California Public Utilities Commission

Pipeline Safety and Reliability Project –

New Natural Gas Line 3602 and De-rating Line 1600 (PSRP)

Appendix I

Preliminary Draft Mitigation Measures

for

CEQA Master Environmental Assessment

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TABLE OF CONTENTS

1.0 Introduction

The California Public Utilities Commission (CPUC) was the lead agency for review of San Diego Gas and Electric Company (SDG&E) and Southern California Gas Company's (SoCalGas; collectively, the applicants) proposed Pipeline Safety and Reliability Project – New Natural Gas Line 3602 and De-Rating Line 1600 (PSRP, or proposed project) pursuant to the California Environmental Quality Act (CEQA). Per the requirements of CEQA, the CPUC began preparing an Environmental Impact Report (EIR) to analyze the environmental impacts of the proposed project, which would have analyzed the alternatives to the proposed project and compared the impacts of those alternatives and the proposed project. On June 22, 2018, the CPUC denied the applicants the Certificate of Public Convenience and Necessity for the proposed project.

The purpose of this appendix to the Master Environmental Assessment (MEA) is to identify and describe general mitigation measures that may be applied to projects similar in nature to the proposed project. The mitigation measures provided herein have not been vetted by agency and/or public review.

1.1 Existing System

SDG&E and SoCalGas, subsidiaries of Sempra Energy, own and operate an integrated natural gas transmission system consisting of pipeline and storage facilities throughout southern California. The existing system is described in detail in Chapter 2 of this MEA. Currently, gas flows to the SDG&E system from the north via three SoCalGas transmission pipelines: Line 1027, Line 1028, and Line 6900. SDG&E's service territory covers approximately 4,100 square miles and includes approximately 250 miles of natural gas transmission pipelines and approximately 14,600 miles of distribution pipelines. SDG&E's natural gas system in San Diego County begins at the southern border of Riverside County and transports natural gas originating in the southwestern United States, south toward San Diego, terminating in Otay Mesa, California, at the Mexican border. Alternatively, SDG&E can receive up to 400 million cubic feet per day (MMcfd) via the southern end of the natural gas system at Otay Mesa, to flow north if the supply is available. The applicants have indicated that the current system can supply 595 MMcfd during the winter operating season and 560 MMcfd during the summer operating season (SDG&E 2017a). Prior to the reduction of the maximum operating pressure of Line 1600 by CPUC Resolution SED-1, the system provided 630 MMcfd during the winter operating season and 590 MMcfd during the summer operating season (SDG&E 2016).

The major components of the SDG&E/SoCalGas natural gas system in San Diego County are two transmission pipelines and the Moreno Compressor Station. All natural gas flowing south into San Diego County passes through this compressor station. The compressor station has over 16,000 installed horsepower that increases pressure, when necessary, to move higher volumes of natural gas to meet San Diego County's natural gas demand. The two transmission lines are the 30-inch-diameter Line 3010 (Line 3010) and 16-inch-diameter Line 1600 (Line 1600). Line 3010 and Line 1600 both originate at the existing Rainbow Metering Station at the Riverside-San Diego county line, traverse through San Diego County, and terminate at the southern boundary of the San Diego metropolitan area.

1.2 Proposed Project

The proposed project would have been located in San Diego County, California, and would have traversed the cities of Escondido, San Diego, and Poway, California; unincorporated communities in San Diego County; and federal land (Marine Corps Air Station Miramar). The proposed project included two components: (1) constructing a new Natural Gas Line 3602 and supporting facilities, and (2) de-rating the existing Line 1600 and making the modifications required to convert it from a transmission pipeline to a distribution pipeline (De-Rating Line 1600).

2.0 Preliminary Draft Mitigation Measures

As noted above, this appendix includes draft mitigation measures that may be applied to projects similar in nature to the proposed project. These measures are intended to address the various stages of project development, including construction, operation, and decommissioning. While these measures have not been vetted, they represent potential means for limiting or avoiding impacts that may result for a similar natural gas pipeline built within a region similar to San Diego.

These measures include those for the following resources:

- Aesthetics
- Agricultural and Forestry
- Biological Resources
- Cultural, Paleontological, and Tribal Cultural Resources
- Geology, Soils, and Minerals
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Noise
- Public Services and Utilities
- Recreation
- Traffic and Transportation

The measures are presented in tabular format (Table 2-1). They are sequentially numbered by resource topic. Some duplication may be present, if a measure can be used for more than one resource area. Measures were not included for all resources and do not in all cases represent the full slate of available measures, as the evaluations conducted for the proposed project were not complete at the time of the CPUC's decision.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
Aesthetics	MM AES-1: Construction Staging Areas/Laydown Yards Screening	Staging areas/laydown yards needed for construction visible from state and county scenic highways, residential areas, and other public viewing locations shall be screened from view from these locations using perimeter screening fences at least 8 feet tall. Perimeter screening fence materials shall be dark in color and dull in finish (i.e., not exposed galvanized fencing) and covered with a dark-colored (e.g., dark green or dark brown) fabric, slats, or other material that provides at least 75 percent screening from exterior views.	• Use perimeter screening fences, which are dark in color and dull in finish and covered with dark-colored fabric, slats, or other material that provides at least 75 percent screening from exterior views.
	MM AES-2: Protection of Existing Vegetation and Views	To reduce visual contrast and mitigate significant impacts on existing aesthetic character and quality of views, measures shall be implemented to protect existing large trees and other vegetation and to minimize the visual effects of vegetation removal. At least 90 days prior to the planned start of construction, a Plan for Protection of Existing Vegetation shall be prepared for CPUC review. CPUC approval is required prior to commencement of construction. This plan shall include, at a minimum, a plan view, elevations, and one or more visual simulations, showing the plan for activities that shall minimize removal and damage to trees and other vegetation and preserve existing views to the maximum extent possible.	• Prepare a Plan for Protection of Existing Vegetation • Include, at a minimum, a plan view, elevations, and one or more visual simulations, showing the plan for activities that minimize removal and damage to trees and other vegetation and preserve the existing views to the maximum extent possible.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM AES-3: Restoration Plan	To reduce visual contrast and maintain the aesthetic quality and character of views, a Restoration Plan shall be prepared and implemented that identifies a diverse mix of shrubs, perennials, forbs, and grasses that are native to the surrounding areas of the proposed project. At least 60 days prior to the planned start of construction, the Restoration Plan shall be submitted for review. CPUC approval is required prior to commencement of construction. This plan shall include, at a minimum, a plan view planting plan; a detailed plant list; planting details; plant protection techniques to be used; a seeding plan; details for a temporary irrigation system; a description of the planting and seeding processes; a description of how plantings will be irrigated and maintained during a three-year establishment period; and a description of restoration establishment objectives, monitoring, and replacement requirements to meet the establishment objectives during the three-year establishment period. The plan shall specify that all shrubs and perennials will be planted from container stock that is dee-pot size or larger. The Restoration Plan shall be implemented as soon as possible following the completion of construction of the pipeline.	• Prepare a Restoration Plan that identifies a diverse mix of shrubs, perennials, forbs, and grasses native to the area. • Include, at a minimum, a plan view planting plan; a detailed plant list; planting details; plant protection techniques to be used; a seeding plan; details for a temporary irrigation system; a description of the planting and seeding processes; a description of how plantings will be irrigated and maintained during a three-year establishment period; and a description of restoration establishment objectives, monitoring, and replacement requirements to meet the establishment objectives during the three-year establishment period. • Specify that all shrubs and perennials will be planted from container stock that is dee-pot size or larger.
	MM AES-4: Aboveground Feature Enclosure Aesthetic Treatment Plan	To reduce potential visual contrast and integrate the appearance of the enclosures, Aesthetic Treatment Plans for the design and implementation of landscaping and decorative treatment for the enclosures shall be prepared. This plan shall include measures that are coordinated with the design of the existing nearby interpretive signage structures. The plans shall be submitted to the CPUC for review at least 60 days prior to the planned start of construction. CPUC approval is required prior to commencement of construction.	• Prepare Aesthetic Treatment Plans for the design and implementation of landscaping and decorative treatment for the enclosures. • Include measures that are coordinated with the design of the existing nearby interpretive signage structures.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM AES-5: Nighttime Lighting	To minimize the effect on nearby sensitive receptors, any lighting required for construction activities, staging areas/laydown yards, maintenance activities, and permanent facilities (e.g., mainline valves, cross-ties, and Electronic Pressure Monitoring equipment) shall be the minimum necessary to ensure safety and security for nighttime activities. All lighting used for nighttime construction or operation and maintenance activities shall be oriented downward and shielded to eliminate offsite light spill at times when the lighting is in use. Safety and security lighting at staging areas/laydown yards or other areas or facilities established for long-duration construction activities shall be motion-activated or use timers to reduce impacts of nighttime lighting. Any safety and security lighting at permanent facilities shall also be motion-activated or use timers to reduce impacts of nighttime lighting. If nighttime construction is required, areas shall be lit only as required for safety and in accordance with Occupational Health and Safety Administration standards.	• Use the minimum necessary lighting to ensure safety and security for nighttime activities. • Use lighting that is oriented downward and shielded to eliminate offsite light spill. • Use motion-activated lights or timers where applicable. • Light areas only as required for safety and in accordance with Occupational Health and Safety Administration standards.
Agricultural and Forestry	MM AG-1: Land Owner Notification	If construction activities have the potential to interfere with existing agricultural operations, applicable property owners shall be notified at least 30 days prior to the initiation of construction activities. At a minimum, the following shall be discussed with the agricultural operators: • Communicate potential disruptions from construction activities (i.e., noise, dust, traffic, and access restrictions). • Describe the activities that shall be occurring, and the anticipated schedule.	• Notify property owners at least 30 days prior to the initiation of construction activities. • Discuss the types of disruptions that may occur; the activities that would be conducted; the schedule; the location of facilities; and recommended safety considerations.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Coordinate the location of construction facilities such as the staging yard or equipment parking areas. • Communicate recommended safety considerations for agricultural staff and patrons, if applicable (such as avoidance areas, barriers, and sign locations). • Prior to initiation of any construction activities that have the potential to interfere with existing agricultural operations, verification shall be provided to the CPUC of completed pre-construction conditions and communications with the agricultural operators.	
	MM AG-2: Limits of Construction Activities: Project Boundaries and Sensitive Areas Clearly Marked	In all locations of the proposed project, construction activities, vehicular traffic (including movement of all equipment), and storage of construction materials shall be restricted to approved access roads and established construction areas indicated by flagging, fencing, and/or signage. Exclusionary fencing shall be installed prior to the start of construction activities around staging areas/laydown yards and work areas, where necessary and appropriate, to prevent inadvertent encroachment on productive agricultural lands or native woody vegetation communities. Identified sensitive resources shall be assigned a buffer as appropriate and clearly marked as an environmentally sensitive area (e.g., with signs, flagging, ropes, and/or fencing) to ensure they are avoided unless disturbance was previously approved. A CPUC-approved qualified biologist shall determine the appropriate buffer depending on the vegetation community involved and the construction activity. The CPUC-approved qualified biologist shall perform or supervise flagging and fencing to ensure that these activities are conducted without harm to sensitive species or habitat.	• Demarcate approved access roads and established construction areas. • Install exclusionary fencing prior to construction around staging areas/laydown yards and work areas, where necessary and appropriate, to prevent inadvertent encroachment on productive agricultural lands or native woody vegetation communities. • Identify sensitive resources with appropriate buffers (determined by CPUC-approved qualified biologist) and clear markings. • Use a CPUC-approved qualified biologist to supervise/perform flagging and fencing.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM AG-3: Topsoil Salvage and Replacement	Where temporary ground disturbance occurs to agricultural resources, up to 12 inches of topsoil that is currently used for agricultural purposes shall be salvaged. Segregated topsoil and subsoil shall be maintained and kept separated throughout all construction activities. If the agricultural area is only used for minor temporary staging or limited construction activities, the Environmental Inspector shall determine if working on the topsoil will result in fewer impacts on the soil structure and function than stripping the topsoil. If work occurs on the topsoil, construction activities shall be limited to avoid rutting (i.e., activities that are found to result in rutting will be halted). If crushed stone or gravel is used for equipment access in agricultural areas, the topsoil shall first be stripped where feasible, and synthetic fabric applied over the subsoil prior to spreading the stone or gravel. Any imported gravel, fill, or soil shall be verified to be free of noxious weeds or soil pests prior to their application to construction sites within agricultural areas. Following construction within agricultural areas, excess stone or gravel and synthetic fabric shall be removed prior to topsoil replacement. The segregated topsoil shall be replaced immediately following the completion of construction activities in the area. In addition, excess rock shall be removed from the topsoil and disturbed areas restored to pre-construction conditions.	• Salvage up to 12 inches of topsoil in agricultural areas. • Maintain segregated topsoil and subsoil throughout all construction activities. • Limit construction activities to avoid rutting. • Strip topsoil, where feasible, and apply synthetic fabric over the subsoil, if crushed stone or gravel is used for equipment access. • Verify any imported gravel, fill, or soil to be free of noxious weeds or soil pests prior to application. • Remove excess stone, gravel, rocks, and synthetic fabric prior to topsoil replacement.
	MM AG-4: Soil De-compaction	If construction activities result in soil compaction to Farmland, the soil shall be plowed or ripped to loosen the compaction after completion of construction activities. Ripping shall be conducted prior to replacing the segregated topsoil.	• Plow or rip to loosen soil compaction after completion of construction activities. • Conduct ripping prior to replacing segregated topsoil.

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Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM AG-5: Pipeline Installation in Farmland	When adjacent pipelines or underground utilities exist beneath Farmland, the proposed project pipeline shall be installed with at least the same depth of cover as the existing pipelines and utilities, but in no event shall the pipeline be installed less than 48 inches deep to avoid conflict with typical tillage activities.	• Install the pipeline with at least the same depth of cover as existing pipelines and utilities. • Do not install less than 48 inches deep in order to avoid conflict with typical tillage activities.
	MM AG-6: Preservation of Agricultural Lands	Prior to commencement of construction, the permanent loss of Farmland shall be mitigated at a 1:1 ratio by preserving irrigated agricultural land within San Diego County of equal or better quality than the land converted by development of the project through either of the following mechanisms: (i) Directly obtaining a permanent conservation easement over a sufficient amount of acres to offset the amount of Farmland permanently converted to non-agricultural uses. The easement shall be recorded with the County of San Diego and shall be held and administered by an established, County of San Diego-approved conservation organization. The easement holder shall be provided with sufficient funds to compensate for reasonable administrative costs incurred by the easement holder, including an endowment to cover the cost of monitoring and enforcing the easement in perpetuity. The form of conservation easement and the conservation organization that will hold and administer the easement shall be approved by the CPUC, though this obligation may be delegated to the County of San Diego if the County agrees to assume the obligation. (ii) Participating in the County of San Diego's Purchase of Agricultural Conservation Easement Program (PACE) by purchasing a sufficient amount of mitigation credits in an established, approved farmland mitigation bank to offset the number of acres of Farmland converted to non-agricultural uses.	• Mitigate the permanent loss of Farmland at a 1:1 ratio by preserving irrigated agricultural land within San Diego County of equal or better quality than the land converted by development.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		Sufficient evidence shall be provided to the CPUC of compliance with this mitigation measure prior to commencement of construction.	
Air Quality	Incomplete	Incomplete	Incomplete
Biological Resources	MM BR-1: Pre-construction Surveys	Prior to construction and activities in a new work area that may include vegetation clearing, staging, and stockpiling, or other activities with the potential to directly or indirectly affect plants or wildlife, a qualified biologist approved by the CPUC shall be retained to conduct pre-construction surveys in all areas of temporary and permanent disturbance to identify sensitive biological resources, including special status plant species and sensitive natural communities, special status wildlife, and nesting birds. Pre-construction surveys shall be species and resource appropriate and conducted a maximum of 14 days prior to construction, unless otherwise approved by the CPUC. If there is no work in an area for 14 days or more, the area shall be considered a "new work area" if construction begins again. Nesting bird and burrowing owl and special status plant pre-construction surveys shall be consistent with the timing required by MM BR-9 and MM BR-16. In project areas that may support western spadefoot toad, additional western spadefoot toad pre-construction surveys shall be conducted by a CPUC-approved biologist who is knowledgeable about western spadefoot toad biology and ecology. Surveys shall be conducted at any time of year in areas where project activities cause vibrations and where artificial wetting of ground surface may result in western spadefoot toad emergence. Additionally, a CPUC-approved, qualified biologist shall conduct pre-construction clearance sweeps for special status species at	• Retain a qualified biologist approved by the CPUC to conduct pre-construction surveys species and resource appropriate 14 days prior to construction in all areas of temporary and permanent disturbance to identify sensitive biological resources, including special status plant species and sensitive natural communities, special status wildlife, and nesting birds. • Re-conduct surveys if more than 14 days pass between activities. • Conduct pre-construction clearance sweeps for special status species at all access areas, staging areas/laydown yards, and work areas where suitable habitat is present within approximately 24 hours of the start of construction activities each day.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		all access areas, staging areas/laydown yards, and work areas where suitable habitat is present within approximately 24 hours of the start of construction activities each day.	
	MM BR-2: Limits of Construction Activities: Project Boundaries and Sensitive Areas Clearly Marked	Construction activities, vehicular traffic (including movement of all equipment), and storage of construction materials shall be restricted to approved access roads and established construction areas indicated by flagging, fencing, and/or signage. Exclusionary wildlife fencing shall be installed prior to the start of construction activities around staging areas/laydown yards and work areas, where necessary and appropriate, to prevent inadvertent encroachment into the project area by special status species and the inadvertent encroachment by project activities into habitat. Identified sensitive resources, such as aquatic features, special status plants and sensitive natural communities, and known wildlife habitat of special status species (e.g., nests, burrows, or dens), shall be assigned a buffer as appropriate and clearly marked as an environmentally sensitive area (e.g., with signs, flagging, ropes, and/or fencing) to ensure they are avoided, unless disturbance was previously approved by the appropriate agency. A CPUC-approved qualified biologist shall determine the appropriate buffer depending on the species and the construction activity. The biologist shall perform or supervise flagging and fencing to ensure that these activities are conducted without harm to sensitive species or habitat. If special status wildlife or plant species, or evidence of special status wildlife or special status plant species not previously analyzed in this document, is found at any time, work shall be immediately halted and the appropriate wildlife agency(ies) and	• Demarcate approved access roads and established construction areas. • Install exclusionary wildlife fencing prior to construction around staging areas/laydown yards and work areas, where necessary and appropriate, to prevent inadvertent encroachment on productive agricultural lands or native woody vegetation communities. • Identify sensitive resources with appropriate buffers (determined by CPUC-approved qualified biologist) and clear markings. • Use a CPUC-approved qualified biologist to supervise/perform flagging and fencing. • Halt work if a special status wildlife or plant species, or evidence of special status wildlife or special status plant species not previously identified is found.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		the CPUC contacted to identify next steps. Work shall resume once the CPUC provides approval.	
	MM BR-3: Worker Environmental Awareness Program	A Worker Environmental Awareness Program shall be developed and implemented for all project personnel. The program must be submitted to the CPUC at least 30 days prior to the planned start of construction for review and approval. CPUC approval must be obtained and the program must be implemented prior to the start of construction. All project personnel shall undergo training prior to entering the project area. The training shall include a description of special status plants and wildlife and their habitats, the generally applicable environmental regulations and the need to adhere to those regulations, the penalties associated with violating those regulations, the general measures that are being implemented during project construction to protect and conserve special status species, the access routes to the project, and project boundaries within which project-related activities must occur. This training shall also include a detailed review of how project personnel can identify sensitive biological resources in the project area that need to be avoided and where work activities are restricted.	• Develop a Worker Environmental Awareness Program for all project personnel. • Include a description of special status plants and wildlife and their habitats, the generally applicable environmental regulations and the need to adhere to those regulations, the penalties associated with violating those regulations, the general measures that are being implemented during project construction to protect and conserve special status species, the access routes to the project, and project boundaries within which project-related activities must occur. • Include a detailed review of how project personnel can identify sensitive biological resources in the project area that need to be avoided and where work activities are restricted.
	MM BR-4: Construction Monitoring	A qualified biologist approved by the CPUC shall be engaged to serve as a biological construction monitor during periods when construction activities occur near active bird nest areas, or within 100 feet of native vegetation or an area (e.g., vegetation, burrow, den, bridge) that is known, or has the potential, to provide habitat for special status species. The monitor shall be present during vegetation removal and ground-disturbing activities within those habitat areas. The monitor shall conduct a preconstruction clearance sweep of the work area prior to	• Engage a qualified biologist to serve as a biological construction monitor during periods when construction activities (e.g., vegetation removal and/or ground-disturbing activities within habitat areas) occur near active bird nest areas, or within 100 feet of native vegetation or an area (e.g., vegetation, burrow, den, bridge) that is known, or has the potential, to provide habitat for special status species.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		vegetation removal or ground disturbance (as described in MM BR-1) and shall verify that construction activities are in compliance with the project permits and authorizations. The monitor shall have the authority to temporarily stop work that is determined to threaten a special status species or sensitive resource. If applicable, the monitor shall determine the buffer around the special status wildlife species in which work shall be stopped and shall not allow work to proceed within that area until the animal has traveled offsite on its own. Work shall resume once the monitor determines there is no longer a threat to the special status species or sensitive resource, or consultation has occurred with the appropriate wildlife agency(ies) to determine the appropriate steps to be taken (e.g., the agency determines it is appropriate for a qualified biologist to relocate special status species).	• Conduct a preconstruction clearance sweep of the work area prior to vegetation removal or ground disturbance. • Verify that construction activities comply with the project permits and authorizations. • Temporarily stop work that is determined to threaten a special status species or sensitive resource, if needed, and provide buffer around the special status wildlife species in which work shall be stopped • Allow work to proceed when the animal has traveled offsite on its own, and the monitor determines that there is no longer a threat to the special status species or sensitive resource or that consultation has occurred with the appropriate wildlife agency(ies) to determine the appropriate steps to be taken (e.g., the agency determines it is appropriate for a qualified biologist to relocate special status species).
	MM BR-5: Plant and Wildlife Protection	To protect plants and wildlife, all trash, including decomposable food scraps, shall be stored in sturdy, animal-proof containers and emptied daily. All project construction vehicles shall be equipped with trash bags. Construction vehicle and equipment speeds shall be limited to 15 miles per hour on all unpaved roads during the day and 10 miles per hour on all unpaved roads at night to prevent collision-related injuries and mortalities of wildlife species. Project vehicle and equipment traffic shall be restricted to CPUC-approved project areas, including roads. Signage shall be posted in all	• Store all trash, including decomposable food scraps, in sturdy, animal-proof containers and empty them daily. • Equip all construction vehicles with trash bags. • Limit construction vehicle and equipment speeds to 15 miles per hour on all unpaved roads during the day and 10 miles per hour on all unpaved roads at night to prevent collision-related injuries and mortalities of wildlife species. • Restrict traffic to approved projects areas.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		project areas indicating the speed limits and identifying approved project areas in which vehicle traffic is permitted. Firearms shall be prohibited in all project areas. Project personnel shall not be allowed to bring pets to any project area, to minimize harassment or killing of wildlife and to prevent the introduction of destructive animal diseases to native wildlife populations. No harm, harassment, or collection of plant and wildlife species shall be permitted. Feeding of wildlife shall be prohibited.	• Post appropriate signage indicating the speed limits and identifying approved project areas in which vehicle traffic is permitted. • Prohibit firearms in all project areas. • Do not allow pets in any project area. • Do not allow harm, harassment, or collection of plant and wildlife species. • Prohibit the feeding of wildlife.
	MM BR-6: Noxious and Invasive Weed Control Plan	Prior to construction, a Noxious and Invasive Weed Control Plan shall be prepared for implementation before, during, and after construction, including during the project restoration phase. Pre-construction surveys shall be completed during the appropriate blooming/growing period(s) as close to the start of construction activities as possible to identify and map state-, county-, and locally designated noxious weed species. This plan shall include measures designed to avoid the introduction and spread of noxious weeds and invasive plant species designated by the state, counties, local weed control boards. This plan shall be developed in consultation with the CPUC and must be submitted to the CPUC for review and approval 60 days prior to the planned start of construction. CPUC approval is required prior to the start of construction. At a minimum, this plan shall include the following: • Protocol for control and/or treatment of noxious weed species. Appropriate agencies, including the CPUC, shall be contacted to determine appropriate species-specific measures to implement, or whether control or treatment of a species is feasible and preferable. California Invasive Plant	• Prepare a Noxious and Invasive Weed Control Plan. • Include measures designed to avoid the introduction and spread of noxious weeds and invasive plant species designated by the state, counties, and local weed control boards. • Clean and inspect vehicles to ensure they are free of dirt, mud, and any debris that may carry invasive plant seeds or parts. • Keep logs of vehicle and equipment being cleaned and inspected. • Use materials from weed-free sources. • Restore all temporary disturbance areas and monitor for invasive species establishment on a monthly basis during the blooming/growing season and on a quarterly basis outside of the blooming/growing season for at least one year after project restoration is completed. Complete pre-construction surveys during the appropriate blooming/growing period(s) as close to start

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Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		Council species rated High or Moderate should be targeted for control or treatment. • Prior to arrival at the project location, including prior to use of access roads, all vehicles and equipment shall be cleaned and inspected to ensure they are free of dirt, mud, and any debris that may carry invasive plant seeds or parts to the project. Logs of vehicle and equipment being cleaned and inspected shall be kept. • If an invasive weed species is present at a given project site, soils excavated from this location for use in construction and restoration activities (e.g., backfilling, road rehabilitation, etc.) shall not be transported to a location that does not already contain that invasive species. • Straw, hay, gravel, soil, or other construction or erosion control materials that could inadvertently contain unwanted plant propagules shall come from state-cleared sources determined to be free of invasive weeds. • All seeds to be used in revegetation and reclamation activities shall come from weed-free sources. • All temporary disturbance areas that shall be restored (see MM BR-8 for success criteria) post-construction shall be monitored for invasive species establishment on a monthly basis during the blooming/growing season and on a quarterly basis outside of the blooming/growing season for at least one year after project restoration is completed. If evidence of the expansion or increase in abundance of a known invasive species or introduction of a new invasive species is found, appropriate control measures, which may include mowing or trimming of weeds prior to seed set, shall be initiated as outlined in the plan.	of construction activities as possible to identify and map state-, county-, and locally designated noxious weed species

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM BR-7: Impact Reduction on Native Trees, Natural Communities, and Aquatic Features.	For all project components in the vicinity of native trees, natural communities, and aquatic features, the following shall be implemented: • Ensure that temporary construction areas will be impacted in a way that facilitates post-construction restoration. For example, drive-and-crush methods in areas with native vegetation shall be employed where possible. • Prior to project construction, consult with a CPUC-approved qualified arborist and/or botanist for the trimming and removal of all native vegetation. A qualified arborist/botanist shall be worked with to determine the minimum amount of vegetation removal required to accommodate project construction, as well as the correct trimming procedures to employ and to preserve root zone aeration and the stability of native trees where possible. • Chip removed vegetation or trees onsite and haul them to an approved landfill facility, or cut them and leave them onsite to minimize the risk of spreading shot hole borer or golden oak borer. • Ensure that during construction and restoration activities, CPUC-approved biological monitors establish and oversee maintenance of a minimum exclusionary buffer of 50 feet from the delineated extent of all jurisdictional aquatic features. • If it is infeasible to maintain a 50-foot exclusionary buffer from a delineated wetland, bed/bank of a drainage feature, or associated riparian habitat during project construction and restoration, take the following actions:	• Ensure that temporary construction areas will be impacted in a way that facilitates post-construction restoration • Consult with a CPUC-approved qualified arborist and/or botanist for the trimming and removal of all native vegetation, to determine the minimum amount of vegetation removal required to accommodate project construction, to correct trimming procedures, and to preserve root zone aeration and the stability of native trees where possible. • Chip removed vegetation or trees onsite and haul them to an approved landfill facility, or cut them and leave them onsite to minimize the risk of spreading shot hole borer or golden oak borer. • Ensure that during construction and restoration activities, CPUC-approved biological monitors establish and oversee maintenance of a minimum exclusionary buffer of 50 feet from the delineated extent of all jurisdictional aquatic features. • Maintain a 50-foot exclusionary buffer from a delineated wetland, bed/bank of a drainage feature, or associated riparian habitat during project construction and restoration • If needed to maintain the 50-foot buffer, take the following actions: o Consult with appropriate agencies regarding the need for any necessary permits and comply with any permit requirements.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		o Consult with appropriate agencies regarding the need for any necessary permits and comply with any permit requirements. o Develop and implement standard Stormwater Pollution Prevention Plan best management practices to control erosion and sedimentation into the jurisdictional feature and submit the proposed measures to the CPUC for approval prior to construction. o For areas where work must occur in a jurisdictional wetland or drainage feature, prepare a Hydrological Features Crossing Plan describing the extent of work to occur in waterways and wetlands in consultation with appropriate agencies. The plan shall include measures to minimize impacts, including techniques to isolate work sites within jurisdictional features as needed (e.g., construct trench breakers at wetland boundaries and/or seal the trench bottom to maintain original hydrology), and restrict construction activities to times of year when water is not present in the feature, unless otherwise permitted by the appropriate agencies. The plan shall be submitted to the CPUC for review 60 days prior to the planned start of construction. CPUC approval is required prior to plan implementation. • Temporary and permanent impacts on sensitive natural communities, habitat for special status species, riparian habitat, or aquatic features shall be fully mitigated in accordance with the Habitat Restoration, Enhancement, and	o Develop and implement standard Stormwater Pollution Prevention Plan best management practices to control erosion and sedimentation into the jurisdictional feature. o For areas where work must occur in a jurisdictional wetland or drainage feature, prepare a Hydrological Features Crossing Plan describing the extent of work to occur in waterways and wetlands in consultation with appropriate agencies. Include measures to minimize impacts, techniques to isolate work sites within jurisdictional features as needed (e.g., construct trench breakers at wetland boundaries and/or seal the trench bottom to maintain original hydrology), and measures to restrict construction activities to times of year when water is not present in the feature, unless otherwise permitted by the appropriate agencies. • Mitigate temporary and permanent impacts on sensitive natural communities, habitat for special status species, riparian habitat, or aquatic features, in accordance with a Habitat Restoration, Enhancement, and Compensation Plan as described in MM BR-8.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		Compensation Plan described in MM BR-8. Mitigation requirements for impacts may be satisfied by demonstrating compliance with equal or more effective permit conditions imposed by a state or federal agency, with approval by the CPUC.	
	MM BR-8: Habitat Restoration, Enhancement, and Compensation	Prior to construction of the project, seasonally appropriate surveys of vegetation shall be completed by a qualified, CPUC-approved botanist familiar with the vegetation associations present in the project area. A Habitat Restoration, Enhancement, and Compensation Plan shall be developed with input from relevant agencies. The plan shall provide for mitigation of all temporary and permanent impacts on priority habitats (i.e., sensitive natural communities, habitat for special status species, and jurisdictional aquatic features) that results in no net loss of these habitats through restoration, enhancement, or compensation. The plan shall include an estimate of the total area of priority habitats expected to be impacted. The plan must be submitted to the CPUC for review 60 days prior to the planned start of construction. CPUC approval is required prior to plan implementation. For the purposes of the Habitat Restoration, Enhancement, and Compensation Plan, the following definitions shall apply: • Restoration – achievement of no net loss of priority habitats through topsoil and plant salvage and reseeding at the impact location. • Enhancement – establishment of a priority habitat of comparable quality and size at a location other than the impact location through topsoil and plant salvage and reseeding.	• Conduct seasonally appropriate surveys of vegetation using a qualified, CPUC-approved botanist familiar with the vegetation present. • Develop a Habitat Restoration, Enhancement, and Compensation Plan with input from relevant agencies. • Include re-contouring and reseeding of non-priority habitats and the permanent right-of-way, and methods to address temporary and permanent impacts on priority habitats; • Provide for mitigation of all temporary and permanent impacts on priority habitats (i.e., sensitive natural communities, habitat for special status species, and jurisdictional aquatic features) that results in no net loss of these habitats through restoration, enhancement, or compensation. • Include an estimate of the total area of priority habitats expected to be impacted.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Compensation – purchase of credits and/or mitigation lands from an entity approved by the California Department of Fish and Wildlife (CDFW) and U.S. Fish and Wildlife Service (USFWS) for comparable priority habitats. The plan must include, but is not limited to, the following measures and requirements: • All temporarily impacted non-priority habitats and the permanent right-of-way shall be recontoured and reseeded to promote growth of native vegetation, or may be restored to the conditions agreed upon by the landowner and the applicants. • All temporary impacts on priority habitats shall be mitigated through one or more of the following methods at the following ratios as listed in Table BR-1: 1. Restoration at the impact location; 2. Enhancement of comparable priority habitats within 1 mile of the impacted area; or 3. If Options 1 and 2 are not feasible or would not achieve the required mitigation ratio, compensation through the purchase of credits in a mitigation bank from an entity approved by the CDFW and USFWS and/or purchase of a conservation easement to permanently preserve lands containing the impacted habitat.	

Table BR-1 3+Temporary Impacts

Vegetation Community	Temporary Impact Ratios
Oak Woodland	1:1
Diegan Coastal Sage Scrub	1.5:1
Vernal Pool	3:1
Other Sensitive Natural Communities	1:1
Other Special Status Species Habitat	1:1
Jurisdictional Aquatic Features	1:1

- All permanent impacts on priority habitats must be mitigated through one or more of the following methods at the ratios as listed in Table BR-2:

  1. Enhancement of comparable priority habitats within 1 mile of the impact area; or
  2. Compensation through the purchase of credits in a mitigation bank from an entity approved by the CDFW and USFWS and/or purchase of a conservation easement to permanently preserve lands containing the impacted habitat.

Table BR-2 Permanent Impacts

Vegetation Community	Permanent Impact Ratios
Oak Woodland	3:1
Diegan Coastal Sage Scrub	2.5:1
Vernal Pool	3:1
Other Sensitive Natural Communities	2:1
Other Special Status Species Habitat	2:1

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• The plan shall specify how each impact shall be mitigated through restoration, enhancement, and/or compensation (for special status plants, see MM BR-9; for non-oak protected trees, see MM BR-7). o For areas being restored or enhanced, the plan shall specify how each type of vegetation community shall be treated for purposes of restoration or enhancement: topsoil segregation and conservation; vegetation treatment and removal; soil compaction prevention and decompaction; revegetation methods, including seed mixes, rates, appropriate habitat structure, and transplants; criteria to monitor and evaluate revegetation success (minimum of five years of monitoring and 80 percent successful native plant establishment); and compensation and remedial measures to be implemented as needed. o For impacts for which compensation will be provided in the form of a conservation easement, the plan shall include legal descriptions and maps of the parcel(s) that will be subject to the conservation easement and documentation demonstrating that the parcel(s) will provide high quality habitat roughly equivalent in composition to the habitats impacted by the project. o For impacts for which compensation will be provided in the form of mitigation credits at a mitigation or conservation bank, the plan shall include a description of the bank including location, and a description of the habitat credits purchased. Where a conservation easement will be used to compensate for habitat impacts, the easement shall be recorded with the County	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		of San Diego and shall be held and administered by an established, County of San Diego–approved conservation organization. The easement holder shall be provided with sufficient funds to compensate for reasonable administrative costs incurred by the easement holder, including an endowment to cover the cost of monitoring and enforcing the easement in perpetuity. The form of conservation easement and the conservation organization that will hold and administer the easement shall be approved by the CPUC, though this obligation may be delegated to the County of San Diego if the County agrees to assume it. Sufficient evidence shall be provided to the CPUC of compliance with this mitigation measure prior to commencement of ground disturbance. With CPUC approval, and on a case-by-case basis, requirements described in this mitigation measure and the Habitat Restoration, Enhancement, and Compensation Plan may be satisfied through compliance with permit conditions imposed by a state or federal agency, if these requirements are equally or more effective.	
	MM BR-9: Restoration of Special Status Plants	A qualified biologist approved by the CPUC shall be retained to complete pre-construction surveys during the appropriate blooming period(s) as close to start of construction activities as possible to identify special status plants, including Hermes copper butterfly host plant spiny redberry, in portions of the project area where suitable habitat is present. Special status plants shall be mapped with a submeter-accurate global positioning system unit, and flagged or surrounded with fencing in such a way that prohibits disturbance of the populations or individuals. In the event that populations or individuals of special status plants cannot be avoided, a restoration plan shall be developed and implemented for each plant to be impacted,	• Retain a qualified biologist approved by the CPUC to complete pre-construction surveys during the appropriate blooming period(s) as close to start of construction activities as possible to identify special status plants. • Map special status plants with a submeter-accurate global positioning system unit, and flag or surround them with fencing in such a way that prohibits disturbance of the populations or individuals.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		which shall be submitted to the CPUC, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW) for review and comment no less than 60 days prior to construction activities within the work area where impacts would occur. For impacts on special status plants, restoration shall be performed after completion of construction at a minimum ratio of 1.5:1 for all special status plants in the project area. The number of plants surviving at five years shall be a minimum of 1.5 times the number destroyed. Mitigation for temporary and permanent impacts shall be provided through: 1. Establishing individual plants within the project area (outside of the permanent right-of-way); 2. Establishing individual plants outside the project area (within 1 mile of the project area); or 3. Purchase of credits and/or mitigation lands of equal or greater quality than the impacted land (as determined by the CPUC) at a ratio of 2.5:1 from an entity approved by the USFWS and CDFW. For options 1 and 2 (establishing plants onsite or within 1 mile of the project area), the plan shall establish the following elements: methodology for transplanting perennials and collecting and dispersing seed of annual species if feasible; planting/seeding palettes; monitoring and contingency program, including the results that trigger additional management actions (e.g., collection and sowing of additional seed, installation of container	• Develop a restoration plan for each plant to be impacted. • Perform restoration after completion of construction at a minimum ratio of 1.5:1 for all special status plants in the project area. The number of plants surviving at five years shall be a minimum of 1.5 times the number destroyed.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		plants); monitoring schedule, including duration (seven years) and performance criteria (minimum of 1.5 times the number destroyed); and any specific measures that shall be required to ensure success of the restoration effort. Implementation of this mitigation measure may be coordinated with restoration efforts pursuant to MM BR-8, if appropriate.	
	MM BR-10: Restoration of Native Oak Trees	Measures shall be taken to avoid or minimize impacts on oak trees resulting from project construction activities, as well as to fully mitigate any trees damaged or removed. Prior to construction, pre-construction surveys shall be submitted, and survey results shall be submitted to the CPUC, to identify all individual trees of the oak genus indigenous to California located in the project area. Oak trees shall be identified by a CPUC-approved qualified arborist (i.e., an arborist with extensive local or regional expertise in the planting, care, and maintenance of oak trees), who shall record a brief description of each tree (height, width, condition, and species). All construction activities that take place within the driplines of oak trees (i.e., the outermost extent of the canopy) that have the potential to damage or result in the removal of oak trees (e.g., trimming more than 25 percent of any individual oak tree canopy during one growing season, excavation or paving within the root zone of oak trees, oak tree removal) shall be monitored by a qualified arborist. Trimming, damage to, or loss of oak trees within the project construction areas shall not occur until the trees are evaluated by the qualified arborist, who shall identify appropriate measures to minimize tree loss, including the placement of fencing around the dripline, padding construction vehicles, or the placement of protective covering (matting) under the existing dripline during construction activities. If construction activities would lead to damage or the removal of any oak tree with a trunk of 8 inches or more in diameter at 4.5 feet ("breast	• Conduct pre-construction surveys and submit results to the appropriate agency. • Use a CPUC-approved qualified arborist (i.e., an arborist with extensive local or regional expertise in the planting, care, and maintenance of oak trees), to record a brief description of each oak tree (height, width, condition, and species). • Monitor all construction activities that take place within the driplines of oak trees (i.e., the outermost extent of the canopy) that have the potential to damage or result in the removal of oak trees (e.g., trimming more than 25 percent of any individual oak tree canopy during one growing season, excavation or paving within the root zone of oak trees, oak tree removal). • Coordinate with each municipality to adequately meet the applicable individual permit conditions.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		height"), the requirements of the County of San Diego or the applicable local municipality regarding oak tree preservation and mitigation shall be adhered to, including obtaining tree removal and/or vegetation clearing permits. Coordinate with each municipality shall be conducted to adequately meet the applicable individual permit conditions; however, any removed tree or tree determined to be damaged by a qualified arborist shall be replaced onsite or mitigated for at a minimum level of 3:1. Tree removal shall not be permitted until replacement trees have been planted or mitigation sites have been approved by the CPUC staff.	
	MM BR-11: Vernal Pool Impact Reduction	To reduce impacts on vernal pools, the following measures shall be implemented: • Prior to construction, a qualified biologist approved by the CPUC shall perform a vernal pool survey when project-related activities are planned within 250 feet of potential vernal pool habitat. Surveys shall occur during the wet season and shall map vernal pools and record whether they support indicator vernal pool plant species. Vernal pools shall be defined to include the vernal pool basin/ponded area and the vernal pool watershed (per the "Vernal Pool Clarification" addendum to SDG&E's Subregional Natural Community Conservation Plan). • A qualified biological monitor approved by the CPUC shall be present during project construction to monitor all activities that occur within 250 feet of vernal pools. • Project-related activities shall completely avoid vernal pools, if feasible. Prior to commencement of ground-disturbing activities in the area of a vernal pool, a qualified	• Perform a vernal pool survey when project-related activities are planned within 250 feet of potential vernal pool habitat during the wet season, map vernal pools, and record whether they support indicator vernal pool plant species. • Monitor all activities that occur within 250 feet of vernal pools. • Avoid vernal pools, if feasible, or determine an appropriate exclusion zone around each vernal pool, to minimally include the vernal pool watershed plus a 5-foot buffer. • Fence the zone with orange safety fencing (or sand bags during the dry season if fencing may impact habitat) and maintain it for the duration of project construction activities. • Install silt fencing along adjacent roads and work areas with the potential for runoff into vernal pools.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		biologist approved by the CPUC shall determine an appropriate exclusion zone around each vernal pool, which minimally shall include the vernal pool watershed plus a 5-foot buffer. The exclusion zone shall be fenced with orange safety fencing (or sand bags during the dry season if fencing may impact habitat) and maintained for the duration of project construction activities. No project-related activities shall occur in the exclusion zone. Silt fencing shall be installed along adjacent roads and work areas with the potential for runoff into vernal pools. • If avoidance is not feasible, all impacts on vernal pools shall be mitigated at a 3:1 ratio. o Mitigation shall be implemented at a pre-approved vernal pool restoration area. Mitigation credits, as approved by the CPUC, U.S. Fish and Wildlife Service (USFWS), and California Department of Fish and Wildlife (CDFW), may be accumulated and used through advance creation, restoration, and enhancement of a vernal pool basin area. The areas pre-approved by the CPUC, USFWS, and CDFW for creation, restoration, and/or enhancement of a vernal pool basin area shall be of high quality and shall support special status vernal pool species impacted by the project. Pre-approved vernal pool mitigation areas shall be managed and monitored pursuant to a Vernal Pool Management Plan approved by the CPUC, USFWS, and CDFW. o If mitigation is not performed at a pre-approved vernal pool restoration area, then CPUC, USFWS, and CDFW concurrence on an acceptable mitigation site is required prior to any impacts on vernal pools. Recognizing that	• Mitigate impacts on vernal pools at a 3:1 ratio.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		restoration efforts may vary somewhat, a detailed Vernal Pool Restoration Plan shall be prepared based on the generalized approach for vernal pool restoration. Within 30 days of receipt of the Vernal Pool Restoration Plan, the CPUC, USFWS, and CDFW will respond to the plan if further refinements to this generalized approach are necessary. o No impacts on vernal pools shall occur until adequate mitigation for impacts on vernal pools has been secured offsite or a restoration plan has been approved by the CPUC, USFWS, and CDFW for any mitigation that will occur outside of pre-approved vernal pool restoration areas.	
	MM BR-12: Hermes Copper Butterfly and Quino Checkerspot Butterfly Surveys and Mitigation	Prior to construction, a CPUC-approved qualified biologist shall conduct pre-construction surveys for Hermes copper butterfly and Quino checkerspot butterfly. Quino checkerspot butterfly surveys shall be conducted in all project work areas that contain suitable habitat for Quino checkerspot butterfly. If suitable habitat is present, and construction cannot avoid the suitable habitat, then one of the following shall occur: • A U.S. Fish and Wildlife Service (USFWS) protocol, adult, flight-season survey shall be conducted by an individual who holds a recovery permit for Quino checkerspot butterfly pursuant to section 10(a)(1)(A) of the Endangered Species Act. The survey shall be conducted within suitable habitat areas to determine whether or not the habitat is occupied by Quino checkerspot butterfly. In areas where no Quino checkerspot butterflies are detected, construction activities may proceed without further review, and any impacted	• Conduct pre-construction surveys for Hermes copper butterfly and Quino checkerspot butterfly in all project work areas that contain suitable habitat. • If construction cannot avoid suitable habitat to the Hermes copper butterfly, conduct a focused, flight season survey within suitable habitat areas to determine whether or not the habitat is occupied by Hermes copper butterfly or mitigate impacts at a 2:1 ratio. • If construction cannot avoid habitat suitable to the Quino checkerspot butterfly, conduct a U.S. Fish and Wildlife Service (USFWS) protocol, adult, flight-season survey utilizing an individual who holds a recovery permit for Quino checkerspot butterfly pursuant to section 10(a)(1)(A) of the Endangered Species Act; if detected, avoid impacts on the occupied habitat,

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		suitable habitat shall be mitigated at a 1:1 ratio, in accordance with MM BR-8. • If Quino checkerspot butterflies are detected, efforts shall be made to avoid impacts on the occupied habitat. Impacts on occupied habitat shall be mitigated at a 2:1 ratio, in accordance with MM BR-8. • If the timing of the project will not allow for an adult, flight-season survey to determine the presence or absence of Quino checkerspot butterfly, presence of Quino checkerspot butterfly will be assumed in all suitable habitats and mitigation of impacts shall occur at a 2:1 ratio, in accordance with MM BR-8. • If impacts on occupied Quino checkerspot butterfly habitat (as determined by surveys or where Quino checkerspot butterfly presence is assumed) are greater than 1 acre, the USFWS shall be consulted to ensure that the activity's impact will not cause permanent loss of Quino checkerspot butterfly habitat. If the USFWS determines that the activity will cause permanent loss of Quino checkerspot butterfly habitat, the USFWS shall be consulted to determine an appropriate course of action to minimize permanent habitat loss. Hermes copper butterfly surveys shall be conducted in all project areas that contain suitable habitat for Hermes copper butterfly (i.e., areas where the butterfly's larval host plant spiny redberry is found within 15 feet of the preferred primary adult nectaring plant, California buckwheat). If suitable habitat is present, and construction cannot avoid the suitable habitat, then one of the following shall occur:	mitigate impacts at a 2:1 ratio, or confer with the USFWS.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• A focused, flight season survey shall be conducted within suitable habitat areas to determine whether or not the habitat is occupied by Hermes copper butterfly. In areas where no Hermes copper butterfly are detected, construction activities may proceed without further review, and impacts on spiny redberry shall be mitigated in accordance with MM BR-9. • If Hermes copper butterfly are detected, efforts shall be made to avoid impacts on the occupied habitat. Impacts on occupied habitat hall be mitigated at a 2:1 ratio, in accordance with MM BR-8. • If the timing of the project will not allow for a flight-season survey to determine the presence or absence of Hermes copper butterfly, presence of Hermes copper butterfly will be assumed in all suitable habitats, and mitigation for impacts shall occur at a 2:1 ratio, in accordance with MM BR-8.	
	MM BR-13: Arroyo Toad Impact Reduction	Within one year prior to of the start of construction, the protocol-level surveys for arroyo toad shall be conducted by a CPUC-approved qualified biologist who is knowledgeable about arroyo toad biology and ecology in portions of the project area where suitable or potentially suitable habitat is present within 500 feet of project construction activities that will occur during the species' breeding season (March 15- to July 15). Surveys shall be conducted in accordance with U.S. Fish and Wildlife Service (USFWS) protocol (USFWS 1999) and methods described in the *Declining Amphibian Population Task Force Fieldwork Code of Practice* (DAPTF 1998). Vegetation clearing or construction within 500 feet of suitable or potentially suitable arroyo toad habitat shall occur outside of	• Conduct protocol-level (U.S. Fish and Wildlife Service and Declining Amphibian Population Task Force Fieldwork Code of Practice [DAPTF 1998]) surveys for arroyo toad utilizing a CPUC-approved qualified biologist who is knowledgeable about arroyo toad biology and ecology where suitable or potentially suitable habitat is present and within 500 feet of construction activities that will occur during the species' breeding season (March 15 to July 15). • Provide for vegetation clearing or construction within 500 feet of suitable or potentially suitable arroyo toad habitat outside of breeding season (July 16 to March

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		breeding season (July 16 to March 14) when feasible and shall be timed such that work is conducted when flows are at their lowest or are nonexistent. Prior to vegetation clearing and/or project construction within 500 feet of suitable habitat identified during protocol level surveys, arroyo toad exclusionary fencing shall be installed in surrounding work areas. The exclusionary fencing shall consist of fabric or plastic at least 2 feet high, staked to the ground with the lower 1 foot of material stretched at least two feet high and secured with a continuous line of gravel bags, and should otherwise be in accordance with the fencing protocols set forth in MM BR-2. In areas where no arroyo toads are documented during protocol-level surveys, then arroyo toad–specific exclusionary fencing is not required unless arroyo toads are observed. Prior to the commencement of vegetation clearing or other project-related activities within the arroyo toad exclusionary fencing, the CPUC-approved biologist shall conduct additional arroyo toad pre-construction surveys during the appropriate climatic conditions and the appropriate time of day or night to ensure no arroyo toads have entered the exclusion area. If arroyo toads are found within the exclusion area during pre-construction surveys, work shall cease and the USFWS and California Department of Fish and Wildlife shall be contacted to determine the appropriate next steps (e.g., wait for the animal to leave, conduct trapping procedures with agency approval, etc.). Additionally, no equipment shall be staged or stored within the stream channel, on sand and/or fine gravel bars, on intermittent shallow pools, on banks, or on sparsely vegetated sandy terraces or flats within 500 feet of suitable arroyo toad habitat.	14) when feasible, and time work to occur when flows are at their lowest or are nonexistent. • Install exclusionary fencing in surrounding work areas consisting of fabric or plastic at least 2 feet high, staked to the ground with the lower 1 foot of material stretched at least 2 feet high and secured with a continuous line of gravel bags. • Conduct additional arroyo toad pre-construction surveys during the appropriate climatic conditions and the appropriate time of day or night to ensure that no arroyo toads have entered the exclusion area. • Stage or store equipment away from the stream channel, sand and/or fine gravel bars, intermittent shallow pools, banks, or sparsely vegetated sandy terraces or flats within 500 feet of suitable arroyo toad habitat.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM BR-14: Open Trenches and Pipes	To prevent entrapment of wildlife, all steep-walled trenches, auger holes, open-ended piping, or other excavations shall be covered at the end of each day or completely fenced off at night in such a way that wildlife cannot enter and become trapped. Alternatively, for open trenches only, wildlife escape ramps shall be installed within the trench at intervals of no greater than 100 feet. These ramps shall have a maximum slope of 2:1. A CPUC-approved biological monitor shall inspect all trenches, auger holes, and other excavations a minimum of three times per day and immediately prior to backfilling. During working hours, all construction materials with open-ended piping, including but not limited to pipe sections and fencing supports, shall be left capped when not planned for use the same day or visually inspected by the CPUC-approved biological monitor three times per day for the presence of wildlife sheltering within them. During active construction, open piping and other staged materials where small animals may hide shall be inspected for wildlife by the applicants' biological monitor before the material is moved, buried, or capped. All non-special-status wildlife species found shall be safely removed and relocated out of harm's way, through the use of suitable tools such as a pool net when applicable. If special status wildlife becomes trapped, the appropriate wildlife agency shall be informed and consulted. If the trapped animal is injured, a recognized wildlife rescue agency shall be employed to remove the animal and address the injury. A list of recognized wildlife rescue agencies shall be provided to the biological monitors prior to the start of construction. For safety reasons, under no circumstance shall biological monitors enter open excavations.	• Cover all steep-walled trenches, auger holes, open-ended piping, or other excavations at the end of each day or completely fence them off at night in such a way that wildlife cannot enter and become trapped. • For open trenches only, install wildlife escape ramps within the trench at intervals of no greater than 100 feet and with a maximum slope of 2:1. • Inspect all trenches, auger holes, and other excavations a minimum of three times per day and immediately prior to backfilling, utilizing a qualified biological monitor. • Cap all construction materials with open-ended piping, including, but not limited to, pipe sections and fencing supports, when not planned for use the same day; or visually inspect them, utilizing the CPUC-approved biological monitor, three times per day for the presence of wildlife sheltering within them. • Inspect all materials for wildlife before they are moved, buried, or capped. • Safely remove and relocate out of harm's way all non-special-status species, through the use of suitable tools such as a pool net when applicable. • If special status wildlife becomes trapped, inform and consult the appropriate wildlife agency. • If the trapped animal is injured, employ a recognized wildlife rescue agency to remove the animal and address the injury.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
			• Provide a list of recognized wildlife rescue agencies to the biological monitors prior to the start of construction.
	MM BR-15: Bat Roost Impact Reduction	Prior to construction, a CPUC-approved qualified bat biologist shall conduct visual surveys to identify potential bat roosts (e.g., bridges, trees with large cavities or dense foliage, old structures) located within or immediately adjacent to (e.g., within 500 feet of) the right-of-way in areas where project activities have the potential to directly impact active roosts or disrupt bat breeding activities (e.g., blasting). Potential roost sites shall be searched for signs of bat use, such as urine streaking, grease marks and droppings, moth wings, and dead bats. Up to 14 days prior to construction, a qualified biologist shall conduct an emergent or acoustic bat survey within the previously identified potential roost sites that have signs of bat use. If the roost is located within a tree or structure that needs to be removed for project activities, the roost (e.g., palm trees) shall not be removed until it can be determined that the bats are no longer present. If a maternal roost or nursery is identified, no construction shall occur within 200 feet of the maternal roost or nursery during the pupping season (typically April 1 through August 31). Additionally, if a hibernation roost is identified, no construction shall occur within 200 feet of the occupied roost until the roost is vacated. If any occupied hibernating roost, maternity roost, or nursery is identified within 500 feet of the project area, the California Department of Fish and Wildlife shall be notified and consulted regarding any additional site- and species-specific protective measures that may be necessary to reduce impacts on bats (e.g., the need for additional monitoring).	• Conduct visual surveys utilizing a CPUC-approved qualified bat biologist to identify potential bat roosts (e.g., bridges, trees with large cavities or dense foliage, old structures) located within or immediately adjacent to (e.g., within 500 feet of) areas where project activities have the potential to directly impact active roosts or disrupt bat breeding activities (e.g., blasting). • Up to 14 days prior to construction, conduct an emergent or acoustic bat survey within the previously identified potential roost sites that have signs of bat use. • Determine appropriate actions if a roost is located.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM BR-16: Nesting Bird Management Plan	To address potential conflicts between construction activities and the activities of nesting birds in the project area, a Nesting Bird Management Plan shall be developed in consultation with the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and CPUC, and submitted to the CPUC for review and approval no less than 60 days prior to the planned start of construction. CPUC approval is required prior to the start of construction, and the plan shall be implemented during construction. The nesting bird management plan shall include measures and an adaptive management program to avoid or minimize impacts on special status, including bird species protected by the Migratory Bird Treaty Act, Federal Endangered Species Act, Bald and Golden Eagle Protection Act, or California Fish and Game Code during nesting periods that occur during project construction activities. Specifically, the nesting bird management plan shall contain the following provisions: • Minimum qualifications for surveyors, including lead avian biologist, avian biologists, and biological monitors. Qualifications should include minimum education and experience requirements appropriate to the role of the surveyor and species in the project area. • Appropriate survey timing, scope, and methods. If pre-construction survey protocols exist for a certain species, the plan shall identify the species-specific protocol that shall be followed and outline how compliance shall occur.	• Develop a Nesting Bird Management Plan in consultation with relevant agencies. • Include measures and an adaptive management program to avoid or minimize impacts on special status species; minimum qualifications for surveyors, including lead avian biologist, avian biologists, and biological monitors; a description of appropriate survey timing, scope, and methods and species-specific protocols; discussion of approved nest deterrent methods; protocols for monitoring and reporting during construction; protocol for determining whether a nest is active; protocol for documenting, reporting, and protecting active nests within construction areas; guidelines for determining appropriate and effective buffer distances; provisions for a buffer reduction process; requirements for site- and species/guild-specific and data-driven buffers. • Allow the CPUC-approved biological monitor to halt work if it is determined that active nesting would be disturbed by construction or restoration activities. • Consult appropriate agencies about bird-friendly night lighting and implement it as appropriate. • Conduct burrowing owl pre-construction surveys in accordance with current burrowing owl survey protocol identified by the California Department of Fish and Wildlife (CDFW) (i.e., CDFW's Staff Report on Burrowing Owl Mitigation [CDFG 2012]). If needed, prepare a Burrowing Owl Compensation Plan, in consultation with appropriate agencies.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Approved nest deterrent methods, including areas where vegetation shall be cleared for the purpose of deterring nesting. • Protocols for monitoring and reporting during construction; protocol for determining whether a nest is active; protocol for documenting, reporting, and protecting active nests within construction areas. • Guidelines for determining appropriate and effective buffer distances that shall account for specific project settings, bird species, stage of nesting cycle, and construction work type. The plan shall include provisions for a buffer reduction process, which shall include coordination with the appropriate wildlife agencies and the CPUC for reduction of the buffer of a special status species. • A requirement that the determination of appropriate and effective buffers between construction activities and identified nests shall be site- and species/guild-specific and data-driven, and shall not be based on generalized assumptions regarding all nesting birds. The determination or appropriate and effective buffers can be made in the field by the CPUC-approved lead avian biologist. • The CPUC-approved biological monitor has the authority to halt work if it is determined that active nesting would be disturbed by construction or restoration activities • The USFWS and CDFW shall be consulted about bird-friendly night lighting, which shall be implemented as appropriate. • Burrowing owl pre-construction surveys must be conducted in accordance with current burrowing owl survey protocol	• Notify appropriate agencies of all project-related bird injuries or mortalities within 12 hours of discovery, and follow agencies' recommended actions, if any. • Provide appropriate reporting of nesting bird activities, buffer reductions, and monitoring results on a regular basis.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		identified by the CDFW. If pre-construction burrowing owl surveys confirm the presence of burrowing owl, prior to the start of construction, a Burrowing Owl Compensation Plan shall be prepared in consultation with the CDFW and the CPUC, which must be consistent with mitigation guidelines in the staff report. The final Burrowing Owl Compensation Plan shall be reviewed and approved by the CPUC. The plan shall be implemented, as specified, throughout project construction and restoration. The plan shall describe the compensatory measures that shall be undertaken to address the loss of burrowing owl burrows within the project area. This shall include mitigation of permanent impacts on nesting, occupied, and satellite burrows and occupied burrowing owl habitat with (a) permanent conservation of vegetation communities comparable to or better than those in the impacted area, and (b) sufficiently large acreage for, and presence of, fossorial mammals. The CDFW, USFWS, and CPUC shall be notified of all project-related bird injuries or mortalities within 12 hours of discovery, and agencies' recommended actions, if any, shall be followed. Nesting bird activities, buffer reductions, and monitoring results shall be reported to the USFWS, CDFW, and CPUC on a regular basis.	
	MM BR-17: Coastal California Gnatcatcher Surveys	Prior to the start of construction, protocol-level pre-construction coastal California gnatcatcher surveys shall be conducted by a CPUC-approved qualified biologist in project areas where suitable habitat exists, in accordance with the Coastal California Gnatcatcher (*Polioptila californica californica*) Presence/ Absence Survey Protocol (USFWS 1997). In the event that coastal California gnatcatchers are observed during pre-	• Conduct protocol-level pre-construction coastal California gnatcatcher surveys utilizing a CPUC-approved qualified biologist where suitable habitat exists, in accordance with the Coastal California Gnatcatcher (Polioptila californica californica) Presence/Absence Survey Protocol (USFWS 1997).

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		construction surveys, a qualified biologist must identify the boundaries of the pair's territory and establish and maintain a minimum 500-foot (or a distance otherwise recommended by the U.S. Fish and Wildlife Service [USFWS]) exclusionary buffer by installing temporary flagging or fencing between the territory and construction activities. Immediately upon return from the field, the USFWS and CPUC shall be notified in the event that territories or nest sites are confirmed by surveys. If it is infeasible to maintain a buffer of 500 feet (or a distance otherwise approved by the USFWS) from active coastal California gnatcatcher territory, construction activities within or near these areas shall be performed outside the breeding and nesting season (approximately February 1 through August 30). Construction activities shall be conducted in coastal California gnatcatcher habitat during the breeding and nesting season if protocol-level surveys (conducted within one year prior to construction activities per protocol) confirm the absence of breeding gnatcatchers, or if the 500-foot protective buffer from all active gnatcatcher territories can be maintained.	• In the event that coastal California gnatcatchers are observed during pre-construction surveys, identify the boundaries of the territory and establish and maintain a minimum 500-foot exclusionary buffer (or a distance otherwise recommended by the U.S. Fish and Wildlife Service [USFWS]) by installing temporary flagging or fencing between the territory and construction activities. • Notify the USFWS and CPUC immediately in the event that territories or nest sites are confirmed by surveys.
	MM BR-18: Riparian Bird Impact Reduction	Prior to construction and within their breeding season (generally April 10 to August 31), protocol-level surveys for least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax trailii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) shall be completed in areas of suitable or potentially suitable habitat located within 500 feet of project workspaces. Surveys shall be conducted by a qualified biologist approved by the CPUC in accordance with the survey protocol for least Bell's vireo (USFWS 2001), southwestern willow flycatcher (Sogge et	• Conduct pre-construction protocol-level surveys for least Bell's vireo (*Vireo bellii pusillus*), southwestern willow flycatcher (*Empidonax trailii extimus*), and western yellow-billed cuckoo (*Coccyzus americanus occidentalis*) in areas of suitable or potentially suitable habitat located within 500 feet of project workspaces utilizing a qualified biologist approved by the CPUC and in accordance with the appropriate survey protocol.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		al. 2010), and western yellow-billed cuckoo (Halterman et al. 2015). In the event that territories or nest sites are confirmed for any of these three species, the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) shall be notified within 24 hours of the biologist returning from the field. If individuals or their nests are observed, biologists shall establish and maintain a minimum 500-foot (or a distance otherwise recommended by USFWS and CDFW) exclusionary buffer by installing temporary flagging or fencing between the nest territory and construction activities. If it is infeasible to maintain a buffer of 500 feet (or a distance otherwise approved by USFWS and CDFW) from an active territory, construction activities within or near these areas shall be performed outside the breeding and nesting season for the species.	• Notify the appropriate agencies in the event that territories or nest sites are confirmed for any of these three species within 24 hours of returning from the field. • Establish and maintain a minimum 500-foot exclusionary buffer (or other distance recommended by appropriate agencies) by installing temporary flagging or fencing between the nest territory and construction activities. • If it is infeasible to maintain a buffer of 500 feet (or a distance otherwise approved by the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife) from an active territory, perform activities outside the breeding and nesting season for the species.
	MM BR-19: Protection of Special Status Species	The take projected to occur as a result of the proposed project within the SDG&E Subregional Natural Community Conservation Plan (NCCP) area is nearing the impact threshold initially authorized under the NCCP, and therefore, take authorization for all the activities associated with the proposed project cannot be covered by the current NCCP. SDG&E is pursuing an alternative agreement with the USFWS and CDFW to obtain take authority and to mitigate project-related impacts. If an agreement is reached with these agencies prior to the start of construction, that agreement shall be in effect for the duration of the project or until the agreement expires. If the NCCP is not utilized, if the NCCP has insufficient coverage, or if an agreement with the USFWS and CDFW is not finalized, during construction and operation, the same or a greater level of species-specific avoidance, mitigation, restoration, and	• Use the same or greater level of species-specific avoidance, mitigation, restoration, and compensation measures that is noted within the SDG&E Subregional Natural Community Conservation Plan.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		compensation measures shall be used as would have been required under the SDG&E Subregional NCCP.	
Cultural, Paleontological, and Tribal Cultural Resources	MM CR-1 Inventory and Evaluation of Cultural Resources	MM CR-1a: Inventory and Evaluate Cultural Resources in Final API. Prior to construction and all other ground disturbing activities, an inventory shall be conducted and submitted for approval by the CPUC. The nature and extent of this inventory shall be determined by the CPUC and shall be based on project engineering specifications. As part of the inventory, field surveys of sufficient nature and extent to identify cultural resources that would be affected by construction and operation shall be conducted. At a minimum, field surveys shall be conducted along newly proposed access roads, new construction yards, and any other projected areas of potential ground disturbance outside of the previously surveyed potential impact areas. As part of the inventory report, the significance of all affected cultural resources shall be evaluated on the basis of surface observations, and recommendations with regard to their eligibility for the California Register of Historic Resources (CRHR) or local registers shall be made. Preliminary determinations of CRHR eligibility will be made by the CPUC. MM CR-1b: Avoid and Protect Potentially Significant Resources. On the basis of preliminary CRHR eligibility assessments (MM CR-1a), the CPUC may require the relocation of the line, ancillary facilities, or temporary facilities or work areas, if any, where relocation would avoid or reduce damage to cultural resource or tribal cultural resource values. Where operationally	• Inventory the full extent of areas that may be subject to disturbance. • Provide evaluations of all newly identified resources. • Make recommendations as to the California Register of Historic Resources status. • Develop a Historical Resources Treatment Plan. • Designate environmentally sensitive areas around known cultural resources; maintain confidentiality of actual locations. • Provide protective barrier(s) as appropriate. • Instruct personnel how to address the environmentally sensitive areas through an approved training program. • Where appropriate, develop a data recovery program when impacts cannot be avoided. • Provide all associated reporting in accordance with accepted standards. • Develop a monitoring program to be approved by all relevant agencies.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		feasible, potentially CRHR-eligible resources or tribal cultural resources shall be protected from direct project impacts by project redesign. Where the CPUC decides that potentially CRHR-eligible cultural resources and tribal cultural resources cannot be protected from direct impacts by project redesign, additional studies shall be undertaken to evaluate the cultural resources' CRHR eligibility and recommend further mitigation treatment. The nature and extent of this evaluation shall be determined by the CPUC and shall be based on final project engineering specifications. Evaluations will be based on surface remains, subsurface testing, and archival and ethnographic resources and will be made within the framework of the historic context and important research questions of the project area. The CUPC, in consultation with the consulting Native American tribes, shall decide the appropriate actions to mitigate impacts on tribal cultural resources. Results of those evaluation studies, recommendations, and consultations for mitigation of project effects shall be incorporated into a Historical Resources Treatment Plan (HRTP) consistent with MM CR-1c. All potentially CRHR-eligible resources (as determined by the CPUC) and tribal cultural resources that will not be affected by direct impacts, but are within 50 feet of direct impact areas, shall be designated as Environmentally Sensitive Areas (ESAs). Protective fencing, or other markers, at the CPUC's discretion, shall be erected and maintained, unless existing physical barriers preclude the use of ESA fencing, to protect ESAs from inadvertent trespass for the duration of construction in the vicinity. Construction personnel and equipment shall be instructed on how to avoid ESAs. ESAs shall not be identified specifically as cultural resources.	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		MM CR-1c: Historical Resources Treatment Plan. Upon approval of the inventory report and the CRHR eligibility evaluations by the CPUC, consistent with MM CR-1a and CR-1b, an HRTP shall be prepared and submitted for approval for CRHR-eligible cultural resources and tribal cultural resources. Treatment of cultural resources and tribal cultural resources shall follow the procedures established by state and local regulations. Avoidance, recordation, and/or data recovery will be used as mitigation alternatives. The HRTP shall be submitted to the CPUC for review and approval. As part of the HRTP, a research design and a scope of work shall be prepared for evaluation of cultural resources and for data recovery or additional treatment of CRHR-eligible sites or tribal cultural resources that cannot be avoided. Data recovery of most resources would consist of sample excavation and/or surface artifact collection, as well as site documentation. A possible exception would be a site or tribal cultural resource where burials, cremations, or sacred features are discovered that cannot be avoided. The HRTP shall define and map all known CRHR-eligible resources and tribal cultural resources and shall identify the cultural values that contribute to their CRHR eligibility and significance to the affiliated tribes. A cultural resources protection plan shall be included that details how CRHR-eligible resources and tribal cultural resources will be avoided and protected during construction. Measures shall include, at a minimum, designation and marking of ESAs, archaeological monitoring, personnel training, and effectiveness reporting. The plan shall detail what measures will be used; how, when, and where they will be implemented; and how	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		protective measures and enforcement will be coordinated with construction personnel. The HRTP shall also define any additional areas that are considered to be of high sensitivity for discovery of buried CRHR-eligible cultural resources, including burials, cremations, or sacred features. The HRTP shall detail provisions for monitoring construction in these high-sensitivity areas. It shall also detail procedures for halting construction; making appropriate notifications to agencies, officials, and Native Americans; and assessing CRHR eligibility in the event that unknown cultural resources are discovered during construction. For all unanticipated cultural resource and tribal cultural resource discoveries, the HRTP shall detail the methods, consultation procedures, and timelines for assessing CRHR eligibility, formulating a mitigation plan, and implementing treatment. Mitigation and treatment plans for unanticipated discoveries shall be approved by the CPUC, appropriate local governments, and Native American consulting tribes prior to implementation. The HRTP shall include provisions for analysis of data in a regional context; reporting of results within one year of completion of field studies; curation of artifacts (except from private land) and data (maps, field notes, archival materials, recordings, reports, photographs, and analysts' data) at a facility that is approved as meeting 36 CFR 79 requirements for repositories; and dissemination of reports to local and state repositories, libraries, and interested professionals. The HRTP shall specify that archaeologists and other discipline specialists conducting the studies meet the Secretary of the Interior's Standards (per 36 CFR 61).	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		MM CR-1d: Conduct Data Recovery. If CRHR-eligible resources, as determined by the CPUC, cannot be protected from direct impacts, data-recovery investigations shall be conducted to reduce adverse effects on the characteristics of each property that contribute to its CRHR eligibility. For sites eligible under Criterion 4, significant data would be recovered through excavation and analysis. For historical resources eligible under Criteria 1, 2, or 3, data recovery may include historical documentation, photography, collection of oral histories, architectural or engineering documentation, preparation of a scholarly work, or some form of public awareness or interpretation. Data gathered during the evaluation phase studies and the research design element of the HRTP shall guide plans and data thresholds for data recovery; treatment will be based on the resource's research potential beyond that realized during resource recordation and evaluation studies. If data recovery is necessary, sampling for data recovery excavations will follow standard statistical sampling methods, but sampling will be confined, as much as possible, to the direct impact area. Data-recovery methods, sample sizes, and procedures shall be detailed in the HRTP consistent with MM CR-1c and implemented only after approval by the CPUC. Following any field investigations required for data recovery, the field studies and findings shall be documented, including an assessment of whether adequate data were recovered to reduce adverse project effects, in a brief field closure report. The field closure report shall be submitted to the CPUC for review and approval, as well as to appropriate state repositories and local governments. Construction work within 100 feet of historical	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		resources that require data-recovery fieldwork shall not begin until authorized by the CPUC. MM CR-1e: Monitor Construction. A qualified archaeologist shall conduct archaeological monitoring during subsurface construction disturbance at all locations identified in the HRTP. Full-time monitoring shall occur when ground-disturbing activities take place at all archaeological high-sensitivity areas described in the HRTP and at all cultural resource ESAs. These locations and their protection boundaries shall be defined and mapped in the HRTP. Intermittent monitoring may occur in areas of moderate archaeological sensitivity at the discretion of the CPUC. Archaeological monitoring shall be conducted by a qualified archaeologist familiar with the types of historical and prehistoric resources that could be encountered within the project area, and under direct supervision of a principal archaeologist that meets the national standards in archaeology set by the *Secretary of Interior's Standards and Guidelines for Archaeology and Historic Preservation (per 36 CFR 61)*. The principal archaeologist and archaeological monitors shall be approved by the CPUC. A Native American monitor may be required at culturally sensitive locations specified by the CUPC following government-to-government consultation with Native American tribes. The monitoring plan in the HRTP shall indicate the locations where Native American monitors will be required and shall specify the tribal affiliation of the required Native American monitor for each location. Any required Native American monitors shall be retained and scheduled. Compliance with and effectiveness of the cultural resources monitoring plan shall be documented by the applicants in a monthly report to be submitted to the CPUC	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		for the duration of project construction. In the event that cultural resources are not properly protected by ESAs, all project work in the immediate vicinity shall be diverted by the archaeological monitor until authorization to resume work has been granted by the CPUC. The CPUC shall be notified of any damage to cultural resource ESAs and consulted to mitigate damages and to increase effectiveness of ESAs. At the discretion of the CPUC, such mitigation may include, but not be limited to modification of protective measures, refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection. All cultural resources recovered will be documented on California Department of Parks and Recreation Site Forms to be filed with the CHRIS South Coastal Information Center (SCIC) at San Diego State University. A preliminary draft report shall be submitted within three months of the end of the project construction activity. The report shall be prepared by a qualified archaeologist and include documentation and interpretation of resources recovered. Interpretation shall include full evaluation of the eligibility of the resources identified for listing on the CRHR. All surface and subsurface artifacts and features are to be mapped and described in the report. The consulting tribes shall be given an opportunity to provide comments for inclusion in the final report. The final report shall be submitted to the CPUC within six months of the end of the project construction activity. The final report shall be filed at the CHRIS-SCIC. One copy of the final report shall be provided to the consulting tribes.	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		MM CR-1f: Train Construction Personnel. All construction personnel shall be trained regarding the recognition of possible buried cultural remains and protection of all cultural resources and tribal cultural resources, including prehistoric and historic resources during construction, prior to the initiation of construction or ground-disturbing activities. Training for all construction personnel shall be completed. Training shall inform all construction personnel of the procedures to be followed upon the discovery of archaeological materials, including Native American burials. Training shall inform all construction personnel that ESAs must be avoided and that travel and construction activity must be confined to designated roads and areas. All personnel shall be instructed that unauthorized collection or disturbance of artifacts or other cultural materials on or off the right-of-way by the applicants, their representatives, or employees will not be allowed. Violators shall be subject to prosecution under the appropriate state and federal laws, and violations shall be grounds for removal from the project. Unauthorized resource collection or disturbance may constitute grounds for the issuance of a stop work order. The following issues shall be addressed in training or in preparation for construction: • All construction contracts shall include clauses that require construction personnel to attend training so they are aware of the potential for inadvertently exposing buried archaeological deposits, their responsibility to avoid and protect all cultural resources, and the penalties for collection, vandalism, or inadvertent destruction of cultural resources.	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• A background briefing shall be provided for supervisory construction personnel describing the potential for exposing cultural resources, the location of any potential ESA, and procedures and notifications required in the event of discoveries by project personnel or archaeological monitors. Supervisors shall also be briefed on the consequences of intentional or inadvertent damage to cultural resources. Supervisory personnel shall enforce restrictions on collection or disturbance of artifacts or other cultural resources. • Upon discovery of potential buried cultural materials by archaeologists or construction personnel, or damage to an ESA, work in the immediate area of the find shall be diverted and the applicants' archaeologist notified. Once the find has been inspected and a preliminary assessment made, the applicants' archaeologist shall consult with the CPUC, as appropriate, to make the necessary plans for evaluation and treatment of the find(s) or mitigation of adverse effects on ESAs.	
	MM CR-2 Native American Consultation and Human Remains	MM CR-2a: Native American Consultation. Consultation with Native American tribes shall continue through construction of the proposed project, pursuant to California Public Resources Code (PRC) Section 21074. Consultation shall identify and assess or mitigate the impact of the proposed project on tribal cultural resources and traditional cultural properties or other resources of Native American concern. In addition, requested information and updates during initiation and construction of the proposed project shall be provided to the consulting tribes. This information may include further developments in the proposed project, copies of site records,	• Conduct consultation with consulting tribes throughout project initiation and construction. • Assist the relevant agencies through issuance of site records, survey reports, etc. • Comply with all appropriate regulations (federal, state, and local) regarding cultural resources and human remains.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		survey reports, or other environmental documents. Assistance and support shall be provided to the CPUC in all required government-to-government consultations with Native Americans and appropriate agencies and commissions, if requested by the CPUC. All activities and required studies shall comply with state regulations and be implemented as directed by the CPUC. MM CR-2b: Human Remains. In the event that human remains are encountered during ground-disturbing activities, all work shall be diverted from the area of the discovery and the CPUC shall be informed immediately. The County Coroner shall be contacted per the PRC. Should the remains be identified as Native American, the Coroner shall contact the Native American Heritage Commission, who shall notify the most likely descendent (MLD). The MLD has 48 hours after being granted access to the site to provide recommendations to the landowner, or representative, for the treatment or disposition, with proper dignity, of the human remains and grave goods. All actions related to the treatment of human remains shall be implemented in accordance with the California Health and Safety Code Section 7050.5 and PRC Section 5097.98.	
	MM CR-3: Protect and Monitor CRHR-eligible Properties	A long-term plan shall be designed and implemented to protect California Register of Historic Resources (CRHR)-eligible resources and tribal cultural resources from direct impacts of project operation and maintenance and from indirect impacts, such as erosion, that result from the proposed project. The plan shall be developed in consultation with the CPUC to design measures that will be effective against project maintenance impacts and project-related vehicular impacts. The plan shall also include protective measures for CRHR-eligible resources	• Develop a long-term plan in consultation with appropriate agencies/tribes to protect CRHR-eligible resources and tribal cultural resources from direct impacts of project operation and maintenance and from indirect impacts, such as erosion, that result from the proposed project. • Monitor cultural resources on an annual basis for five years following project construction.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		and tribal cultural resources within the proposed project that will experience operational and access impacts. The proposed measures may include restrictive fencing or gates, permanent access road closures, signage, stabilization of erosion, site capping, site patrols, and interpretive/educational programs, or other measures that will be effective for protecting CRHR-eligible resources and tribal cultural resources. The plan shall be property specific and shall include provisions for monitoring and reporting its effectiveness and for addressing inadequacies or failures that result in damage to CRHR-eligible resources and tribal cultural resources. The plan shall be submitted to the CPUC for review and approval at least 30 days prior to project operation. Monitoring of selected sites shall be conducted annually by a professional archaeologist for a period of five years. Monitoring shall include inspection of all site loci and defined surface features, documented by photographs from fixed photo-monitoring stations and written observations. A monitoring report shall be submitted to the CPUC within one month following the annual resource monitoring. The report shall indicate any historical resources or tribal cultural resources that have been impacted by erosion or vehicle or maintenance impacts. For resources that have been impacted, recommendations shall be provided for mitigating impacts and for improving protective measures. After the fifth year of resource monitoring, the CPUC, as appropriate, will evaluate the effectiveness of the protective measures and the monitoring program. Based on that evaluation, the CPUC may require revisions or refinements of the protective measures, or alter the monitoring protocol or schedule.	• Provide for protocols if adverse effects/impacts are found. • Submit appropriate reporting/documentation.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		If the annual monitoring program identifies adverse effects to CRHR-eligible resources or tribal cultural resources from operation or long-term presence of the project, or if, at any time, adverse effects are noted, the CPUC shall be notified immediately and mitigation for adverse changes shall be implemented, as directed by the CPUC. At the discretion of the CPUC, such mitigation may include, but not be limited to modification of protective measures, refinement of monitoring protocols, data-recovery investigations, or payment of compensatory damages in the form of non-destructive cultural resources studies or protection.	
	MM CR-4: Preconstruction Reporting	A supplemental Paleontological Resources Technical Report will be provided by the principal paleontologist if areas outside those previously studied are included in the final design. A principal paleontologist is defined as an individual with a graduate degree in paleontology, geology, or related science (e.g., biology, physical anthropology, but excluding anthropology or archaeology) and a minimum of five years of experience as a paleontology principal investigator. This document shall include a paleontological resources records search from the San Diego Natural History Museum (SDNHM), a literature review, a paleontological survey of any potentially fossiliferous units in the alternative, and updated geologic and sensitivity maps. The supplemental Paleontological Resources Technical Report shall be provided to the CPUC for review and approval prior to the start of construction. A Paleontological Mitigation Program shall also be provided by the principal paleontologist and can either be included in the	• Complete supplemental Paleontological Resources studies and associated reporting for any areas not previously accounted for prior to construction. • Develop a paleontological mitigation plan prior to construction.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		supplemental Paleontological Resources Technical Report or provided as a separate document. The Paleontological Mitigation Program shall include the following: • Information on the proposed staff and their qualifications; • General fieldwork and laboratory methods proposed; • A research design covering marine invertebrates and the qualifications for their scientific significance, curation requirements; • A curation agreement with the SDNHM; and • Monitoring reporting requirements. The Paleontological Mitigation Program shall be provided to the CPUC for review and approval prior to start of construction.	
	MM CR-5: Preconstruction Activities	The principal paleontologist or their designee should attend the pre-construction meeting to consult with the grading and excavation contractors concerning excavation schedules, areas of sensitivity, paleontological mitigation measures, and safety issues. The principal paleontologist shall prepare a Paleontological Resources Awareness Training that covers applicable environmental laws and regulations, the potential resources of the project, and the measures to be taken in the event of a discovery. The Paleontological Resources Awareness Training should be incorporated into the Worker Environmental Awareness Program. Attendance is mandatory, and trainings	• Prepare a Paleontological Resources Awareness Training that covers applicable environmental laws and regulations, the potential resources of the project, and the measures to be taken in the event of a discovery. • Require attendance for all personnel. • Submit attendance rosters to appropriate agencies. • Issue appropriate identification for those completing training.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		shall be given both prior to the start of construction for all applicant, contractor, and subcontractor personnel, as well as on an as-needed basis for all new personnel becoming involved on site or off site in positions that may require such project knowledge. Attendance rosters shall be submitted to the paleontology team and the CPUC, and project Worker Environmental Awareness Program hard-hat stickers issued.	
	MM CR-6: Paleontological Resources Monitoring and Recovery	Monitoring and recovery activities shall be completed in accordance with the Paleontological Mitigation Program. Paleontological monitoring will be conducted by an individual who has more than one year of paleontological monitoring and recovery experience. The paleontological monitor will work under the direction of a principal paleontologist. Formations given a moderate or high paleontological resource potential ranking will require full-time monitoring for all excavation into previously undisturbed sediments by a paleontological monitor. If at a later date the principal paleontologist determines that monitoring can be reduced or eliminated in a formation or a particular area of the project, this decision can be incorporated into planning of future monitoring activities. Formations given a low or marginal paleontological resource potential ranking may be monitored on a part-time basis at the discretion of the principal paleontologist. Areas with zero paleontological sensitivity will not require monitoring. The paleontological monitor has the authority to temporarily divert or halt grading in the vicinity of any potential paleontological resource finds to allow recovery of fossil remains in a timely manner. As significance is often difficult to determine in the field, the principal paleontologist and paleontological monitor shall take into consideration the significance criteria as	• Conduct monitoring and recovery activities in accordance with the Paleontological Mitigation Program. • Consult with agencies where appropriate, depending on the paleontological resources identified.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		per the California Environmental Quality Act, the expanded criteria, and the consideration of Taxon Abundance and Representative Samples. Invertebrate and plant fossils will be assessed on a case by case basis. All identifiable vertebrate remains shall be collected. Larger finds or bone beds will require special measures and may require temporary closure of the project area for fossil and data collection. The principal paleontologist shall consult with appropriate parties on alternatives in such instances. Alternatives may include collection, preservation in place, or other measures depending on the situation.	
	MM CR-7: Paleontological Resources Unanticipated Discoveries	A paleontological monitor also shall be on call to respond in the event of unanticipated discoveries. If unanticipated fossils are discovered, all work will halt in that area, and a 50-foot buffer zone will be maintained until the paleontological team can be notified and can evaluate the find. Vertebrate fossils that are identifiable will be recovered. Invertebrate fossils will be sampled as directed by the principal paleontologist.	• Provide an on-call paleontological monitor. • In the case of a discovery, follow all established protocols.
	MM CR-8: Paleontological Resources Treatment and Reporting	Fossils will be cleaned, repaired, sorted, and cataloged as part of the Paleontological Mitigation Program. Prepared fossils that meet significance criteria, along with copies of all pertinent field notes, photos, and maps, shall be curated at the San Diego Natural History Museum (SDNHM). A final summary report outlining the results of the paleontological mitigation program will be prepared following completion of the paleontological monitoring efforts. This report shall include discussions of the methods used, stratigraphic section(s) exposed, fossils collected, and significance of	• Clean, repair, sort, and catalog fossils per the Paleontological Mitigation Program. • Provide all associated reporting.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		recovered fossils. Copies of the final summary report shall be provided to the applicants, the CPUC, and the SDNHM.	
Geology, Soils, and Minerals	MM GEO-1: Geotechnical Investigation and Engineering and Design Measures	A site-specific geotechnical investigation shall be conducted for all areas underlying the proposed project components, and a geotechnical report shall be prepared documenting the results of the investigation. The geotechnical investigation shall assess the potential for liquefaction, landslides, lateral spreading, seismic ground shaking, and expansive soil. The geotechnical report shall identify engineering and design measures to modify/strengthen the project design, as determined appropriate by a California-licensed geotechnical engineer and/or certified engineering geologist, in order to mitigate against hazards associated with liquefaction, landslides, lateral spreading, seismic ground shaking, and expansive soils under the project area. Engineering and design measures used to minimize impacts may include, but are not limited to: • *Liquefaction:* stabilization of fills, retaining walls, slope coverings, removal of unstable materials, avoidance of highly unstable areas, construction of pile foundations, and/or ground improvements of liquefiable zones. • *Landslides and lateral spreading:* retaining walls, excavation of unstable materials, and/or avoidance of highly unstable areas. • *Seismic ground shaking:* energy dissipating devices, bracing, and/or bolting of foundations. • *Expansive soil:* excavation of expansive soil, draining water away from expansive soils, and/or ground-treatment processes.	• Prepare a site-specific geotechnical investigation for all areas underlying the proposed project components and a geotechnical report documenting the results of the investigation. • Assess the potential for liquefaction, landslides, lateral spreading, seismic ground shaking, and expansive soil. • Identify engineering and design measures to modify/strengthen the project design, as determined appropriate by a California-licensed geotechnical engineer and/or certified engineering geologist, in order to mitigate hazards associated with liquefaction, landslides, lateral spreading, seismic ground shaking, and expansive soils under the project area. • Design the project using industry standards for seismic-resistant design in liquefaction-prone areas and incorporate all of the engineering and design measures identified in the geotechnical report. • Provide documentation to the appropriate agencies prior to construction.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		The project shall be designed using industry standards for seismic-resistant design in liquefaction-prone areas and shall incorporate all of the engineering and design measures identified in the geotechnical report. Documentation shall be provided to the CPUC prior to construction that demonstrates that the project has been designed to industry standards for seismic-resistant design in liquefaction-prone areas and that the engineering and design measures identified in the geotechnical report have been incorporated into the project design.	
	MM GEO-2: Erosion and Sediment Control Plan	To ensure the stabilization of topsoil during grading and excavation activities and prevent erosion during project operation and maintenance, an Erosion and Sediment Control Plan (ESCP) shall be developed and implemented, which shall include a Stormwater Pollution Prevention Plan (SWPPP) (as required for obtaining coverage under the National Pollutant Discharge Elimination System Construction General Permit) and additional best management practices for erosion and sediment control measures to reduce the loss of topsoil, ensure that topsoil is salvaged during grading, and prevent storm water pollution. These measures shall include, but are not limited to, installation of trench plugs, water bars, and outlets. The ESCP shall require, at the completion of construction activities, further stabilization of disturbed soils by seeding and implementing additional measures outlined in the SWPPP. Site-specific erosion control drawings shall be developed in areas where cross-country construction occurs on slopes exceeding 33 percent; where construction crosses landslides; where construction in cross-country areas crosses soil ranked by the Natural Resources Conservation Service (NRCS) as posing a	• Develop and implement an Erosion and Sediment Control Plan and a Stormwater Pollution Prevention Plan (SWPPP). • Utilize best management practices for erosion and sediment control measures to reduce the loss of topsoil, ensure that topsoil is salvaged during grading, and prevent storm water pollution. • Require, at the completion of construction activities, further stabilization of disturbed soils by seeding and implementing additional measures outlined in the SWPPP. • Develop site-specific erosion control drawings in areas where cross-country construction occurs on slopes exceeding 33 percent; where construction crosses landslides; where construction in cross-country areas crosses soil ranked by the Natural Resources Conservation Service (NRCS) as posing a severe erosion hazard, including access and patrol roads; and

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		severe erosion hazard, including access and patrol roads; and where ground-disturbing activities will occur on soils in any unpaved areas ranked by the NRCS as posing a severe erosion hazard. The erosion control drawings shall show the approximate location of trench plugs, water bars, and outlets. Trench plugs shall consist of sakrete, foam, or functional equivalent and will be spaced at regular intervals. Waterbars shall be installed below the trench plugs and extend to the edge of the right-of-way or beyond to a stabilized area that will convey flow away from disturbed areas. In addition, the drawings shall include stabilization measures, such as rolled erosion control products and seed, as needed. The spacing of the trench plugs and waterbars, as well as the need for additional stabilization measures, shall be confirmed in the field by an erosion control specialist. The ESCP shall identify the frequency with which all SWPPP-mandated and additional erosion and sediment control measures will be inspected to ensure that they are functioning to minimize erosion and sedimentation impacts on water quality but inspections shall occur no less than once every 30 days or as specified by a California Certified SWPPP Developer. Erosion and sediment control measures shall be maintained through the completion of project construction, but the ESCP shall also identify erosion control features implemented during the construction phase that shall remain in place during operations and maintenance, as needed, to address soil erosion on project access roads.	where ground-disturbing activities will occur on soils in any unpaved areas ranked by the NRCS as posing a severe erosion hazard. • Identify the frequency with which all SWPPP-mandated and additional erosion and sediment control measures will be inspected to ensure that they are functioning to minimize erosion and sedimentation impacts on water quality, but inspections shall occur no less than once every 30 days or as specified by a California Certified SWPPP Developer. • Maintain all measures through the completion of project construction, but identify erosion control features implemented during the construction phase that remain in place during operations and maintenance, as needed, to address soil erosion on project access roads.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
Hazards and Hazardous Materials	MM HZ-1: Hazardous Materials and Waste Management Program Plan	A project-specific Hazardous Materials and Waste Management Program Plan for the construction phase of the project shall be developed and implemented. Prior to construction, the plan shall be submitted to the CPUC for review and approval. The plan shall include practices that are consistent with the California Title 8 and California Occupational Safety and Health Administration regulations. The plan shall include a list of the hazardous materials that will be present on site during construction, information regarding their storage, use, transportation, and disposal, and will outline steps that would be implemented if a hazardous material spill occurs. The plan shall additionally outline steps that would be implemented if contaminated soils or groundwater are encountered. The plan shall also include a list of spill response materials, the location of these materials at the project site during construction, and a list of fire-suppression devices. The objective of the plan shall be to minimize risk to the public and to the environment resulting from exposure to and disturbance of hazardous materials, contaminated groundwater and contaminated soils. At a minimum, the plan shall include procedures for the following steps: • Identifying potentially impacted soil and groundwater; • Establishing a no-work zone for potentially contaminated areas; • Assessing potentially impacted soil and groundwater; • Notifying appropriate agencies, • Cleanup procedures;	• Develop a project-specific Hazardous Materials and Waste Management Program Plan for the construction phase of the project. • Include practices that are consistent with the California Title 8 and California Occupational Safety and Health Administration regulations; a list of the hazardous materials that will be present onsite during construction, information regarding their storage, use, transportation, and disposal; steps that would be implemented if a hazardous material spill occurred or if contaminated soils or groundwater were encountered; a list of spill response materials, the location of these materials at the project site during construction, and a list of fire-suppression devices; stated objectives to minimize risk to the public and to the environment resulting from exposure to and disturbance of hazardous materials, contaminated groundwater, and contaminated soils. • Under the supervision of a California licensed registered geologist or professional engineer, monitor soil conditions during all earthmoving activities.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Impacted soil and groundwater storage; • Verification sampling; and • Impacted soil and groundwater characterization and disposal. During construction an appropriately trained construction personnel, under the supervision of a California licensed registered geologist or professional engineer, shall be present to monitor soil conditions during all earthmoving activities. If potentially contaminated soils are generated or encountered during construction, the applicant would implement the Hazardous Materials and Waste Management Plan to assess the soils or groundwater and to determine appropriate procedures based on the nature of the contamination.	
	MM HZ-2: Hazard Training Plan and Health and Safety Plan	A project-specific Hazard Training Plan and a project-specific Health and Safety Plan shall be developed and implemented. Programs will be developed and implemented that address hazards training, and site safety planning that will include all project related hazardous materials and that also addresses unexploded ordnances.	• Develop a project-specific Hazard Training Plan and a project-specific Health and Safety Plan. • Ensure that the program addresses hazards training, site safety planning, project related hazardous materials, and unexploded ordinances.
	MM HZ-3: Pipeline Engineering Assessment of Line 3602	An Independent Pipeline Engineering Assessment of Line 3602 shall be completed prior to construction. A third-party Independent Pipeline Engineering Assessment shall be conducted by a professional authority in natural gas pipeline engineering; who is independent of the applicant. The assessment will evaluate the following engineering components of the pipeline: 1) failure frequency; 2) risk assessment; 3) outflow analysis and placement of valves; 4) fate and transport; 5) detection of leaks; 6) prevention of leaks; 7) protective design	• Conduct an independent engineering assessment prior to construction. • Address the following: 1) failure frequency; 2) risk assessment; 3) outflow analysis and placement of valves; 4) fate and transport; 5) detection of leaks; 6) prevention of leaks; 7) protective design measure; 8) potential mitigation measures; 9) conclusions; and 10) recommendations.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		measure; 8) potential mitigation measures; 9) conclusions; and 10) recommendations. The assessment will be presented in a final report that includes design recommendations to be incorporated in the final design that could potentially reduce the impact of an upset or accident. The CPUC shall review the Independent Pipeline Engineering Assessment and any applicant-accepted design or mitigation measures prior to any approval of the project.	
	MM HZ-4: Hazard and Risk Analysis of Line 3602	An Independent Hazard and Risk Analysis of Line 3602 shall be completed prior to construction. A third-party Independent Hazard and Risk Analysis of Line 3602 would be conducted by a professional authority in hazard and risk analysis of natural gas pipelines; who is independent of the applicant. The risk assessment shall evaluate the following risk-related components and aspects of the pipeline: 1) the overall public and environmental risk assessment methodology; 2) characteristics of the natural gas being transported; 3) transport and fate of released pressurized natural gas; 4) hazards associated with the release of pressurized natural gas; 5) consequences of a release of pressurized natural gas; 6) determination of an acceptable significance criteria for risks associated with mortality, injury, property damage and financial loss; 7) calculation of risks associated with mortality, injury, property damage and financial loss; 8) evaluation of any hazard or risk to the environment or to local ecology including wildfires (excluding atmospheric); 9) potential mitigation measures; 10) conclusions; and 11) recommendations. The assessment will be presented in a final report that includes hazard and risk conclusions. The CPUC shall review the Independent Pipeline Hazard and Risk Analysis prior to any approval of the project	• Conduct an independent Hazard and Risk Analysis that includes: 1) the overall public and environmental risk assessment methodology; 2) characteristics of the natural gas being transported; 3) transport and fate of released pressurized natural gas; 4) hazards associated with the release of pressurized natural gas; 5) consequences of a release of pressurized natural gas; 6) determination of an acceptable significance criteria for risks associated with mortality, injury, property damage and financial loss; 7) calculation of risks associated with mortality, injury, property damage and financial loss; 8) evaluation of any hazard or risk to the environment or to local ecology including wildfires (excluding atmospheric); 9) potential mitigation measures; 10) conclusions; and 11) recommendations.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM HZ-5: Risk and Hazards Analysis of the De-rating of Line 1600	An Independent Hazard and Risk Analysis of the modification and de-rating of Line 1600 shall be completed prior to modification and de-rating. A third-party Independent Hazard and Risk Analysis shall be conducted by a professional authority in hazard and risk analysis of existing natural gas pipelines; who is independent of the applicant. The risk assessment shall evaluate the following risk-related components and aspects of the pipeline: 1) the overall public and environmental risk assessment methodology; 2) characteristics of the natural gas being transported; 3) transport and fate of released pressurized natural gas; 4) hazards associated with the release of pressurized natural gas; 5) Consequences of a release of pressurized natural gas; 6) determination of an acceptable significance criteria for risks associated with mortality, injury, property damage and financial loss; 7) Calculation of risks associated with mortality, injury, property damage and financial loss; 8) evaluation of any hazard or risk to the environment or to local ecology (excluding atmospheric); 9) potential mitigation measures; 10) conclusions; and 11) recommendations. The assessment will be presented in a final report that includes hazard and risk conclusions. The CPUC shall review the Independent Pipeline Hazard and Risk Analysis prior to any approval of the project modification and de-rating activities.	• Conduct an independent hazard and risk analysis of modification and de-rating activities that includes: 1) the overall public and environmental risk assessment methodology; 2) characteristics of the natural gas being transported; 3) transport and fate of released pressurized natural gas; 4) hazards associated with the release of pressurized natural gas; 5) Consequences of a release of pressurized natural gas; 6) determination of an acceptable significance criteria for risks associated with mortality, injury, property damage and financial loss; 7) Calculation of risks associated with mortality, injury, property damage and financial loss; 8) evaluation of any hazard or risk to the environment or to local ecology (excluding atmospheric); 9) potential mitigation measures; 10) conclusions; and 11) recommendations.
	MM HZ-6: In-Line Inspections of Line 3602	In-line inspection using the most recent or consensus accepted in-line inspection, internal corrosion direct assessment, and stress corrosion cracking direct assessment inspection technology shall be conducted on a schedule that would lead to all segments being inspected on a multi-year basis established by the CPUC. Mandatory reporting to the CPUC of findings and corrective actions shall be delivered at an interval determined by	• Conduct in-line inspection using the most recent or consensus-accepted in-line inspection, internal corrosion direct assessment, and stress corrosion cracking direct assessment inspection technology.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		the CPUC. Require as-soon-as-practical, in-line inspections of any Line 3602 segments in areas affected by an extreme weather event such as a flood, landslide, an earthquake, a natural disaster, or other similar event.	
	MM HZ-7: Instrumented Leak Surveys	Quarterly instrumented leak surveys on the entirety of Line 3602 during operation shall be conducted. Natural gas leak surveys using appropriately sensitive methane detecting instruments shall be conducted on a quarterly basis. Mandatory reporting to the CPUC of findings and corrective actions shall be delivered at an interval determined by the CPUC. Additionally, the mitigation measure requires an immediate leak survey of any Line 3602 segments in areas affected by an extreme weather event such as a flood, landslide, an earthquake, a natural disaster, or other similar event.	• Conduct quarterly instrumented leak surveys during operations. • Provide mandatory reporting documentation to relevant agencies.
	MM HZ-8: Emergency Plan	An Emergency Plan for Line 3602 shall be developed prior to construction that shall address protocols and procedure for all actual and detected pipeline leaks, releases, and ruptures including potential and actual intrusion events. The plan shall address the notification and contingency procedures for all persons, communities and residents within 1,500 feet of the pipeline. The plan shall also require a 60 day pre-construction notification to school districts and hospitals within 500 feet of project construction. The Emergency Plan shall be reviewed and approved by the CPUC and each jurisdictional authority responsible for public safety.	• Develop an Emergency Plan to address protocols and procedure for all actual and detected pipeline leaks, releases, and ruptures, including potential and actual intrusion events. • Include a 60-day pre-construction notification to school districts and hospitals within 500 feet of project construction.
	MM HZ-9: Public School Risk Assessment Support	All schools and associated school districts within 1,500 feet of the project shall be provided with a 60-day prior notification of all risk, a hazard and health assessment, survey, and evaluation associated with Line 1600 and Line 3602 prior to project construction and again prior to operation of Line 3602.	• Provide a 60-day prior notification to schools and districts within 1,500 feet of the project of all risk, a hazard and health assessment, survey, and evaluation prior to project construction and again prior to

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		Additionally, contact information regarding risk assessment support shall be provided to all schools and associated school districts within 1,500 feet of the project. An independent risk assessment support shall be provided to any public school district with plans for construction within 1,500 feet of the project.	operation, along with contact information and an independent risk assessment.
	MM HZ-10: Unexploded Ordnance Evaluation and Planning	Programs shall be developed and implemented that addresses unexploded ordnances (UXOs) and requires a qualified UXO technician to clear construction areas for UXO prior to initial ground disturbance and to monitor excavation activities in areas where UXO may be present.	• Develop and implement a program that addresses unexploded ordnances (UXOs) and requires a qualified UXO technician to clear construction areas for UXO prior to initial ground disturbance and to monitor excavation activities in areas where UXO may be present.
	MM HZ-11: MCAS Miramar Runway Protection Zone Evaluation	An evaluation of all crane activity within the Marine Corps Air Station (MCAS) Miramar Airport Land Use Compatibility Plan (ALUCP) area shall be conducted to determine whether the boom height will exceed the 100-to-one height restriction. If boom heights are to exceed the100-to-one height restriction, then the applicant must follow the Federal Aviation Administration notification requirement indicated in 14 CFR Part 77. Additionally, the ALUCP and the MCAS Miramar authorities need to be notified.	• Conduct an evaluation of all potential crane activity to determine if Federal Aviation Administration notification is needed.
	MM HZ-12: Pomerado Hospital Emergency Egress and Access Coordination	Coordination with local hospitals shall be conducted to ensure that evacuation and access routes are not obstructed by construction activities in the event of an emergency. The hospital shall be notified 48 hours prior to any construction that could potentially disrupt evacuation and access routes.	• Coordinate with local hospitals to ensure that evacuation and access routes are not obstructed by construction activities in the event of an emergency.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM HZ-13: Pomerado Road Emergency Egress Plan	Prior to construction, a contingency plan shall be developed specifically addressing emergency evacuation for the residents of all neighborhoods along the pipeline route that have one or limited emergency egress routes. The plan shall be approved by the CPUC and distributed to all affected residents.	• Develop a contingency plan to address emergency evacuation for residents along the pipeline route, especially those with one or limited egress routes.
	MM HZ-14: Fire Prevention Plan	A Fire Prevention Plan shall be prepared that is specifically tailored for the project construction. The Fire Prevention Plan shall include, among other provisions, requirements for carrying emergency fire suppression equipment on all project-related personal, commercial, and construction vehicles and equipment; restrictions on smoking; restrictions on idling vehicles; restrictions on parking; and restriction on construction during weather events that may result in extreme fire behavior (i.e., Red Flag Warnings). The final Fire Prevention Plan shall be submitted to the CPUC for approval at least 30 days prior to construction. The final Fire Prevention Plan shall, at a minimum, include provisions for all the elements listed below: • Prepare a Wildfire Hazard and Risk evaluation; • During project construction, implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods; • During the fire season, conduct daily all-personnel fire safety meetings at each construction site; • During Red Flag Warning events, as issued daily by the National Weather Service, all construction and	• Develop a Fire Prevention Plan specifically tailored for the project construction. • Include, among other provisions, requirements for carrying emergency fire suppression equipment on all project-related personal, commercial, and construction vehicles and equipment; restrictions on smoking; restrictions on idling vehicles; restrictions on parking; and restriction on construction during weather events that may result in extreme fire behavior (i.e., Red Flag Warnings). • Also include a Wildfire Hazard and Risk evaluation; ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies; daily all-personnel fire safety meetings at each construction site; • During Red Flag Warning events, as issued daily by the National Weather Service, cease all construction and maintenance activities, with an exception for activities that are intended to reduce fire risk. • Provide personnel with radio and/or cellular telephone access that is operational in all project work areas and access routes to allow for immediate reporting of fires.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		maintenance activities shall cease, with an exception for activities which are intended to reduce fire risk; • All personnel supporting the project's construction activities shall be provided with radio and/or cellular telephone access that is operational in all project work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction activities at each construction work site; • All construction personnel shall be trained in fire-safe actions and fire prevention; • All construction personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats; • Maintain all areas clear of vegetation and other flammable materials for at least a 50-foot-radius of any welding or grinding operations, or the use of an open flame; • Spray nearby vegetation with water, using a water truck or other suitable equipment, prior to any welding or grinding operations or the use of an open flame; • All equipment, gasoline-powered hand tools, and vehicles shall be equipped with spark arresters; • Equip all vehicles entering the right-of-way, welding trucks or rigs with minimal fire suppression equipment (e.g., ax, bucket, 5- to 21-pound fire extinguisher, shovels, etc.);	• Test and confirm communication pathways each day prior to initiating construction activities at each construction work site. • Train all construction personnel in fire-safe actions and fire prevention, extinguishing small fires in order to prevent them from growing into more serious threats, and maintaining all areas clear of vegetation and other flammable materials for at least a 50-foot-radius around any welding or grinding operations, or the use of an open flame • Spray nearby vegetation with water, using a water truck or other suitable equipment, prior to any welding or grinding operations or the use of an open flame. • Equip tools and vehicles with spark arresters and with minimal fire suppression equipment (e.g., ax, bucket, 5- to 21-pound fire extinguisher, shovels, etc.). • Park all vehicles in cleared areas. • Restrict smoking to designated and cleared locations. • Refuel at appropriate locations. • Maintain at least one half-full water truck or water tanker at each work site during all periods of work and for one hour after all work has ceased for the day. • Require the contractor to use a dedicated fire watch during all hot work, breaks, and for one hour after all work has ceased for the day. • Provide activity documentation and compliance monitoring.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• All vehicles will be parked only in cleared areas. Idling of parked vehicles will be prohibited; • Smoking will be restricted to designated and cleared locations; • All vehicle refueling will be done at cleared designated fueling areas; • Maintain at least one half-full water truck or water tanker at each work site during all periods of work and for one-hour after all work has ceased for the day; • Require the contractor to use a dedicated fire watch during all hot work, breaks, and for one-hour after all work has ceased for the day; and The plan also shall include provisions for activity documentation and compliance monitoring. The elements of the Fire Response Plan can be integrated with the Fire Prevention Plan to create a single plan.	
	MM HZ-15: Fire Response Plan	A Fire Response Plan shall be prepared that is specifically tailored for the project construction. The final Fire Response Plan shall be submitted to the CPUC for approval at least 30 days prior to construction. The final Fire Response Plan shall, at a minimum, include provisions for all the elements listed below: • Provide the CPUC and jurisdictional fire agency 24-hour contact information and a list of all onsite fire suppression equipment, tools, and personnel. Information must be updated as personal changes;	• Develop a Fire Response Plan specifically tailored for the project construction. • Provide the jurisdictional fire agency 24-hour contact information and a list of all onsite fire suppression equipment, tools, and personnel. Information must be updated as personal changes. • Determine site evacuation and egress routes for each work site. • Report all fires to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Determination of site evacuation and egress routes for each work site; • All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition; • All construction personnel shall be trained in initial attack firefighting with the equipment that will be used on the project; • All construction personnel shall be trained on fire reporting and shall carry at all times a listing of pertinent telephone numbers for reporting fires and information defining immediate steps to take if a fire starts; • All construction personnel shall be trained and equipped to extinguish small fires to prevent them from growing into more serious threats; • The applicant and/or its contractors shall have water tanks and/or water trucks sited/available at active construction sites for fire protection during project construction. Prior to construction, the applicant and its contractors shall contact and coordinate with the jurisdiction Fire Departments and applicable local fire departments (i.e., California Department of Forestry and Fire Protection, Escondido, City of San Diego, and City of Poway) to determine the appropriate minimum capacity and locations for the water tanks if water trucks are not used. Applicant shall submit verification of its consultation with fire departments to the CPUC at least 30 days prior to construction;	• Train all construction personnel in initial attack firefighting with the equipment that will be used on the project. • Train all construction personnel on fire reporting and carry at all times a listing of pertinent telephone numbers for reporting fires and information defining immediate steps to take if a fire starts. • Train all construction personnel and equip them to extinguish small fires in order to prevent them from growing into more serious threats. • Provide water tanks and/or water trucks at active construction sites for fire protection during project construction. • Contact and coordinate with the jurisdiction fire departments and applicable local fire departments to determine the appropriate minimum capacity and locations for the water tanks if water trucks are not used. • Address site evacuation and egress procedures. • Include provisions for activity documentation and compliance monitoring.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• The plan must address site evacuation and egress procedures; and • The plan should include provisions for activity documentation and compliance monitoring. The elements of the Fire Prevention Plan can be integrated with the Fire Response plan to create a single plan.	
	MM HZ-16: Implementation of Fire Plans	The project's Fire Prevention and Fire Response Plans shall be implemented prior to construction activities, and documentation shall be provided for all associated activities and monitoring.	• Implement the Fire Prevention and Fire Response Plans. • Document all applicable activities and monitoring.
	MM HZ-17: Operations and Maintenance Fire Prevention and Response Plan	An Operations and Maintenance Fire Prevention and Response Plan shall be developed and implemented. Plans shall be developed to address fire prevention and response for the project prior to operation and maintenance. The Final Plan shall be submitted to the CPUC for approval at least 30 days prior to construction.	• Develop and implement Operations and Maintenance Fire Prevention and Response Plan.
Hydrology and Water Quality	MM HY-1: Storm Water Pollution Prevention Plan	Coverage for a proposed project under the statewide Construction General Permit (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ) shall be obtained, and a Stormwater Pollution Prevention Plan (SWPPP) shall be prepared to reduce the potential for water pollution and sedimentation from construction. Verification of coverage under the Construction General Permit obtained from the Regional Water Quality Control Board shall be provided to the CPUC at least 30 days prior to start of construction. The current version of the approved SWPPP shall be kept onsite during construction and provided to the CPUC on request during construction.	• Obtain coverage for the proposed project under the statewide Construction General Permit (Order No. 2009-0009-DWQ, as amended by 2010-0014-DWQ and 2012-0006-DWQ). • Prepare a Stormwater Pollution Prevention Plan (SWPPP) to reduce the potential for water pollution and sedimentation from construction. • Do not stockpile brush, loose soils, excavation spoils, or other similar debris material within sensitive habitats. • Use standard dust suppression techniques (e.g., water spraying) in all ground disturbance areas.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		The SWPPP shall include, but is not limited to, the following measures and best management practices (BMPs): • Do not stockpile brush, loose soils, excavation spoils, or other similar debris material within sensitive habitats. • If visible dust is present during construction activities, use standard dust suppression techniques (e.g., water spraying) in all ground disturbance areas. • During construction activities, implement measures to ensure that contaminants are not discharged from construction sites. The SWPPP shall define areas where hazardous materials and trash shall be stored; where vehicles shall be parked, fueled, and serviced; and where construction materials shall be stored. • Minimize runoff, sedimentation, and erosion through the use of BMPs such as water bars, silt fences, staked straw bales, wattles, and mulching and seeding of all disturbed areas. These measures shall be designed to minimize ponding, eliminate flood hazards, and avoid erosion and siltation into any creeks, streams, rivers, or bodies of water, and to preserve roadways and adjacent properties. • Implement measures to control sedimentation and erosion in areas where helicopters would be landed, fueled, serviced, or used for construction activities.	• Implement measures to ensure that contaminants are not discharged from construction sites. • Define areas where hazardous materials and trash shall be stored; where vehicles shall be parked, fueled and serviced; and where construction materials shall be stored. • Minimize runoff, sedimentation, and erosion through the use of best management practices such as water bars, silt fences, staked straw bales, wattles, and mulching and seeding of all disturbed areas. • Implement measures to control sedimentation and erosion in areas where helicopters would be landed, fueled, serviced, or used for construction activities. • Install sediment barriers across the entire temporary workspace at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. • Install removable sediment barriers where equipment crosses waterbodies. • Install sediment barriers along the edge of project workspaces where runoff may drain toward waterbodies located adjacent to or in the vicinity of the workspace. • Locate equipment storage, fueling, and staging areas/laydown yards in upland sites away from riparian areas or other sensitive habitats. • Implement measures such as sandbags, silt screens, cleanup of hazardous material spills, and cleanup of sediment to prevent polluted (with sediment or

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Install sediment barriers across the entire temporary workspace at all waterbody crossings, where necessary to prevent the flow of sediments into the waterbody. Removable sediment barriers may be installed where equipment crosses waterbodies, but should be re-installed after work at the waterbody is completed. • Install sediment barriers along the edge of project workspaces where runoff may drain toward waterbodies located adjacent to or in the vicinity of the workspace. • Locate equipment storage, fueling, and staging areas/laydown yards in upland sites away from riparian areas or other sensitive habitats. These designated areas shall be located so as to prevent any runoff from entering sensitive habitat. Where vehicle maintenance (excluding fueling) cannot be avoided in areas outside those previously specified, these maintenance activities shall be performed at least 150 feet from all aquatic resources or as specified by agency permits on an impermeable bladder or tarp specified for such maintenance activities. Project-related spills of hazardous materials shall be cleaned up immediately and contaminated soils removed to approved disposal areas. • Implement measures such as sandbags, silt screens, cleanup of hazardous material spills, and cleanup of sediment to prevent polluted (with sediment or hazardous materials) runoff from work	hazardous materials) runoff from work areas in paved streets from entering the storm drain system. • Implement measures such as silt screens, cleanup of hazardous material spills, cleanup of sediment, secondary containment for hazardous materials, and avoidance of activities that disturb sediment or have a high potential for hazardous materials spills immediately before or during rain to prevent polluted (with sediment or hazardous materials) runoff from staging areas/laydown yards from draining into water ways such as washes, drainages, and ditches and from entering municipal storm drain systems.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		areas in paved streets from entering the storm drain system. • Implement measures such as silt screens, cleanup of hazardous material spills, cleanup of sediment, secondary containment for hazardous materials, and avoidance of activities that disturb sediment or have a high potential for hazardous materials spills immediately before or during rain to prevent polluted (with sediment or hazardous materials) runoff from staging areas/laydown yards from draining into water ways such as washes, drainages, and ditches and from entering municipal storm drain systems.	
	MM HY-2: Regional Storm Water Best Management Practices	The best management practices (BMPs) set forth in the County of San Diego BMP Design Manual (San Diego County, Department of Public Works 2016) and SDG&E's BMPs Manual for Water Quality Construction (SDG&E 2011) during all ground-disturbing activities shall be implemented.	• Implement best management practices (BMPs) set forth in the County of San Diego BMP Design Manual (San Diego County, Department of Public Works 2016) and SDG&E's BMPs Manual for Water Quality Construction (SDG&E 2011) during all ground-disturbing activities.
	MM HY-3: Construction Dewatering and Discharge of Hydrostatic Test Water	The San Diego Regional Water Quality Control Board shall be consulted to determine the need for Waste Discharge Requirements (WDRs) for potential discharge of construction water (e.g., groundwater intercepted during excavation/trenching and hydrostatic test water) into waters of the State. All conditions and mitigation measures shall be imposed in connection with issuance of any WDRs, which may include avoidance, reduction, and compensatory measures. Groundwater extracted as a result of dewatering during project construction shall not be discharged to waters of the state unless such activities are covered by a WDR. Extracted	• Consult the Regional Water Quality Control Board to determine the need for Waste Discharge Requirements for potential discharge of construction water (e.g., groundwater intercepted during excavation/trenching and hydrostatic test water) into waters of the state.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		groundwater may be discharged in a manner that does not cause erosion or result in silt-laden water flowing into any waterbody or wetland in one of the following manners without obtaining a WDR: • Discharge to an upland area using dewatering structures and secondary containment best management practices. • Use for dust control. • Use for irrigation water. • Disposal at a licensed facility if water is suspected of being contaminated or degraded.	
	MM HY-4: Horizontal Directional Drilling Plan	A project-specific Horizontal Directional Drilling (HDD) Plan shall be prepared in coordination with the drilling contractor or revised following selection of the drilling contractor, as necessary, to ensure that preventive and responsive measures can be implemented by the contractor. The HDD Plan must be submitted to the CPUC, and CPUC approval must be obtained prior to beginning project construction activities. The HDD Plan shall include: • Site-specific construction diagrams that show the location of mudpits, pipe assembly areas, and all areas to be disturbed or cleared for construction; • Evidence that disturbed areas are limited to the minimum needed to construct the crossing; • Identification of any aboveground disturbances or clearing between the HDD entry and exit workspaces during construction;	• Prepare a project-specific horizontal directional drilling plan in coordination with the drilling contractor.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• A description of how an inadvertent release of drilling mud (frac-out) will be contained and cleaned up (see below); • A contingency plan for crossing the waterbody in the event the HDD is unsuccessful and how the abandoned drill hole would be sealed, if necessary (FERC 2013); • Design protocols to be implemented for the protection of sensitive cultural and biological resources; and • Design protocols requiring a geotechnical engineer or qualified geologist to make recommendations regarding the suitability of the formations to be bored to minimize the potential for frac-out conditions.	
	MM HY-5: Construction Drainage Plan	A Construction Drainage Plan shall be prepared and implemented, or the requirements of this mitigation measure shall be incorporated into MM HY-1, Storm Water Pollution Protection Plan, to ensure that runoff during project construction activities will not exceed the drainage capacity of the storm water system and other drainage facilities. The following measures shall be included in the Drainage Plan, or Stormwater Pollution Prevention Plan (SWPPP), as practicable: • Construction of detention basins prior to commencement of construction. • Construction of temporary detention basins along the project construction route. • Creation of infiltration areas to limit the runoff that enters the storm water system.	• Prepare a construction drainage plan.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		If preparation of a Construction Drainage Plan separate from the SWPPP is relied upon to comply with this mitigation measure, the plan shall be submitted to the CPUC for review and obtain the CPUC's approval prior to beginning project construction activities.	
	MM HY-6: Dam Failure Evacuation Training	As part of a Worker Environmental Awareness Program, workers shall be trained on evacuation routes in the event of a dam failure based on the County of San Diego Operational Area Evacuation Annex Q. Workers in the following five dam inundation areas must receive the evacuation route training: Henshaw, Turner, Lake Wohlford, Dixon, and Sutherland Overtopping Hodges.	• Train workers as part of the Worker Environmental Awareness Program on evacuation routes in the event of a dam failure based on the County of San Diego Operational Area Evacuation Annex Q.
Land Use and Planning	MM LU-1: Parking	To limit impacts on parking capacity in rural and urban areas of the proposed project route, most construction personnel shall utilize contractor-operated vehicles to travel from staging areas/laydown yards to areas of active construction. Construction workers shall drive to staging areas/laydown yards located along the proposed project route, park their personal vehicles, and utilize contractor-operated private buses, vans, and pickups to be transported to active work areas. At the end of the day, construction personnel shall utilize the same vehicles to return to the staging areas/laydown yards. Personnel (e.g., foremen, inspectors, supervisory staff, vehicle operators, welders, monitors, security, and safety personnel) who require a vehicle as part of their specific role will be exempt from this requirement. Additionally, a minimum of two weeks prior to construction in any specific section of the proposed project, signage shall be posted along existing parking areas regarding the potential temporary loss of on-street parking as a result of proposed project construction.	• Utilize contractor-operated vehicles to travel from staging areas/laydown yards to areas of active construction. • Post signage a minimum of two weeks prior to construction in any specific section of the proposed project regarding the potential temporary loss of on-street parking as a result of proposed project construction.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
	MM LU-2: Land Use Access	Prior to construction, residents, businesses, and public facilities along the proposed project route shall be notified where driveway access could be temporarily blocked or restricted as a result of construction activities. For each residence, business, or public facility, information shall be provided regarding when these construction activities are scheduled to occur, the anticipated duration and times of the restricted access, and a contact telephone number. At the request of public facilities, provisions shall be made to maintain access, such as keeping metal plates available to cover open trenches.	• Notify residents, businesses, and public facilities along the proposed project route where driveway access could be temporarily blocked or restricted as a result of construction activities. • Provide information regarding when these construction activities are scheduled to occur, the anticipated duration and times of the restricted access, and a contact telephone number.
Noise	MM NS-1: Noise Control Plan	Prior to the start of construction, a Noise Control Plan shall be prepared that incorporates the following elements: (1) Compliance with Local Ordinances Ensure that project construction activities comply with the noise regulations of each jurisdiction, including the County and City of San Diego, the City of Escondido, and the City of Poway. The plan shall mandate compliance with each jurisdiction's construction equipment operation requirements, as listed in Table NS-1, and describe the plan that shall be followed to manage potential exceedances in noise, as well as the potential requirements for variances.	• Prepare a noise control plan that incorporates how the project shall comply with local ordinances; how noise levels shall be reduced; how noise modelling and monitoring shall be conducted; how questions and/or complaints shall be addressed; and how documentation shall be submitted.

Table NS-1 Construction Equipment Operation Requirements by Jurisdiction

Jurisdiction	Construction Equipment Operation		
	Allowed Hours	Allowed Average Sound Level	Allowed Days
County of San Diego	7 a.m. to 7 p.m.	75 decibels over an 8-hour period	Monday through Saturday; not holidays
City of San Diego	7 a.m. to 7 p.m.	75 decibels over a 12-hour period	All days
City of Escondido	7 a.m. to 10 p.m.	50 decibels for 1 hour	All days
	10 p.m. to 7 a.m.	45 decibels for 1 hour	All days
City of Poway	7 a.m. to 5 p.m.	75 decibels over an 8-hour period	Monday through Saturday; not holidays

Sources: City of Escondido Municipal Code; City of Poway Municipal Code; City of San Diego Municipal Code, Article 9.5; County of San Diego Ordinance No. 9962.

Additionally, the plan shall mandate compliance with the County of San Diego's standards for impulsive noise, which would be generated by mainline shut downs during operation and maintenance. Since the county's ordinance provides an exception for emergency work with respect to impulsive noise, the plan shall address compliance with the County's maximum allowed sound level for impulsive noise for non-emergency work (see Table LU-2).

Table 2-1 Preliminary Draft Mitigation Measures

<table>
<tr><th>Resource Area</th><th>Identification Number/Title</th><th>Suggested Mitigation</th><th>Mitigation Outline</th></tr>
<tr><td></td><td></td><td>
Table NS-2 County of San Diego Impulsive Noise Requirements
<table>
<tr><th>Land Use</th><th>Maximum Allowable Sound Level for Impulsive Noise</th></tr>
<tr><td>Agricultural</td><td>85 dBA</td></tr>
<tr><td>Civil</td><td>82 dBA</td></tr>
<tr><td>Commercial</td><td>85 dBA</td></tr>
<tr><td>Industrial</td><td>85 dBA</td></tr>
<tr><td>Residential</td><td>82 dBA</td></tr>
<tr><td>Village</td><td>82 dBA</td></tr>
</table>
Source: County of San Diego Ordinance Code 9962.
Key:
dBA = A-weighted decibel

(2) Measures to Reduce Noise Levels
The plan shall also include measures to ensure that ambient noise is not increased by more than 10 dBA or does not exceed the noise level specified in the applicable jurisdiction’s noise ordinance. The measures shall be selected based on the specific equipment used, activity conducted in specific locations, and proximity to sensitive noise receptors and may include:
</td><td></td></tr>
</table>

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Temporarily and safely install and maintain absorptive noise control barriers in the perimeter of construction sites and/or between stationary construction equipment and sensitive noise receptors when located within 200 feet of noise-intensive equipment operating more than 4 hours a day. All residents located within 50 feet of the absorptive barriers shall be notified. • Limit heavy equipment activity adjacent to residences or other sensitive receptors to the shortest possible period required to complete the work activity. • Ensure that proper mufflers, intake silencers, and other noise reduction equipment are in place and in good working condition. • Maintain construction equipment according to manufacturer recommendations. • Minimize unnecessary construction equipment idling. • Reduce noise from back-up alarms (i.e., alarms that signal vehicle travel in reverse) in construction vehicles and equipment by providing a layout of construction sites that minimizes the need for back-up alarms. Use flagmen to minimize the time needed to back up vehicles. • When possible, use construction equipment specifically designed for low noise emissions, such as equipment that is powered by electric or natural	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		gas engines instead of diesel or gasoline reciprocating engines. • Where practical, locate stationary equipment such as compressors, generators, and welding machines away from sensitive receptors. (3) Noise Modeling and Monitoring The plan shall detail the frequency, location, and methodology for noise modeling and monitoring prior to and during various construction and restoration activities to ensure that generated noise levels do not exceed 10 dBA above existing ambient noise levels, or the applicable jurisdiction's noise standards. These methods shall include monitoring noise levels at the boundary of construction areas and using industry-standard noise modeling techniques to predict noise levels at adjacent sensitive receptors. If modeled levels exceed the greater than 10 dBA above existing ambient noise or applicable ordinance threshold, noise monitoring shall be conducted to verify model results. The Noise Control Plan shall also detail the actions and procedures that shall be implemented to mitigate impacts in the event that monitoring detects noise levels that have exceeded the applicable criteria. Noise level monitoring and measurement shall be conducted in compliance with the County of San Diego, City of San Diego, City of Escondido, and City of Poway requirements, as applicable. (4) Construction Relations Officer The plan shall designate a Construction Relations Officer who is readily available to answer questions or respond to complaints during periods of construction or restoration.	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		Each construction site shall include clearly visible signs with the Construction Relation Officer's public phone number. Monthly reports shall be submitted to the CPUC summarizing any complaints submitted to the Construction Relations Officer. The summary reports shall describe how each complaint was addressed, if and when it was resolved, and available contact information for the member of the public who submitted the complaint. (5) Submittal to the CPUC A Noise Control Plan shall be submitted to the CPUC for review and approval at least 30 days prior to the start of construction.	
	MM NS-2: Advance Notice of Construction	Notice shall be provided to all sensitive receptors, including residences, within 500 feet of all project components at least 30 days prior to construction activities occurring in that area to alert nearby users of the construction activities and give them an opportunity to avoid the noise. The notice shall include dates, times, and descriptions of construction activities. The notification shall also include a phone number for the public to contact the Construction Relations Officer. A copy of the notice shall be provided to the CPUC at least 20 days prior to commencement of construction.	• Provide notice to all sensitive receptors, including residences, within 500 feet of all project components at least 30 days prior to construction activities occurring in that area to alert nearby users of the construction activities and give them an opportunity to avoid the noise. • Include dates, times, and descriptions of construction activities. • Include a phone number for the public to contact the Construction Relations Officer.
Public Services and Utilities	MM PS-1: Recycled Water	At least three months prior to commencement of ground disturbance, one or more contracts for the supply of recycled water to the proposed project for dust control and hydrostatic testing shall be identified and executed. Any source of recycled water secured shall be an existing source for which all permits have been obtained for this use in connection with the proposed project prior to the date of execution of the water supply	• Identify and execute contracts for supply of recycled water for dust control and hydrostatic testing.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		contract. The source(s) of recycled water shall be located within XX miles [define mileage that equates to the threshold below] of the proposed project area. If it is determined that the delivery of recycled water for construction may result in more than 132,750 miles traveled or an average of 262 truck trips per day and a maximum of 957 truck trips per day during hydrostatic testing, the CPUC shall be consulted to determine if the benefits of using recycled water are sufficient to justify the increased impacts on air quality, greenhouse gas emissions, and traffic. All recycled water uses shall be conducted in accordance with all applicable local, state, and federal regulations and permits related to the transportation, storage, application, and discharge of recycled water.	
	MM PS-2: Utility Notification	At least two days prior to excavation activities, the responsible utility providers for any utilities identified by Underground Service Alert of Southern California shall be notified. Excavation activities shall be coordinated with utility providers to avoid disruption in service or damage to existing utilities to the extent feasible.	• Notify responsible utility providers for any utilities identified by Underground Service Alert of Southern California two days prior to excavation.
Recreation	MM RE-1: Parks and Trail Plan	A Parks and Trail Plan shall be prepared and submitted to the City of Poway Community Services Department, City of San Diego Park and Recreation Department, and San Dieguito River Valley Regional Open Space Park Joint Powers Authority for a 30-day review and comment period at least 90 days before the start of construction. The Parks and Trail Plan, along with any comments received from the local agencies, shall be submitted to the CPUC for review and approval at least 45 days before the start of construction. CPUC approval must be obtained prior to the start of construction.	• Prepare a Parks and Trail Plan to be submitted to appropriate jurisdictional agencies. • Include, at a minimum, the following measures: require placement of safety barriers around interpretive signage and markers, or temporary removal of interpretive signage and markers along trails or within public parks and open space; require the restoration of trails (including associated interpretive signage or markers) adjacent to or crossed by the project to pre-construction conditions; take photographs to document the

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		The Parks and Trail Plan shall include, at a minimum, the following measures: • Requiring placement of safety barriers around interpretive signage and markers, or temporary removal of interpretive signage and markers along trails or within public parks and open space. • Requiring the restoration of trails (including associated interpretive signage or markers) adjacent to or crossed by the project to pre-construction conditions. Photographs shall be used to document the conditions of the trail prior to and following construction and any repairs of trails made as part of the proposed project. • Submission of documentation of original conditions and post-repair conditions to the CPUC for review and verification within 30 days of repair completion. • Posting of signage along trails and parks that are crossed by or adjacent to the proposed project no less than four weeks prior to the beginning of construction activities within or adjacent to the park. Signage shall notify park users of the impending construction activities, construction impacts (e.g., increased noise and dust), affected locations, and estimated duration of temporary park facility closures. Contact information to reach the project's public liaison shall be provided on the signage, and the public liaison shall address any complaints related to dust, noise, odor, and access restrictions. In addition to the signage, park and open space authorities shall be directly contacted and	conditions of the trail prior to and following construction and any repairs of trails; post signage along trails and parks that are crossed by or adjacent to the proposed project no less than four weeks prior to the beginning of construction activities within or adjacent to the park to notify park users of the impending construction activities, construction impacts (e.g., increased noise and dust), affected locations, and estimated duration of temporary park facility closures; and provide contact information on signage to reach the project's public liaison.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		provided advance notice of project activities no less than 4 weeks prior to construction.	
Traffic and Transportation	MM TT-1: Traffic Control and Management Plan	A comprehensive Traffic Control and Management Plan (TMP) shall be prepared. The TMP shall, to the maximum extent possible, comply with the conditions of any encroachment permits issued by a state or local agency for the project and with any applicable county and city, plans ordinances and policies. It shall be submitted to the California Department of Transportation (Caltrans), the County of San Diego, and the Cities of Escondido, Poway, and San Diego for review and comment prior to submitting it to the CPUC for review and approval. The TMP shall be submitted to the CPUC at least 60 days prior to the start of construction. The TMP's level of detail shall be appropriate to the complexity of the project work. The TMP shall include, at a minimum, the following measures: 1. To reduce impacts on affected road segments resulting from the proposed project: • Implement detours only when an appropriate alternative route has been identified and approved by Caltrans or the appropriate local jurisdiction, and property access can be maintained; • Facilitate traffic by using flaggers, signage, and barricades to guide vehicles through or around construction zones, following recommended considerations of the California Manual on Uniform Traffic Control Devices (CA MUTCD) latest edition, including proper signage, and avoiding abrupt changes in geometrics;	• Prepare a comprehensive Traffic Control and Management Plan (TMP). • Comply with the conditions of any encroachment permits issued by a state or local agency for the project and with any applicable county and city plans, ordinances, and policies and submit the TMP to relevant agencies for review and approval. • Implement detours only when an appropriate alternative route has been identified and approved by the California Department of Transportation (Caltrans) or the appropriate local jurisdiction, and property access can be maintained. • Facilitate traffic by using flaggers, signage, and barricades to guide vehicles through or around construction zones, following recommended considerations of the California Manual on Uniform Traffic Control Devices (CA MUTCD) latest edition, including proper signage, and avoiding abrupt changes in geometrics. • Schedule construction activities during off-peak hours to the extent feasible, including night or weekend work. • Restore road capacity to the extent feasible when construction activities are not occurring, which could include the use of steel road plates or temporary paving.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Schedule construction activities during off-peak hours to the extent feasible, including night or weekend work; • Restore road capacity to the extent feasible when construction activities are not occurring, which could include the use of steel road plates or temporary paving; • Require construction delivery trucks and construction workers to avoid road segments with significant impacts (i.e., road that would exceed significance thresholds as established by the jurisdiction) to the extent feasible; • Require the majority of construction personnel to leave personal vehicles at proposed project staging areas and to utilize contractor-operated private buses, vans, and pickups to travel to and from areas of active construction; • Implement construction phases, schedules, and techniques that minimize lane closures, including the number of cross streets and side streets that may be blocked or otherwise impacted by construction activities, and to maintain access through intersections where no alternative routes are available. 2. To reduce hazards from open trenches and slow moving construction vehicles operating within road rights-of-way:	• Require construction delivery trucks and construction workers to avoid road segments with significant impacts (i.e., road that would exceed significance thresholds as established by the jurisdiction) to the extent feasible. • Require the majority of construction personnel to leave personal vehicles at project staging areas and to utilize contractor-operated private buses, vans, and pickups to travel to and from areas of active construction • Implement construction phases, schedules, and techniques that minimize lane closures, including the number of cross streets and side streets that may be blocked or otherwise impacted by construction activities, and to maintain access through intersections where no alternative routes are available. • Implement standard safety practices, including installing appropriate barriers between work zones and transportation facilities. • Place appropriate signage and use traffic control devices at appropriate locations during construction to warn drivers of open trenches, active construction equipment, and slow trucks operating within the road right-of-way. • Enforce speed limits of construction vehicles on all roads • Document road and pavement conditions with photographs prior to the project along roads identified for heavy vehicle use and trenching

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Implement standard safety practices, including installing appropriate barriers between work zones and transportation facilities; • Place appropriate signage and use traffic control devices at appropriate locations during construction to warn drivers of open trenches, active construction equipment, and slow trucks operating within the road right-of-way. Signage shall adhere to the CA MUTCD. • Enforce speed limits of construction vehicles on all roads, including unpaved access roads within Marine Corps Air Station Miramar; • Comply with any conditions imposed in connection with encroachment permits issued by Caltrans and local agencies. 3. To address damage to roads caused by project-related vehicle traffic or disturbance for project-related construction: • Comply with the conditions imposed in connection with encroachment permits issued by Caltrans and local agencies; • Document road and pavement conditions with photographs prior to the project along roads identified for heavy vehicle use and trenching; and • Take photographs after the project and after any repairs that document restoration of pre-project pavement conditions. Documentation of original conditions and repair shall be submitted to the	• Take photographs after the project and after any repairs that document restoration of pre-project pavement conditions. • Maintain good public relations by assessing the needs of road users, adjacent property owners, and emergency service providers (law enforcement, fire fighters, and medical) and cooperating with various news media. • Notify local emergency service providers (i.e., police departments, ambulance services, and fire departments) of road closures at least one week prior to the closure. • Notify the emergency service provider of the location, date, time, and duration of closure. • Make provisions to maintain emergency vehicle access at all times in coordination with local emergency service providers, such as keeping metal plates available to cover open trenches. • Provide for safe vehicle, bicyclist, pedestrian, and trail user passage through construction zones using road or trail geometrics and features and traffic control devices comparable to normal road and trail conditions, to the extent possible. • Notify the North County Transit District, Metropolitan Transit District, Riverside Transit Agency, and other public transit providers of construction along existing public transit routes and work with transit providers to temporarily relocate transit stops during construction, if needed.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		CPUC for review and verification within 30 days of repair completion. 4. To address impacts to local emergency service providers (i.e., maintain access for emergency service vehicles): • Maintain good public relations by assessing the needs of road users, adjacent property owners, and emergency service providers (law enforcement, fire fighters, and medical l) and cooperating with various news media; • Notify local emergency service providers (i.e., police departments, ambulance services, and fire departments) of road closures at least one week prior to the closure; • Notify the emergency service provider of the location, date, time, and duration of closure; and • Make provisions to maintain emergency vehicle access at all times in coordination with local emergency service providers, such as keeping metal plates available to cover open trenches. 5. To address impacts to public transit facilities (e.g. transit routes and stops), bicycle facilities (e.g. bike lanes and routes), and pedestrian facilities (e.g. sidewalks and trails): • Provide for safe vehicle, bicyclist, pedestrian, and trail user passage through construction zones using road or trail geometrics and features and traffic control devices comparable to normal road and trail conditions, to the extent possible.	• Provide bicyclists, pedestrians, and trail users with reasonably safe, convenient, and accessible paths that replicate as nearly as possible the most desirable characteristics of the existing paths (e.g., maintaining bicycle and sidewalk access on at least one side of affected streets during construction). • Survey detours within parks and open space to ensure they are free of sensitive biological or cultural resources. • Outline plans for notifications and a process for communication with affected transit users, bicyclists, pedestrians, and trail users prior to the start of project construction. • Post detour signs during construction of alternative routes for public transit users, bicyclists, pedestrians, and trail users, applying the CA MUTCD principles for proper marking, signing, and flagging. • Install steel plates over open trenches in inactive construction areas to maintain existing public transit user, bicyclist, pedestrian, and trail user access after construction hours.

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		• Notify the North County Transit District, the Metropolitan Transit District, Riverside Transit Agency, and other public transit providers of construction along existing public transit routes and work with transit providers to temporarily relocate transit stops during construction, if needed; • Provide bicyclists, pedestrians, and trail users with reasonably safe, convenient, and accessible paths that replicate as nearly as possible the most desirable characteristics of the existing paths (e.g., maintaining bicycle and sidewalk access on at least one side of affected streets during construction). Detours within parks and open space shall be surveyed to ensure they are free of sensitive biological or cultural resources; • Outline plans for notifications and a process for communication with affected transit users, bicyclists, pedestrians, and trail users prior to the start of project construction. Advance public notification shall include posting of notices and appropriate signage of construction activities. The written notification shall include the construction schedule, the exact location and duration of activities (i.e., which public transit, bicycle, pedestrian, and trail facilities would be affected on which days and for how long), and a toll-free telephone number for receiving questions or complaints; • Post detour signs during construction of alternative routes for public transit users, bicyclists,	

Table 2-1 Preliminary Draft Mitigation Measures

Resource Area	Identification Number/Title	Suggested Mitigation	Mitigation Outline
		pedestrians, and trail users, applying the CA MUTCD principles for proper marking, signing, and flagging; and • Install steel plates over open trenches in inactive construction areas to maintain existing public transit user, bicyclist, pedestrian, and trail user access after construction hours.	

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