establishes water quality objectives, and implementation programs to meet stated objectives and to protect the beneficial uses of water. Because the project area is located within the RWQCB's jurisdiction, all discharges to surface water or groundwater are subject to the Basin Plan requirements.

In January 2007, the RWQCB adopted Order 2007-0001, a municipal permit to all of the jurisdictions within San Diego County. This permit and the previous permit (Order 2001-01) have requirements for development projects to minimize or eliminate the impacts of development on water quality. The proposed project is subject to the requirements of the municipal permit as it is implemented via the City's Urban Runoff Management Program. The specific requirements include the selection of appropriate

BMPs to avoid, prevent or reduce the pollutant loads entering the storm drain system and receiving waters.

Provision D.1.g of Regional Water Board Order R9-2007-0001 also requires the San Diego Stormwater Co-permittees to implement a Hydromodification Management Plan (HMP) "…to manage increases in runoff discharge rates and durations from all Priority Development Projects, where such increased rates and durations are likely to cause increased erosion of channel beds and banks, sediment pollutant generation, or other impacts to beneficial uses and stream habitat due to increased erosive force." To address this requirement, a Draft Hydromodification Plan has been prepared for the County of San Diego; however, the final plan has not been adopted (Brown and Caldwell 2009).

The San Diego Regional Model Standard Urban Stormwater Mitigation Plan (SUSMP) was approved in May 2009 by the Regional Board and is applicable to the proposed project.

California Regional Water Quality Control Board Watershed Management Program

The watershed management program is to promote the restoration of impaired water resources; develop and implement best management practices and ground water protection measures, make cooperative partnerships with other parties in the watershed, make project-generated data publically available, and to increase public awareness and participation in pollution prevention. The recommended watershed management practices include restrictions on land use, response protocols for spills and natural disasters, and runoff, erosion, and sediment controls.

California Streambed Alteration Agreement

Section 1601 of the California Fish and Game Code requires an agreement between the Department of Fish and Game and a public agency proposing to substantially divert or obstruct the natural flow or effect changes to the bed, channel, or bank of any river, stream, or lake. The agreement, describes best management practices which may include avoidance and restoration procedures, and is designed to protect the fish and wildlife values of a river, lake, or stream.

California Groundwater Rights

California created a system of appropriating surface water rights through a permitting process in 1913, but groundwater has never had any statewide regulation. Though the regulation of groundwater has been considered on several occasions since 1913, the California Legislature has repeatedly determined that groundwater management should remain a local responsibility. The right to use groundwater in California has evolved through a series of court decisions dating back to the late 1800s. Groundwater rights are usufructuary, meaning the right is not one of absolute ownership, but of the opportunity of use on the overlying land. This use must be reasonable and beneficial. In 1903, a court ruling established that for landowners overlying an aquifer, each property had a correlative or co-equal right to a just and fair proportion of the resource. These correlative rights only require that all property owners share equally in the resource until it is exhausted, irrespective of the consequences. When the consequences of over-pumping are severe, groundwater users can ask the court to adjudicate, or define, the rights that overlying users have to groundwater resources. To date, there are 19 adjudicated basins in California, mostly in southern California. Eighteen of the adjudications were undertaken in the State Superior Court and one in Federal Court. For each adjudication case, the court appoints a watermaster to oversee the court judgment. In 15 of these basins, the court judgment limits the amount of groundwater that can be extracted by all parties based on a court determined safe yield of the basin. The Santa Margarita Basin, which is partially

located in San Diego County, was adjudicated in Federal Court and requires that water users report the amount of surface and groundwater they use, but groundwater extraction is not restricted.

California Water Code

The California Water Code lists 22 kinds of districts or local agencies with specific statutory provisions to manage surface water. Many of these agencies have statutory authority to exercise some forms of groundwater management. For example, a Water Replenishment District (Water Code Section 60000 et seq.) is authorized to establish groundwater replenishment programs and collect fees for that service, while a Water Conservation District (Water Code Section 75500 et seq.) can levy groundwater extraction fees. Through special acts of the Legislature, 13 local agencies have been granted greater authority to manage groundwater. Most of these agencies, formed since 1980, have the authority to limit export and even control some in-basin extraction upon evidence of overdraft or the threat of an overdraft condition. These agencies can also generally levy fees for groundwater management activities and for water supply replenishment.

Assembly Bill 3030 - Groundwater Management Act

In 1992, AB 3030 was passed which greatly increased the number of local agencies authorized to develop a groundwater management plan and set forth a common framework for management by local agencies throughout California. These agencies could possess the same authority as a water replenishment district to "fix and collect fees and assessments for groundwater management" (Water Code Section 10754), provided they receive a majority of votes in favor of the proposal in a local election (Water Code Section 10754.3).

California Department of Water Resources Water Well Standards

Until 1990, the California Water Well Standards were found in Department of Water Resources Bulletin 74-81 and the Cathodic Protection Well Standards in Bulletin 74-1. In 1990, the Department published Bulletin 74-90 as a supplement to Bulletin 74-81 and as a replacement for parts of the Water Well Standards in Bulletin 74-81. Also, Bulletin 74-90 replaced Bulletin 74-1 for Cathodic Protection Well Standards and added a new section on Monitoring Well Standards. To make the Well Standards easier to use and more widely available, the Southern District has combined the contents of Bulletins 74-81 and 74-90, and formed integrated Water Well Standards. The standards are intended to apply to the construction (including major reconstruction) or destruction of water wells throughout the State of California.

Local

San Diego County Code of Regulatory Ordinances Sections 67.701-67.703, 67.710-67.711, 67.720-67.722, Groundwater Ordinance

The County of San Diego currently manages anticipated future groundwater demand through the County Groundwater Ordinance. This Ordinance does not limit the number of wells or the amount of groundwater extraction from existing landowners. However, the Ordinance does identify specific measures to mitigate potential groundwater impacts of projects requiring specified discretionary permits. Existing land uses are not subject to the Ordinance unless a listed discretionary permit is required. Additionally, Major Use Permits (MUPs) or MUP modifications which involve construction of agricultural and ranch support facilities or those involving new or expanded agricultural land uses are among the exemptions from the

Ordinance. However, the agricultural exemption does not supersede or limit the application of any law or regulation, including CEQA. The Groundwater Ordinance separates the County into three areas of regulations: Borrego Valley, Groundwater Impacted Basins, and All Other Projects.

The County of San Diego Land and Water Quality Division regulate the design, construction, modification, and destruction of water wells throughout San Diego County to protect San Diego County's groundwater resources. The project is subject to the requirements of the San Diego County Groundwater Ordinance No. 9826 (new series).

To provide adequate authority to implement the requirements of the revised Municipal Permit, the County of San Diego Board of Supervisors adopted the County of San Diego Watershed Protection, Stormwater Management, and Discharge Control Ordinance on March 12, 2008. The following objectives are stated in WPO Section 67.801:

- Prohibit polluted non-stormwater discharges to the stormwater conveyance system and receiving waters;
- Establish requirements to prevent and reduce pollution to water resources;
- Establish requirements for development project site design to reduce stormwater pollution and erosion;
- Establish requirements for the management of stormwater flows from development projects to prevent erosion and to protect and enhance existing water-dependent habitats;
- Establish standards for the use of off-site facilities for stormwater management to supplement on-site practices at development project sites;
- Establish notice procedures and standards for adjusting stormwater and non-stormwater management requirements, where necessary.

3.10.3 Environmental Consequences/Impact Analysis

California Environmental Quality Act Significance Criteria

Appendix G of the *CEQA Guidelines* states that the project would have a significant effect on hydrology and water quality if it would:

- Substantially alter existing drainage patterns in the project area;
- 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;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site;
- Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

- 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;
- Substantially degrade water quality.

As discussed in Section 3.10-1, the project is not located near a dam, lake, or coastline which would subject the project to the hazards of floods, seiches, or tsunamis. Therefore, the following CEQA significance criteria are considered not relevant to the project area, and are not discussed:

- Place housing within a 100-year flood hazard area as mapped by the federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map;
- Place within a 100-year flood hazard area structures which would impede or redirect flood flows;
- Expose people or structures to significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam;
- Inundation by seiche, tsunami, or mudflow.

Project Components

The project proposes to construct up to134 wind turbines pads, new roads and upgrades to existing access roads, an overhead and underground collector cable system, a co-located 10-acre Operation & Maintenance (O&M)/Substation facility, a 138 kV transmission line, two meteorological towers (MET) towers and one sonic detection and ranging system (SODAR) unit, a 5-acre batch plant, a 10-acre parking area, and nineteen 2-acre laydown areas. **Table 3.10-5** presents a breakdown of the project components and the temporary and permanent land disturbances resulting from the construction of each project component. Some of the project components overlap when combined together such as; the new proposed roads with a 24 feet disturbed area intersecting with the turbines 200-foot radius. This gives a distorted higher calculation for the overall project surface land disturbances. In an effort to show the breakdown of the land disturbances for each of the project components and an overall total of surface land disturbance for the project, **Table 3.10-5** presents a calculated total (Total Disturbed Area) with the overlapping areas removed. The project area was analyzed on the largest permanent impact of 543 acres. The project development will increase impervious areas by a very small amount. Each turbine pad represents approximately 360 square feet of impermeable area. The access roads and turbines are anticipated to constitute the largest project components requiring a substantial amount of grading.

Roads

To facilitate construction activity, existing and new access road improvements will include widening from approximately 16 to 20-foot widths to 36-foot widths to accommodate large cranes and equipment delivery. The access roads will be restored from the 36-foot temporary width (accommodates large equipment and deliveries) to the widths identified below, after the turbines have been installed.

Upon completion of construction activity, existing and proposed access roads located on land under the jurisdiction of the County of San Diego will be improved to comply with the Department of Public Works Private Road Standard of 24 feet (28 foot graded extent). The main project roads (Ribbonwood Road and McCain Valley Road) throughout the project site will be improved to a maximum of 20 feet to comply with the California Fire Code Standards. Spur roads to the turbines will be improved to a maximum of 18 feet wide to comply with State Responsibility Areas (SRA) Fire Safe Regulations.

Table 3.10-5. Proposed Project Estimate of Surface Land Disturbance

Project Component	Quantity*	Area Disturbed per Feature	Disturbance Type	Proposed Project	Proposed Project with Deviant Substation
Turbine	134	400-foot diameter	Perm	386.57	386.57
Transmission Line	1	24-foot width	Temp	26.37	28.33
Transmission Line Poles	108 (116)	50 feet x 150 feet	Temp	18.26	19.71
Transmission Line Poles	108 (116)	8-foot diameter	Perm	0.12	0.13
Overhead Collector Line	1	24-foot width	Temp	25.12	27.36
Collector Poles	232 (250)	2-foot diameter	Perm	0.02	0.02
Underground Collector Line	1	24-foot width	Temp	83.09	84.17
New Roads	89 (90)	36 feet	Temp	60.43	61.23
New Roads	89 (90)	20 feet (28 ft. on County lands)	Perm	91.00	92.00
Improvements to Existing Roads	21	16-20 feet	Temp	23.00	23.00
Improvements to Existing Roads	21	20 feet (28 ft. on County lands)	Perm	74.10	74.10
Substation	1	5 acres	Perm	5.00	5.00
O&M Facility	1	5 acres	Perm	5.00	5.00
Parking Lot	1	10 acres	Temp	10.00	10.00
Batch Plant	1	5 acres	Temp	5.00	5.00
Staging Area (Laydown Areas)	19	2 acres	Temp	38.00	38.00
Met Tower	2	700 sf	Temp	0.032 (1,400 sf)	0.032 (1,400 sf)
Met Tower	2	900 sf	Perm	0.041 (1,800 sf)	0.041 (1,800 sf)
SODAR	1	700 sf	Temp	0.016 (700 sf)	0.016 (700 sf)
SODAR	1	900 sf	Perm	0.021(900 sf)	0.021 (900 sf)
Totals		Acres Disturbed (Temporary)		223.6	229.9
		Acres Disturbed (Permanent))		541.7	542.74
		Total Disturbed Area		765.3	772.7

*( ) = the quantity utilizing the Deviant Substation

When construction is complete, temporary construction areas along access roads will be revegetated to its natural state. New roads will be located away from drainages and follow natural contours to the extent practical, designed to maintain current surface water runoff patterns to prevent erosion, designed to minimize stream crossings, avoid wetlands to the greatest possible extent, and limit changes to surface water runoff. A total of 114 new roadways will be constructed with a disturbed area resulting in 91.0 acres of permanent impacts, and 61.2 acres of temporary impacts. A total of 23 existing roadways will be improved, resulting in a maximum disturbed area of 74.1 acres of permanent impacts and 23 acres of temporary impacts. The total roadway disturbed area for the proposed project will include 165.1 acres of permanent impacts and 84.2 acres of temporary impacts due to roadway construction and

improvements. Soil erosion will be controlled at culvert outlets and catch basins, roadway ditches, and culverts will be maintained and cleaned on a regular basis by Iberdrola Renewables.

The new access roadway from Rough Acres Ranch to Ribbonwood Road has not been completely surveyed due to private property access issues, as well as the western portion of the project within the Campo and Manzanita Indian Reservations, as permission to access this area has not been granted to date. This Rough Acres Ranch area is identified as a drainage area which drains southeast into Tule Lake. The project area is drained by 19 drainage basins, and all basins have similar drainage patterns. The basins in the area sheet flow across ground surface until it encounters rivulets which then discharge into larger streams.

Precipitation that falls on access roads typically sheet flows off the side of the roads where it is either collected in swales parallel to the road or continues to sheet flow across the natural terrain. Drainage of access roads throughout the project will be facilitated by brow ditches/swales parallel to proposed roads, which will convey flows in exiting surface drainage features.

Turbines

A temporary construction work area will be cleared for each wind turbine tower. Work areas may vary in size, and may be constructed differently in keeping with each site's topography. Each turbine work area will require an up to 200-foot radius to be cleared and leveled. The cleared area is necessary for foundation excavation and construction, assembling turbine sections, and also to stage the construction crane which will hoist turbine sections into place. Upon completion of construction, the area surrounding the tower will be surfaced with gravel up to a 10-foot radius to provide surface stabilization and to minimize surface erosion and runoff. The remaining area will be revegetated with a 100 feet fuel management (combined with the 10-foot radius from the turbine base).

Permanent wind tower foundations will be approximately 60 feet in diameter, and 7 to10 feet deep. Specific dimensions will depend on site needs, as determined by geotechnical investigations. Following soil excavation and compaction, tower foundations will be constructed of structural concrete with appropriate steel reinforcement, as directed by the tower supplier. A 5-foot by 9-foot concrete pad for transformer foundations will also be included. To support the construction crane for turbine erection, a compacted-soil crane pad measuring 40 feet by 120 feet with a maximum slope of one percent is required. The construction crane pad will not be asphalt surfaced, and underlying soils will be compacted to provide a minimum soil bearing capacity of 6,000 pounds per s.f. to provide a stable foundation for the crane. In locations where this is not feasible, crane mats will be used to stabilize the crane.

Precipitation falling on the exposed portions of the turbine pads will sheet flow off the turbines and finished surfaces, such as the O&M building, to surrounding brow ditches/swales. Runoff will be directed into the surrounding existing natural drainage features, with overall flow patterns intended to mimic existing drainage features.

Substantially alter existing drainage patterns in the project area

Construction

A preliminary SWMP and drainage study continuous hydrologic analysis was completed to determine project impacts on hydromodification resulting from the project development. The hydromodification analysis assumes only disturbed footprint areas and identified 19 major drainage basins for the project

area. According to the drainage study, the amount of impervious area will be minimal, and roadways will be constructed to follow natural contours. The project development will not significantly affect existing drainage patterns and the amount of redirected flows will be minimal. The project will implement and follow the County and BLM standards for grading and will follow the natural contours of the site. Portion of roadways within the County portions of the project are not expected to exceed a 10 percent grade, which will require paving per the County Fire Guidelines. Additionally, BMPs (outlined in Section 2.0) will be implemented and CDFG-approved culverts will be used where necessary. Additional site specific hydrologic and hydraulic analysis will be completed for the project to determine flow rates at specific locations within the studied basins in order to size proposed drainage facilities. Impacts will be less than significant.

Operation and Maintenance

The operation and maintenance of the project will not alter any existing drainage patterns for the project area. Roadways will be maintained so that erosion will be limited and culverts will be maintained as needed. No impacts are identified due to the operation and maintenance of the proposed project.

Decommissioning

The decommissioning phase will include similar activities as the construction phase of the project. Prior to termination of the ROW authorization, a decommissioning plan will be developed and approved by BLM. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase to reduce impacts to existing drainage patterns. Impacts due to the decommissioning of the project regarding existing drainage patterns are considered less than significant.

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

Construction

The eastern portion of San Diego County obtains their water supply from fractured crystalline rock aquifers. According to the County of San Diego Department of Planning and Land Use, the estimated long-term groundwater available in McCain Valley and Boulevard area has estimated minimum groundwater storage of 99 percent. Additionally, the project is not listed within the County of San Diego designated Groundwater Impacted Basins in the Section 67.721 of the County Groundwater Ordinance.

The construction phase of the project is expected to occur over a period of 18 to 24 months. The project will require water supply for dust suppression on access roads, grading, clearing vegetation, and concrete mixing for wind turbine foundations, and substation and electrical transformer concrete pads. The project is anticipated to obtain groundwater from three existing groundwater wells located on Rough Acres Ranch property, owned by Hamann Properties, based on the well tests conducted as part of the formal groundwater investigation that will support the required County of San Diego Groundwater Major Use Permit. As described previously, the project has identified adequate groundwater sources for the construction phase of the project, with an additional three groundwater resources in the event that the primary sources are not adequate.

A groundwater study will be completed to further investigate the condition of the area groundwater table and proposed water usage for the project. Considering the groundwater is obtained from fractured crystalline rock aquifers located in the area, it is not anticipated that the proposed project will have an effect on lowering the local groundwater table level. Impacts to groundwater supplies are less than significant.

Operation and Maintenance

The O&M building site will include a groundwater well to provide up to 5 gallons per minute of potable water. Once the project is operational, the O&M facility will use approximately 2,500 gallons per day of water for employees water and sewer uses. Impacts to groundwater supply and recharge are less than significant.

Decommissioning

During the decommissioning phase of the project, impacts would be less than the construction phase of the project, as no water will be required for concrete mixing. However, water may be required for dust suppression throughout the decommissioning phase. Impacts to groundwater supplies and recharge due to the decommission phase of the project are less that significant.

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

Construction

The project proposes to permanently disturb a maximum of 543acres of land for the development of the project components. The turbines and the access roads are anticipated to constitute the largest project feature requiring grading. Project planning will limit the number of unnecessary drainage crossings, and only include engineered crossings at locations where crossings are required. As discussed previously, a preliminary hydrologic analysis was completed for the project, of which the modeling results indicated that the existing conditions and the proposed runoff were identical. The grading for the project will be in accordance with both County and BLM regulations and is intended to match the existing drainage patterns and minimize the amount of redirected flows. Site specific hydrologic and hydraulic analysis is necessary to determine flow rates in the existing drainage features, size of proposed drainage facilities to convey design storms, impacts that additional crossings will have on upstream water surfaces, the potential increased flow rates, and the potential for erosion or siltation on or off-site that may result from project construction. Project planning will limit the number of unnecessary drainage crossings. Impacts to existing drainage patterns, or the alteration of a stream or river course resulting in substantial erosion or siltation on- or off-site due to the construction of the project is less than significant.

Operation and Maintenance

The operation and maintenance of the project will not alter any existing drainage patterns for the project area, or alter a course of a stream or river. Roadways will be maintained so that erosion will be limited and culverts will be maintained as needed. No impacts are identified due to the operation and maintenance of the proposed project.

Decommissioning

Decommissioning activities will be similar to the construction phase of the project. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase to reduce impacts to existing drainage patterns and avoid erosion to the greatest extent possible. The decommissioning phase of the project is not anticipated to alter existing drainage patterns or a course of a stream or river that may result in substantial erosion. Impacts are less than significant.

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

Construction

As discussed previously, the project will be sited away from drainages to the maximum extent feasible, and will utilize CDFG-approved culverts where necessary. Some project features (i.e., turbine pads, concrete foundations, etc.) do include impervious surfaces which would result in an increase in surface runoff. However, the amount of surface runoff is considered minimal and would not result in on- or off-site flooding. Surface parking areas proposed for the project are small areas intended for accommodating construction personnel, which will be constructed of gravel or compacted dirt and will sheet flow to surrounding landscaping. Project development will not significantly affect existing drainage patterns and the amount of redirected flows will be minimal. It is anticipated that the use of appropriate drainage basins will sufficiently accommodate the surface runoff and will not cause area flooding. Impacts are less than significant.

Operation and Maintenance

The O&M/Substation facility will be constructed on a ten-acre site, and will include concrete pads for the O&M/Substation foundations and electrical transformers. Areas not covered by concrete pads, such as the parking area will be surfaced with gravel to minimize erosion and surface runoff. Impervious areas will all drain to surrounding naturally vegetated areas. Impacts resulting from the operation and maintenance phase of the project are less than significant.

Decommissioning

The decommissioning phase of the proposed project is not anticipated to alter drainage patterns or the course of a stream or river that would cause substantial surface runoff or cause flooding. All impervious areas and project components would be removed and the area would return to its natural state. No impacts are identified.

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

Construction

Construction activities aggravate soil erosion, due to ground surface disturbance, heavy equipment traffic, or alteration of surface runoff patterns. Additionally, weathering of freshly exposed soils from foundation excavation, or access road construction can release various chemicals through oxidation and leaching

processes. Surface water bodies and local groundwater are two resources that are hydrologically connected. Altering the surface water hydrology could affect the water quality of downgradient locations, affecting the groundwater infiltration.

The proposed project will mimic existing drainage patterns and will minimize redirection of any flows. Project crossings of existing drainage features will utilized a stabilized Arizona type crossing, similar to The San Diego county Design Standard DS-14 without low flow culverts. Road surfaces will be stabilized with articulated concrete block (ACB) systems or reinforced concrete, or equivalent, depending on crossing flow rates. Riprap protection, or equivalent, will be provided in the channel immediately upstream and downstream of the crossing to protect against soil erosion and increased sediment loads.

Precipitation falling on graded pads will sheet flow off the proposed features and finished surfaces to swales/brow ditches that will collect runoff. Runoff from the exposed portions of the turbine pads will flow through a layer of placed gravel. Runoff will then be directed to the existing natural surface drainage features, with flow patterns intended to mimic existing conditions.

Proposed electrical collector lines will be located throughout the project. Minor effects on drainage patterns from collector lines or transmission lines may occur during construction. Once the collector and transmission lines are either hung or buried the surrounding vegetation and grades will be restored to existing conditions to the greatest extent practicable.

Nearly all access roads will be constructed of gravel and/or locally available soil, and as such will be permeable. Any runoff from the roads themselves will be conveyed into swales/brow ditches parallel to the road. Swale flows will be conveyed to surrounding existing drainage features, where they will return to the existing drainage patterns. Access roads over 10 percent will be required to be paved based on the County of San Diego Fire Department requirements. Any short distances of paved roads will be drained similarly to the gravel roads.

Using the County of San Diego SWMP approach as a guideline in conjunction with General Construction Permit requirements, project water quality mitigation criteria were established. Based on the County of San Diego SUSMP, a Stormwater Intake Form for Development Projects was completed. Under existing conditions pollutants generated by the project site include sediments, nutrients, trash and debris, oil and grease, bacteria and viruses, and pesticides. Based on the County of San Diego SUSMP anticipated pollutants for hillside developments and industrial developments are sediment, nutrients, heavy metals, organic compounds, oil and grease, trash and debris, oxygen demanding substances, and pesticides, as shown in **Table 3.10-6**.

Selection of treatment control BMPs is influenced by primary pollutants of concern, removal efficiencies, expected flows, and applicability to site design constraints. Treatment control BMP selection criteria from the County of San Diego SUSMP were used for BMP recommendations. **Table 3.10-7** identifies the Groups of Pollutants and Relative Effectiveness of Treatment Facilities.

Table 3.10-6. Anticipated and Potential Pollutants Generated by Land Use Type

Priority Project Categories	General Pollutant Categories								
	Sediments	Nutrients	Heavy Metals	Organic Compounds	Trash & Debris	Oxygen Demanding Substances	Oil & Grease	Bacteria & Viruses	Pesticides
Detached Residential Development	X	X			X	X	X	X	X
Attached Residential Development	X	X			X	P(1)	P(2)	P(1)	X
Commercial Development >1 Acre	P(1)	P(1)		P(2)	X	P(5)	X	P(3)	P(5)
Heavy industry/industrial development	X		X	X	X	X	X		
Automotive Repair Shop			X	X(4)(5)	X		X		
Restaurants					X	X	X	X	
Hillside Development >5,000 ft^2	X	X			X	X	X		X
Parking Lots	P(1)	P(1)	X		X	P(1)	X		P(1)
Retail Gasoline Outlets			X	X	X	X	X		
Streets, Highways & Freeways	X	P(1)	X	X(4)	X	P(5)	X		

Source: County of San Diego SUSMP
X = anticipated
P = potential
(1) A potential pollutant if landscaping exists on-site.
(2) A potential pollutant if the project includes uncovered parking areas.
(3) A potential pollutant if land use involves food or animal waste products.
(4) Including petroleum hydrocarbons.
(5) Including solvents.

Table 3.10-7. Groups of Pollutants and Relative Effectiveness of Treatment Facilities

Pollutant of Concern	Bioretention Facilities (LID)	Settling Basins (Dry Ponds)	Wet Ponds and Wetlands	Infiltration Facilities or Practices (LID)	Media Filters	High-rate Biofilters	High-rate Media Filters	Trash Rack & Hydro-dynamic Devices
Course Sediment and Trash	High	High	High	High	High	High	High	High
Pollutants that tend to associate with fine particles during treatment	High	High	High	High	High	Medium	Medium	Low
Pollutants that tend to be dissolved following treatment	Medium	Low	Medium	High	Low	Low	Low	Low

Source: County of San Diego SUSMP

There are no primary pollutants of concern for the project; however, the County of San Diego SUSMP requires the project to focus on the secondary pollutants of concern. Secondary pollutants of concern are trash and oil and grease; which represent course sediment and trash as well as pollutants that tend to associate with fine particles during treatment. Bioretention facilities such as; settling basins, wet ponds, infiltration facilities, and media filters have the highest removal rates for the pollutants of concern. High-rate biofilters and high-rate media filters are also considered, since they have medium removal effectiveness for oil and grease, which is a secondary pollutant of concern.

According to the SWMP, the project would not be subject to completing a Hydromodification Plan, but would be subject to a General Construction Permit. Given the current planning stage of the project the preliminary Post-Construction Water Balance Calculator, specific sizing and application of the General Construction Permit post construction BMPs is limited to recommendation in the SWMP report. The project is not anticipated to create or contribute runoff water that will exceed the capacity of the natural drainage system. The use of bioretention facilities and swales/brow ditches would reduce potential pollutant runoff; therefore, impacts to drainage systems due to the construction of the project are considered less than significant with the implementation of bioretention facilities.

Operation and Maintenance

No impermeable parking lots, sidewalks, roads, or other impermeable access features are planned for the project. Surface improvements will be gravel or compacted dirt. Additionally, landscaping will be completed to match the existing surrounding conditions with drought tolerant native species plants. The operation and maintenance phase of the proposed project would not significantly contribute to runoff water which would exceed the capacity of the natural drainage systems or add to pollutant runoff. Impacts are considered less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase of the project. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase to reduce impacts to water quality. The decommissioning phase of the project is not anticipated to exceed the capacity of existing or planned stormwater drainage systems or provide a substantial source of polluted runoff. Impacts are less than significant.

Substantially degrade water quality

Construction

According to the drainage study completed for the project, the only water body that may be impacted by the project development is Morena Reservoir. Currently there are no Region 9 SWRCB special requirements for any water bodies that will be impacted by the proposed project. Based on the available information there are no High Risk Areas within the project boundaries. A hazardous waste search conducted by HDR with the County of San Diego did not identify any existing hazardous or contaminated soils located within the project construction footprint. Comparison of the anticipated pollutants and the receiving water bodies' impairments indicates there are no primary pollutants of concern. Impacts to water quality due to the construction of the project are less than significant with the implementation of BMPs and bioretention facilities.

Operation and Maintenance

Normal site operations are not expected to generate noticeable amounts of pollutants other than potentially sediment. However, a number of source control principles from the County of San Diego SUSMP have been recommended for the project. The O&M facility will have enclosed areas for storage of maintenance equipment and trash. The operation and maintenance staff will keep all materials out of contact with precipitation and runoff. There will be no public access to any streams, channels, or storm drain inlets for the project. However, any such publically accessed feature will be properly labeled with stenciling and signage prohibiting illegal dumping. Impacts to water quality due to the operation and maintenance of the project are less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase of the project. All management plans, BMPs, and stipulations developed for the construction phase of the project will be applied to similar activities during the decommissioning phase to reduce potential impacts that may degrade water quality. Impacts due to the decommissioning phase of the project are not anticipated to degrade water quality, and are less than significant.

3.10.4 Cumulative Impacts

According to the cumulative list of projects in the general vicinity, found in **Table 2.0-8**, there are a number projects identified that pose a potentially significant hazard to hydrology and water quality. However, the proposed project is not anticipated to contribute a substantial impact to hydrology and water quality on a cumulative level.

Increased risk to water quality could occur during project construction and operation due to the inherent hazards associated with construction activities and maintenance of turbines. However, these risks would be minimized by the proposed BMPs and storm water management measures implemented by the project applicant. Cumulative impacts to hydrology and water quality are less than significant.

3.10.5 CEQA Levels of Significance Before Mitigation

Substantially alter existing drainage patterns in the project area

Construction

According to the preliminary drainage study conducted for the project, the project would not significantly affect existing drainage patterns and the amount of redirected flows will be minimal. Impacts to existing drainages will be further reduced by implementing and following the County and BLM standards for grading, and will follow the natural contours of the site. Additionally, CDFG-approved culverts will be used where necessary and BMPs will be implemented.

Additional hydrologic and hydraulic analysis will be completed at specific locations within the studied basins in order to size proposed drainage facilities. However, implementation of BMPs and mitigation measures will reduce impacts to less than significant.

Operation and Maintenance

The operation and maintenance of the project will not alter any existing drainage patterns for the project area. Roadways will be maintained so that erosion will be limited and culverts will be maintained as needed. The project will match existing drainage patterns and minimize the amount of redirected flows to the greatest extent possible. No impacts are identified due to the operation and maintenance phase of the project.

Decommissioning

All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase. During the decommissioning phase of the project, impacts would be similar as to the construction phase of the project. Impacts resulting from the decommissioning phase of the project are less that significant.

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

Construction

The project is anticipating obtaining water from three existing wells on Rough Acres Ranch and will be submitting a Major Use Permit for water extraction. The three wells are expected to support the construction water needs of the project over a period of 18 to 24 months for dust suppression, grading, and concrete mixing. Additionally, four additional water sources have been identified in the event that the Rough Acres wells fail to produce the required water for the project construction. The project is not proposing the construction of a significant amount of impervious surfaces which would limit groundwater recharge. In addition, the groundwater is obtained from fractured crystalline rock aquifers located in the area, it is not anticipated that the proposed project will have an affect on lowering the local groundwater table. The project would not have an affect on the Campo Cottonwood Sole Source Aquifer. Impacts to groundwater supplies are less than significant.

Operation and Maintenance

The O&M building will require the construction of a groundwater well to provide up to 5 gallons per minute of potable water for the operational phase of the project. The O&M building is anticipated to use approximately 2,500 gallons of water per day for employee water and sewer uses. Impacts to groundwater supply and recharge are less than significant.

Decommissioning

During the decommissioning phase of the project, impacts would be less than the construction phase of the project, as no concrete will require to be mixed. Impacts to groundwater supplies and recharge due to the decommissioning phase of the project are less that significant.

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

Construction

As discussed previously, a preliminary hydrologic analysis was completed for the project, of which the modeling results indicated that the existing conditions and the proposed runoff were identical. the project

will be sited away from drainages to the maximum extent feasible, and will utilize CDFG-approved culverts where necessary. Some project features (i.e., turbine pads, concrete foundations, etc.) do include impervious surfaces which would result in an increase in surface runoff. Project planning will limit the number of unnecessary drainage crossings. Site specific hydrologic and hydraulic analysis is necessary to determine flow rates in the existing drainage features, size of proposed drainage facilities to convey design storms, impacts that additional crossings will have on upstream water surfaces, the potential increased flow rates, and the potential for erosion or siltation on or off-site that may result from project construction. The project does not propose to significantly alter the course of a stream of river which would result in substantial erosion or siltation on-or off-site. Impacts are less than significant.

Operation and Maintenance

The operation and maintenance phase of the project will not alter any existing drainage patterns for the project area, or alter a course of a stream or river. Roadways will be maintained so that erosion will be limited and culverts will be maintained as needed. No impacts are identified due to the operation and maintenance phase of the proposed project.

Decommissioning

All management plans, BMPs, and stipulations developed for the construction phase of the project will be applied to similar activities during the decommissioning phase to reduce any potential impacts to existing drainage patterns. Impacts resulting from the decommissioning phase of the project are less than significant.

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

Construction

As discussed previously, the project will be sited away from drainages to the maximum extent feasible, and will utilize CDFG-approved culverts where necessary. Some project features (i.e., turbine pads, concrete foundations, etc.) do include impervious surfaces which would result in an increase in surface runoff. However, the amount of surface runoff would not result in on or off-site flooding. Surface parking areas proposed for the project are small areas intended for accommodating construction personnel, and will be constructed of gravel or compacted dirt and will sheet flow to surrounding landscaping. It is anticipated that the use of appropriate drainage basins will sufficiently accommodate the surface runoff, and will not cause area flooding. Impacts are less than significant.

Operation and Maintenance

The O&M/Substation facility will consist of a ten-acre area and will include concrete pads for the O&M/Substation foundation and electrical transformers. Areas not covered by concrete pads, such as the parking area will be surfaced with gravel to minimize erosion and surface runoff. Impervious areas will all drain to surrounding naturally vegetated areas. Impacts resulting from the operation and maintenance phase of the project are less than significant.

Decommissioning

The decommissioning phase of the project is not anticipated to alter drainage patterns or the course of a stream or river. All impervious areas and project components would be removed and the area would return to its natural state. No impacts are identified.

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

Construction

There are no primary pollutants of concern for the project; however, the County of San Diego SUSMP requires the project to focus on the secondary pollutants of concern. Secondary pollutants of concern are trash and oil and grease; which represent course sediment and trash as well as pollutants that tend to associate with fine particles during treatment. The project is not anticipated to create or contribute runoff water to exceed the natural drainage system. The use of bioretention would reduce potential impacts due to pollutant runoff; therefore, impacts are less than significant with the implementation of bioretention facilities.

Operation and Maintenance

The operation and maintenance phase of the proposed project would not substantially contribute runoff water which would exceed the capacity of the natural drainage systems or add to pollutant runoff. Impacts are less than significant.

Decommissioning

The decommissioning phase of the project is not anticipated to increase the amount of pollutant runoff or exceed the capacity of existing or planned stormwater drainage systems. Impacts are less than significant.

Substantially degrade water quality

Construction

According to the drainage study completed for the project, the only water body that may be impacted by the project development is Morena Reservoir. Currently there are no Region 9 SWRCB special requirements for any water bodies that will be impacted by the proposed project. A hazardous waste search conducted by HDR with the County of San Diego did not identify any existing hazardous or contaminated soils located within the construction footprint. Impacts to water quality due to the construction of the project are considered less than significant with the implementation of BMPs and bioretention facilities.

Operation and Maintenance

The operation and maintenance phase of the project is not expected to generate noticeable amounts of pollutants that would degrade water quality. Impacts to water quality due to the operation and maintenance phase of the project are considered less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase of the project. Impacts due to the decommissioning phase of the project are less that significant.

3.10.6 Mitigation Measures

HY-1 Prior to final approval of the proposed project the project applicant shall prepare and submit a final grading plan and site plan. The grading plan shall be prepared to the standards set forth by the BLM and the County of San Diego and include the BMPs as presented in **Table 2.0-6** of this environmental document. The grading and site plan are subject to review and approval of the BLM and the San Diego County Public Works Department.

HY-2 Iberdrola Renewables shall prepare a Final Storm Water Management Plan and Drainage Study prior to final approval of the grading plan and roadway management plan. The applicant shall implement all recommendations presented in the studies.

3.10.7 CEQA Levels of Significance After Mitigation

Substantially alter existing drainage patterns in the project area

Although a less than significant impact is identified for this significance criteria, implementation of mitigation measures HY-1 and HY-2 would further reduce possible impacts to a less than significant level.

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

Although a less than significant impact is identified for this significance criteria, implementation of mitigation measures HY-1 and HY-2 would further reduce impacts to a less than significant level.

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

Although a less than significant impact is identified for this significance criteria, implementation of mitigation measures HY-1 and HY-2 would further reduce impacts to a less than significant level.

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

Although a less than significant impact is identified for this significance criteria, implementation of mitigation measures HY-1 and HY-2 would further reduce impacts to a less than significant level. All other impacts discussed above in Section 3.10.5 are less than significant or no impacts were identified.

3.10.8 Comparison of Alternatives

In developing the alternatives to be addressed in this environmental document, the potential alternatives were evaluated in terms of their ability to meet the basic objectives of the project, while avoiding or reducing the environmental impacts of the project. The alternatives will contain all of the same components and construction corridor as the proposed project except they may vary in the number and location.

No Project Alternative/No Action Alternative

Under the No Project/No Action Alternative, the proposed project would not be implemented and the impacts associated with the project would not occur. Although there would be no impacts to hydrology or water quality by the Tule Wind Project, the BLM's determination that the area is conducive to wind and renewable energy development will still be valid, thus leaving the area available for another project. This alternative would still leave the San Diego County region dependent on electricity generated by fossil fuels and without a more reliable source of electricity. The BLM, State, and County would be forced to continue to search for renewable energy projects to contribute to their renewable energy mandates and portfolios. Impacts to hydrology and water quality would not occur under this alternative. This alternative will have fewer impacts than the proposed project.

Alternate Transmission Line Alternative #1

The Alternate Transmission Line Alternative #1 (T-line Alternative #1) would include all of the same components as the proposed project except for an alternate overhead 138 kV transmission line (T-line Alternative #1), as shown in **Figure 2.0-12**. The T-line Alternative #1 would be located parallel to, but in-lieu of, the proposed transmission line. T-line Alternative #1 would be located further west and run from either the proposed or deviant collector substation approximately 5.5 miles south to the Rough Acres Ranch (south of turbine G-19). From Rough Acres Ranch, the line would continue west to Ribbonwood Road. The line would continue south on Ribbonwood Road to Old Highway 80, and east along Old Highway 80 to the SDG&E proposed Rebuilt Boulevard Substation.

This alternative would increase the land disturbance by approximately 7.6 acres; from 772.7 acres to 780.3 acres, utilizing the deviant collector substation. The 138 kV transmission line would increase in distance from 9.7 miles to 11.7 miles and would increase the amount of transmission line poles from 116 poles to 152 poles, utilizing the deviant collector substation. The 34.5 kV overhead collector lines would remain the same distance of 9.4 miles, and would require the same amount of collector line poles (250), and the underground collector lines would also remain the same distance of 29.3 miles, utilizing the deviant collector substation.

Substantially alter existing drainage patterns in the project area

Construction Operation and Maintenance, and Decommissioning

This alternative has increased temporary and permanent land disturbances as compared to the proposed project. Model results for the project indicate the project construction would be similar to the existing drainage patterns. Construction of the alternative will implement and follow the County and BLM standards for grading and will follow the natural contours of the site. BMPs (outlined in Section 2.0) would also be implemented and CDFG-approved culverts would be used where necessary. Additional hydrologic and hydraulic analysis will be completed for the project to determine flow rates at specific

locations within the studied basins in order to size proposed drainage facilities. Impacts to drainage patterns would have a similar impact as the proposed project. Therefore, impacts will be less than significant.

Operation and Maintenance, and Decommissioning

No impacts are identified that would result from the operation and maintenance phase of the project and decommissioning impacts are less than significant.

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

Construction

The project is not proposing the construction of a significant amount of impervious surfaces in the way of roadways or parking areas which would limit groundwater recharge. This alternative would utilize the same groundwater wells for the construction of the project. Considering the fractured crystalline rock aquifers located in the area, it is not anticipated that this alternative would significantly decrease the local groundwater table. The groundwater study completed for the project has determined that adequate groundwater supply has been identified for the construction phase of the project. Impacts to groundwater supplies due to the construction of this alternative are less than significant.

Operation and Maintenance

This alternative would have the same water requirements as the proposed project. Impacts to groundwater supply and recharge are less than significant.

Decommissioning

During the decommissioning phase of the project, impacts would be less than the construction phase of the project, as no concrete will be required to be mixed. Impacts to groundwater supplies and recharge due to the decommissioning phase of the project would be the same as the project and are less than significant.

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

Construction

Construction of the alternative may alter existing drainage patterns in some areas of the project area. The grading for the alternative would be in accordance with both County and BLM regulations and is intended to match the existing drainage patterns and minimize the amount of redirected flows. Further hydrologic and hydraulic analysis is necessary to determine flow rates in the existing drainage features, size of proposed drainage facilities to convey design storms, impacts that additional crossings will have on upstream water surfaces, the potential increased flow rates, and the potential for erosion or siltation on or off-site that may result from construction of the alternative. The project does not propose to significantly alter the course of a stream of river which would result in substantial erosion or siltation on-or off-site. Impacts are less than significant.

Operation and Maintenance, and Decommissioning

No impacts are identified due to the operation and maintenance phase of this alternative. Impacts due to the decommissioning phase of this alternative would be with the same as the proposed project. Impacts are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

The project components for this alternative are the same as the proposed project, with the exception of the transmission line alignment. This alternative would not include impervious surface runoff that would result in flooding on- or off-site. Parking areas will be constructed of gravel or compacted dirt and will sheet flow into surrounding landscaping. It is anticipated that the use of appropriate drainage basins will be sufficient to accommodate the surface runoff; thus eliminating the potential for flooding. It is anticipated that the use of appropriate drainage basins will sufficiently accommodate the surface runoff and will not cause area flooding. Impacts are less than significant.

Impacts due to the operation and maintenance phase of this alternative are less than significant and no impacts are identified for the decommissioning phase.

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

Construction, Operation and Maintenance, and Decommissioning

This alternative is not anticipated to create or contribute pollutants to runoff water or exceed the natural drainage system. The use of bioretention would reduce potential impacts to water quality resulting from pollutant runoff. Therefore, impacts are less than significant for all phases of this alternative, with the implementation of bioretention facilities.

Substantially degrade water quality

Construction

The Morena Reservoir is the only water body that has the potential to be impacted by development under this alternative scenario. Currently there are no Region 9 SWRCB special requirements for any water bodies that will be impacted by the proposed project. Based on the available information there are no High Risk Areas within the project boundaries. A hazardous waste search conducted by HDR with the County of San Diego did not identify any existing hazardous or contaminated soils. Comparison of the anticipated pollutants and the receiving water bodies' impairments indicates there are no primary pollutants of concern. Impacts to water quality due to the construction of this alternative are less than significant with the implementation of BMPs and bioretention facilities.

Operation and Maintenance

Normal site operations are not expected to generate noticeable amounts of pollutants other than potentially sediment. However, a number of source control principles from the County of San Diego SUSMP have been recommended for the project. The O&M facility will have enclosed areas for storage of maintenance equipment and trash. The operation and maintenance staff will keep all materials out of contact with precipitation and runoff. There will be no public access to any streams, channels, or storm drain inlets for the project. However, any such publically accessed feature will be properly labeled with stenciling and signage prohibiting illegal dumping. Impacts to water quality due to the operation and maintenance phase are less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase to reduce potential impacts that may degrade water quality. Impacts due to the decommissioning phase are not anticipated to degrade water quality, and are less than significant.

This alternative has the same level of impacts as the proposed project.

Alternate Transmission Line #2 and Collector Substation Alternative

The Alternate Transmission Line #2 and Collector Substation Alternative would include the alternate O&M/Substation facility co-located on Rough Acres Ranch (T17S R7E Sec9), the Alternate Transmission Line #2 (138 kV), as well as an alternate overhead collector system, as shown in **Figure 2.0-13**. This alternative would consist of two 34.5 kV lines connecting the turbines to the alternate collector substation location. All other elements of the project including the turbine locations, parking and laydown areas, roadway upgrades, and batch plant would remain as described in the proposed project. The Alternate Transmission Line #2 would run from the alternate collector substation south along McCain Valley Road, and then west along Old Highway 80 until reaching the SDG&E proposed Rebuilt Boulevard Substation.

This alternative would increase the land disturbance by 1.9 acres; from 772.7 acres to 774.6 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 3.8 miles and would decrease the amount of transmission line poles from 116 poles to 44 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Substantially alter existing drainage patterns in the project area

Construction, Operation and Maintenance, and Decommissioning

Modeling results for the proposed project indicated that drainage patterns are similar to the existing conditions. This alternative would have similar drainage patterns as the proposed project. The project will implement and follow the County and BLM standards for grading and will follow the natural contours of the site. Additionally, BMPs (outlined in Section 2.0) will be implemented and CDFG-approved culverts will be used where necessary. Additional hydrologic and hydraulic analysis will be completed for the project to determine flow rates at specific locations within the studied basins in order to

size proposed drainage facilities. Impacts will be drainage patterns would have a similar impact as the proposed project. Impacts are less than significant.

No impacts are identified that would result from the operation and maintenance phase and decommissioning impacts are less than significant.

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

Construction

The project does not propose the construction of a significant amount of impervious surfaces in the way of roadways or parking areas which would limit groundwater recharge. This alternative would utilize the same groundwater wells for the construction of the project. This alternative would utilize the same groundwater wells for the construction as the proposed project. Considering the fractured crystalline rock aquifers located in the area, it is not anticipated that this alternative would significantly decrease the local groundwater table. Impacts to groundwater supplies due to the construction of this alternative are less than significant.

Operation and Maintenance

This alternative would require the same water requirements as the proposed project. Impacts to groundwater supply and recharge are less than significant.

Decommissioning

During the decommissioning phase, impacts would be less than the construction phase, as no concrete will be required to be mixed. Impacts to groundwater supplies and recharge due to the decommissioning phase of the project would be the same as the project and are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

The alternative would be sited away from drainages to the maximum extent feasible, and would utilize CDFG-approved culverts where necessary. Some project features (i.e., turbine pads, concrete foundations, etc.) do include impervious surfaces which would result in an increase in surface runoff. Site-specific hydrologic and hydraulic analysis is necessary to determine flow rates in the existing drainage features, size of proposed drainage facilities to convey design storms, impacts that additional crossings will have on upstream water surfaces, the potential increased flow rates, and the potential for erosion or siltation on- or off-site that may result from project construction. Impacts due to this alternative are considered similar as the proposed project. Impacts are less than significant.

The operation and maintenance phase of this alternative would be similar to the proposed project. No impacts are identified due to the operation and maintenance phase of this alternative. Impacts due to the decommissioning phase of this alternative would be with the same as the proposed project. Impacts are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

The project components for this alternative are the same as the proposed project, with the exception of the transmission line alignment and the alternate collector substation. This alternative would not include impervious surface runoff that would result in flooding on- or off-site. Parking areas will be constructed of gravel or compacted dirt and will sheet flow into surrounding landscaping. It is anticipated that the use of appropriate drainage basins will be sufficient to accommodate the surface runoff; thus eliminating the potential for flooding. Impacts are less than significant.

Impacts due to the operation and maintenance phase are less than significant and no impacts are identified for the decommissioning.

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

Construction, Operation and Maintenance, and Decommissioning

This alternative would not create or contribute pollutants to runoff water or exceed the natural drainage system. The use of bioretention would reduce potential impacts to water quality resulting from pollutant runoff. Therefore, impacts are less than significant for all phases of the alternative, with the implementation of bioretention facilities.

Substantially degrade water quality

Construction

The Morena Reservoir is the only water body that has the potential to be impacted by development under this alternative scenario. Currently there are no Region 9 SWRCB special requirements for any water bodies that will be impacted by the proposed project. Based on the available information there are no High Risk Areas within the project boundaries. A hazardous waste search conducted by HDR with the County of San Diego did not identify any existing hazardous or contaminated soils. Comparison of the anticipated pollutants and the receiving water bodies' impairments indicates there are no primary pollutants of concern. Impacts to water quality due to the construction of this alternative are less than significant with the implementation of BMPs and bioretention facilities.

Operation and Maintenance

Normal site operations are not expected to generate noticeable amounts of pollutants other than potentially sediment. However, a number of source control principles from the County of San Diego SUSMP have been recommended for the project. The O&M facility will have enclosed areas for storage of maintenance equipment and trash. The operation and maintenance staff will keep all materials out of contact with precipitation and runoff. There will be no public access to any streams, channels, or storm drain inlets for the project. However, any such publically accessed feature will be properly labeled with stenciling and signage prohibiting illegal dumping. Impacts to water quality due to the operation and maintenance phase of this alternative are less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase to reduce potential impacts that may degrade water quality. Impacts due to the decommissioning phase are not anticipated to degrade water quality, and are less than significant. This alternative has the same level of impacts as the proposed project.

Alternate Transmission Line #3 and Collector Substation Alternative

The Alternate Transmission Line #3 and Collector Substation Alternative would include the alternate O&M/Substation facility co-located on Rough Acres Ranch (T17S R7E Sec9), the Alternate Transmission Line #3 (138 kV), as well as an alternate overhead collector system as shown in **Figure 2.0-14**. This alternative would consist of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements including the turbine locations, parking and laydown areas, roadway upgrades, and batch plant would remain as described in the proposed project. The Alternate Transmission Line #3 would run from the alternate collector substation west to Ribbonwood Road, continue south along Ribbonwood Road, and then east along Old Highway 80 until reaching the SDG&E proposed Rebuilt Boulevard Substation.

This alternative would increase the land disturbance by 7.3 acres; from 772.7 acres to 780.0 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 5.4 miles and would decrease the amount of transmission line poles from 116 poles to 60 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Substantially alter existing drainage patterns in the project area

Construction, Operation and Maintenance, and Decommissioning

According to the Drainage Study, the amount of impervious area will be minimal and roadways will be constructed to follow natural contours. The project development will not significantly affect existing drainage patterns and the amount of redirected flows will be minimal. The project will implement and following the County and BLM standards for grading, and will follow the natural contours of the site. Additionally, CDFG-approved culverts will be used where necessary and BMPs will be implemented. Further analysis will be provided in conjunction with final engineering and the final grading plan and the completion of the Final SWMP and Drainage Study. However, implementation of BMPs and mitigation measures will reduce impacts to less than significant. No impacts are identified that would result from the operation and maintenance phase and decommissioning impacts are less than significant.

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

Construction

This alternative would utilize the same groundwater wells for the construction of the proposed project. Considering the limited impervious surfaces proposed and the fractured crystalline rock aquifers located in the area, it is not anticipated that this alternative would significantly decrease the local groundwater

table. According to the groundwater study, the condition of the area groundwater table is considered adequate for the construction water usage. Impacts to groundwater supplies due to the construction of this alternative are less than significant.

Operation and Maintenance

This alternative would require the same water requirements as the proposed project. Impacts to groundwater supply and recharge are less than significant.

Decommissioning

During the decommissioning phase of the project, impacts would be less than the construction phase as no concrete will be required to be mixed. Impacts to groundwater supplies and recharge due to the decommissioning phase of this alternative would be the same as the proposed project and are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

The alternative would be sited away from drainages to the maximum extent feasible, and would utilize CDFG-approved culverts where necessary. Some project features (i.e., turbine pads, concrete foundations, etc.) do include impervious surfaces which would result in an increase in surface runoff. Site specific hydrologic and hydraulic analysis is necessary to determine flow rates in the existing drainage features, size of proposed drainage facilities to convey design storms, impacts that additional crossings will have on upstream water surfaces, the potential increased flow rates, and the potential for erosion or siltation on or off-site that may result from project construction. The project does not propose to significantly alter the course of a stream of river which would result in substantial erosion or siltation on-or off-site. Impacts are less than significant.

The operation and maintenance phase of this alternative would be similar to the proposed project. No impacts are identified due to the operation and maintenance phase of this alternative. Impacts due to the decommissioning phase of this alternative would be with the same as the proposed project. Impacts are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

The project components for this alternative are the same as the proposed project, with the exception of the transmission line alignment and the alternate collector substation. This alternative would not include impervious surface runoff that would result in flooding on or off-site. Parking areas will be constructed of gravel or compacted dirt and will sheet flow into surrounding landscaping. It is anticipated that the use of appropriate drainage basins will be sufficient to accommodate the surface runoff; thus eliminating the potential for flooding. Site-specific hydrologic and hydraulic analysis is necessary to determine flow rates in the existing drainage features, size of proposed drainage facilities to convey design storms, impacts that

additional crossings will have on upstream water surfaces, the potential increased flow rates, and the potential for erosion or siltation on or off-site that may result from project construction. The project does not propose to significantly alter the course of a stream of river which would result in substantial erosion or siltation on-or off-site. Impacts are less than significant.

Impacts due to the operation and maintenance phase are less than significant and no impacts are identified for the decommissioning which is the same level of impact for the proposed project.

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

Construction, Operation and Maintenance, and Decommissioning

This alternative would not create or contribute pollutants to runoff water or exceed the natural drainage system. The use of bioretention would reduce potential impacts to water quality resulting from pollutant runoff. Therefore, impacts are less than significant for all phases of the alternative, with the implementation of bioretention facilities.

Substantially degrade water quality

Construction

The Morena Reservoir is the only water body that has the potential to be impacted by development under this alternative scenario. Currently there are no Region 9 SWRCB special requirements for any water bodies that will be impacted by the proposed project. Based on the available information there are no High Risk Areas within the project boundaries. A hazardous waste search conducted by HDR with the County of San Diego did not identify any existing hazardous or contaminated soils. Comparison of the anticipated pollutants and the receiving water bodies' impairments indicates there are no primary pollutants of concern. Impacts to water quality due to the construction of this alternative are less than significant with the implementation of BMPs and bioretention facilities.

Operation and Maintenance

Normal site operations are not expected to generate noticeable amounts of pollutants other than potentially sediment. However, a number of source control principles from the County of San Diego SUSMP have been recommended for the project. The O&M facility will have enclosed areas for storage of maintenance equipment and trash. The operation and maintenance staff will keep all materials out of contact with precipitation and runoff. There will be no public access to any streams, channels, or storm drain inlets for the project. However, any such publically accessed feature will be properly labeled with stenciling and signage prohibiting illegal dumping. Impacts to water quality due to the operation and maintenance phase of this alternative are less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase to reduce potential impacts that may degrade water quality. Impacts due to the decommissioning phase are not anticipated to degrade water quality, and are less than significant. This alternative has the same level of impacts as the proposed project.

Operation and Maintenance Facility Location #1 Alternative

The O&M Facility Location #1 Alternative would be located on private property (T17S R7E Sec4), north of the alternate collector substation and located west of McCain Valley Road, as shown in **Figure 2.0-13**. This alternative would consist of separating the 5-acre O&M building site from the collector substation; however, both would remain on Rough Acres Ranch property. Alternate Transmission Line #2 would be utilized under this alternative as well as the Alternate Overhead Collector System consisting of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements of the project including the turbine locations, parking and laydown areas, and batch plant would remain as described in the proposed project.

This alternative is estimated to have the same land disturbance impacts as the Alternate Transmission Line #2 and Collector Substation Alternative. However, by relocating the O&M building site to the northern portion of Rough Acres Ranch, this alternative would require an approximate 650-foot new access road to be constructed on the west side of McCain Valley Road, thus necessitating an approximate 0.07 acres of permanently impacted area and a temporary impact of 0.55 acres. In comparison to the proposed project, this alternative would decrease the land disturbance by approximately 2.5acres; from 772.7 acres to 775.2 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 3.8 miles and would decrease the amount of transmission line poles from 116 poles to 44 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Substantially alter existing drainage patterns in the project area

Construction, Operation and Maintenance, and Decommissioning

The alternative would implement and follow the County and BLM standards for grading and would follow the natural contours of the site. Additionally, BMPs (outlined in Section 2.0) will be implemented and CDFG-approved culverts will be used where necessary. Additional hydrologic and hydraulic analysis will be completed for the project to determine flow rates at specific locations within the studied basins in order to size proposed drainage facilities. Impacts will be drainage patterns would have a similar impact as the proposed project. No impacts are identified that would result from the operation and maintenance phase and decommissioning impacts are less than significant.

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

Construction

This alternative is not proposing the construction of a significant amount of impervious surfaces in the way of roadways or parking areas which would limit groundwater recharge. This alternative would utilize the same groundwater wells for construction as the proposed project. Considering the limited construction and the fractured crystalline rock aquifers located in the area, it is not anticipated that this alternative would significantly decrease the local groundwater table. Impacts to groundwater supplies due to the construction of this alternative are less than significant.

Operation and Maintenance

This alternative would require the same water requirements as the proposed project. Impacts to groundwater supply and recharge are less than significant.

Decommissioning

During the decommissioning phase, impacts would be less than the construction phase as no concrete will be required to be mixed. Impacts to groundwater supplies and recharge due to the decommissioning phase would be the same as the proposed project and are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

The alternative would be sited away from drainages to the maximum extent feasible, and would utilize CDFG-approved culverts where necessary. Some project features (i.e., turbine pads, concrete foundations, etc.) do include impervious surfaces which would result in an increase in surface runoff. Site specific hydrologic and hydraulic analysis is necessary to determine flow rates in the existing drainage features, size of proposed drainage facilities to convey design storms, impacts that additional crossings will have on upstream water surfaces, the potential increased flow rates, and the potential for erosion or siltation on or off-site that may result from project construction. The project does not propose to significantly alter the course of a stream of river which would result in substantial erosion or siltation on-or off-site. Impacts are less than significant.

The operation and maintenance phase of this alternative would be similar to the proposed project. No impacts are identified due to the operation and maintenance phase of this alternative. Impacts due to the decommissioning phase of this alternative would be with the same as the proposed project. Impacts are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

This alternative would not include impervious surface runoff that would result in flooding on or off-site. Parking areas will be constructed of gravel or compacted dirt and will sheet flow into surrounding landscaping. It is anticipated that the use of appropriate drainage basins will be sufficient to accommodate the surface runoff; thus eliminating the potential for flooding. The alternative would implement and follow the County and BLM standards for grading and would follow the natural contours of the site. Additionally, BMPs (outlined in Section 2.0) will be implemented and CDFG-approved culverts will be used where necessary. It is anticipated that the use of appropriate drainage basins will be sufficient to accommodate the surface runoff; thus eliminating the potential for flooding. Impacts will be less than significant.

Impacts due to the operation and maintenance phase are less than significant and no impacts are identified for the decommissioning which is the same level of impact for the proposed project.

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

Construction, Operation and Maintenance, and Decommissioning

This alternative would not create or contribute pollutants to runoff water or exceed the natural drainage system. The use of bioretention would reduce potential impacts to water quality resulting from pollutant runoff. Therefore, impacts are less than significant for all phases of this alternative, with the implementation of bioretention facilities.

Substantially degrade water quality

Construction

The Morena Reservoir is the only water body that has the potential to be impacted by development under this alternative scenario. Currently there are no Region 9 SWRCB special requirements for any water bodies that will be impacted by the proposed project. Based on the available information there are no High Risk Areas within the project boundaries. A hazardous waste search conducted by HDR with the County of San Diego did not identify any existing hazardous or contaminated soils. Comparison of the anticipated pollutants and the receiving water bodies' impairments indicates there are no primary pollutants of concern. Impacts to water quality due to the construction of this alternative are less than significant with the implementation of BMPs and bioretention facilities.

Operation and Maintenance

Normal site operations are not expected to generate noticeable amounts of pollutants other than potentially sediment. However, a number of source control principles from the County of San Diego SUSMP have been recommended for the project. The O&M facility will have enclosed areas for storage of maintenance equipment and trash. The operation and maintenance staff will keep all materials out of contact with precipitation and runoff. There will be no public access to any streams, channels, or storm drain inlets for the project. However, any such publically accessed feature will be properly labeled with stenciling and signage prohibiting illegal dumping. Impacts to water quality due to the operation and maintenance phase of this alternative are less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase. All management plans, BMPs, and stipulations developed for the construction phase of the project will be applied to similar activities during the decommissioning phase to reduce potential impacts that may degrade water quality. Impacts due to the decommissioning phase are not anticipated to degrade water quality, and are less than significant.

This alternative has the same level of impacts as the proposed project.

Operation and Maintenance Facility Location #2 Alternative

The O&M Facility Location #2 Alternative would be located on private property (T17S R7E Sec 16), south of the alternate collector substation and located west of McCain Valley Road, as illustrated in **Figure 2.0-13**. This alternative would consist of separating the 5-acre O&M building site from the collector substation; however, both would remain on Rough Acres Ranch property. Alternate

Transmission Line #2 would be utilized under this alternative as well as the Alternate Overhead Collector System consisting of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements of the project including the turbine locations, parking and laydown areas, and batch plant would remain as described in the proposed project.

This alternative is estimated to have the same land disturbance impacts as the Alternate Transmission Line #2 and Collector Substation Alternative. However, by relocating the O&M building site to the southern portion of Rough Acres Ranch, this alternative would result in a very slight difference 1.0 acre of permanent impacts and 0.08 acre of temporary impacts resulting from the construction of new access roads than those described in **Table 2.0-10**. In comparison to the proposed project, this alternative would increase the land disturbance by approximately 2.0 acres; from 772.7 acres to 774.7 acres. The 138 kV transmission line would decrease in distance as a result of this alternative from 9.7 miles to 3.8 miles and would decrease the amount of transmission line poles from 116 poles to 44 poles. The 34.5 kV overhead collector lines would increase in distance from 9.4 miles to 17 miles, and would increase the amount of collector line poles from 250 to 452 poles. The underground collector lines would decrease in distance from 29.3 miles to 28.9 miles.

Substantially alter existing drainage patterns in the project area

Construction, Operation and Maintenance, and Decommissioning

This alternative has increased temporary and permanent land disturbances as compared to the proposed project. Model results for the project indicate the project construction would be similar to the existing drainage patterns. The alternative would implement and follow the County and BLM standards for grading and would follow the natural contours of the site. Additionally, BMPs (outlined in Section 2.0) will be implemented and CDFG-approved culverts will be used where necessary. A Final SWMP, Drainage Study and grading plan will be completed in conjunction with final design of the project and will finalize potential impacts to existing drainage patterns. However, the above measures will be implemented to reduce any impacts to existing drainage systems. Impacts will be less than significant.

No impacts are identified that would result from the operation and maintenance phase and decommissioning impacts are less than significant.

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

Construction

The project is not proposing the construction of a significant amount of impervious surfaces in the way of roadways or parking areas which would limit groundwater recharge. This alternative would utilize the same groundwater wells for the construction as the proposed project. Considering the fractured crystalline rock aquifers located in the area, it is not anticipated that this alternative would significantly decrease the local groundwater table. A groundwater study has been completed and the identified groundwater wells will have sufficient water supply for the construction of the project. In addition, three additional water sources have been identified in the event that the primary sources are not adequate. Impacts to groundwater supplies due to the construction of this alternative are less than significant.

Operation and Maintenance

This alternative would require the same water requirements as the proposed project. Impacts to groundwater supply and recharge are less than significant.

Decommissioning

During the decommissioning phase, impacts would be less than the construction phase as no concrete will be required to be mixed. Impacts to groundwater supplies and recharge due to the decommissioning phase would be the same as the proposed project and are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

The construction phase of this alternative would be similar to the proposed project. The alternative would implement and follow the County and BLM standards for grading and would follow the natural contours of the site. Additionally, BMPs (outlined in Section 2.0) will be implemented and CDFG-approved culverts will be used where necessary. A Final SWMP, Drainage Study and grading plan will be completed in conjunction with final design of the project and will finalize potential impacts to existing drainage patterns. However, the above measures will be implemented to reduce any impacts to existing drainage systems. Impacts will be less than significant.

No impacts are identified due to the operation and maintenance phase of this alternative. Impacts due to the decommissioning phase of this alternative would be with the same as the proposed project. Impacts are less than significant.

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

Construction, Operation and Maintenance, and Decommissioning

This alternative has increased temporary and permanent land disturbances as compared to the proposed project. Model results for the project indicate the project construction would be similar to the existing drainage patterns. This alternative would not include impervious surface runoff that would result in flooding on or off-site. Parking areas will be constructed of gravel or compacted dirt and will sheet flow into surrounding landscaping. It is anticipated that the use of appropriate drainage basins will be sufficient to accommodate the surface runoff; thus eliminating the potential for flooding. The alternative would implement and follow the County and BLM standards for grading and would follow the natural contours of the site. Additionally, BMPs (outlined in Section 2.0) will be implemented and CDFG-approved culverts will be used where necessary. Additional hydrologic and hydraulic analysis will be completed for the project to determine flow rates at specific locations within the studied basins in order to size proposed drainage facilities. Impacts to drainage patterns would have a similar impact as the proposed project. Impacts will be less than significant.

Impacts due to the operation and maintenance phase are considered less than significant and no impacts are identified for the decommissioning which is the same level of impact for the proposed project.

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

Construction, Operation and Maintenance, and Decommissioning

This alternative would not create or contribute pollutants to runoff water or exceed the natural drainage system. The use of bioretention would reduce potential impacts to water quality resulting from pollutant runoff. Therefore, impacts are less than significant for all phases of the alternative, with the implementation of bioretention facilities.

Substantially degrade water quality

Construction

According to the drainage study completed for the project, the only water body that may be impacted by the project development is Morena Reservoir. Currently there are no Region 9 SWRCB special requirements for any water bodies that will be impacted by the proposed project. Based on the available information there are no High Risk Areas within the project boundaries. A hazardous waste search conducted by HDR with the County of San Diego did not identify any existing hazardous or contaminated soils. Comparison of the anticipated pollutants and the receiving water bodies' impairments indicates there are no primary pollutants of concern. Impacts to water quality due to the construction of this alternative are less than significant with the implementation of BMPs and bioretention facilities.

Operation and Maintenance

Normal site operations are not expected to generate noticeable amounts of pollutants other than potentially sediment. However, a number of source control principles from the County of San Diego SUSMP have been recommended for the project. The O&M facility will have enclosed areas for storage of maintenance equipment and trash. The operation and maintenance staff will keep all materials out of contact with precipitation and runoff. There will be no public access to any streams, channels, or storm drain inlets for the project. However, any such publically accessed feature will be properly labeled with stenciling and signage prohibiting illegal dumping. Impacts to water quality due to the operation and maintenance phase are less than significant.

Decommissioning

Decommissioning activities will be similar to the construction phase. All management plans, BMPs, and stipulations developed for the construction phase will be applied to similar activities during the decommissioning phase to reduce potential impacts that may degrade water quality. Impacts due to the decommissioning phase are not anticipated to degrade water quality, and are less than significant. This alternative has the same level of impacts as the proposed project.