

E.3.12 Water Resources

E.3.12.1 Environmental Setting

The Route D Alternative would replace the portion of Interstate 8 alternative between mile markers I8-71 and I8-92.7. The entire Route D is over a mountainous natural area, much of which is in backcountry, non-motorized areas of the Cleveland National Forest, and is similar in climate and terrain to the Central Link. There are 22 major water crossings in this alternative (see Table E.3.12-1) including the San Diego River. Table E.3.12-1 shows the watercourse crossings for this alternative. This route crosses no designated groundwater basin. This area contains rugged terrain with watercourses in deep canyons. There is at least one scenic waterfall and a spring in the vicinity of Milepost D-14.5 (west of Eagle Peak Road).

E.3.12.2 Environmental Impacts and Mitigation Measures

Table E.3.12-2 summarizes the impacts of the Route D Alternative for water resources.

**Table E.3.12-1. Route D Alternative
Watercourse Crossing Table**

Watercourse	Associated Groundwater Basin
D-0 to D-16.8	
Unnamed	None
Unnamed	None
Viejas Creek	None
Unnamed	None
King Creek	None
Unnamed	None
Conejos Creek	None
Unnamed	None
Boulder Creek	None
Unnamed	None
Unnamed	None
Cedar Creek	None
Unnamed	None
Ritchie Creek	None
San Diego River	None
Dye Canyon	None

Table E.3.12-2. Impacts Identified – Alternatives – Water Resources

Impact No.	Description	Impact Significance
Route D Alternative		
H-1	Construction activity would degrade water quality due to erosion and sedimentation	Class II
H-2	Construction activity would degrade water quality through spills of potentially harmful materials	Class II
H-5	Creation of new impervious areas would cause increased runoff resulting in flooding or increased erosion downstream	Class III
H-6	Transmission towers or other aboveground project features located in a floodplain or watercourse would result in flooding, flood diversions, or erosion	Class II
Central South Substation Alternative		
H-1	Construction activity would degrade water quality due to erosion and sedimentation	Class II
H-2	Construction activity would degrade water quality through spills of potentially harmful materials	Class II
H-5	Creation of new impervious areas would cause increased runoff resulting in flooding or increased erosion downstream	Class II
H-7	Accidental releases of contaminants from project facilities would degrade water quality	Class II

Construction Impacts

This alternative crosses no groundwater basin. Therefore, Impact H-3 (Excavation could degrade groundwater quality in areas of shallow groundwater) and Impact H-4 (Groundwater dewatering for project construction could deplete local water supplies) do not apply. Further, towers are not likely to be located in or near drainageways where local groundwater might be present. Local dewatering for towers located near drainageways would have only a temporary effect on local groundwater levels.

Impact H-1: Construction activity would degrade water quality due to erosion and sedimentation (Class II)

Table E.3.12-9 lists the streams that are potentially at risk of water quality degradation due to construction-induced erosion and sedimentation in the Route D Alternative. The potential for surface water contamination from soil disturbance is significant along this alternative because of the steep terrain, natural condition of the vegetation, possible presence of surface waters during the dry season, and the presence of local springs along the route. Road construction for construction and maintenance access would be the primary source of sediment, and could be significant. A substantial part of this route is in a designated roadless area of the National Forest, intended to remain that way to preserve the natural character of the ecosystem, including water resources.

APMs (as described in Table D.12-6) and the proposed SWPPP would reduce this impact. WQ-APM-1 would minimize disturbance to drainage channels. WQ-APM-2 would avoid or span watercourses with project structures. WQ-APM-3 would require marking sensitive areas for avoidance and provide for employee training. WQ-APM-4 requires the use of erosion control best management practices. WQ-APM-5 requires construction stream crossing at periods of low flows with site-specific mitigation and restoration plans. WQ-APM-14 requires complying with the State of California General Permit for Storm Water Discharge Associated with Construction Activity. WQ-APM-15 requires situating access roads away from stream channels and minimizing stream disturbance.

Even with implementation of APMs and the SWPPP, due to the sensitivity of the water resource within Forest Service property and the high level of disturbance that would occur in the steep, natural terrain, Impact H-1 would be significant. Mitigation Measure H-1n, which requires construction by helicopter in roadless areas of Route D, is required. With implementation of Mitigation Measures H-1k, H-1l, and H-1n, Impact H-1 would be less than significant (Class II). The full text of the mitigation measures appears in Appendix 12.

Mitigation Measures for Impact H-1: Construction activity would degrade water quality due to erosion and sedimentation

- H-1k Comply with Forest Service Conditions.**
- H-1l Construction on Forest Service land to be subject to an approved, site-specific SWPPP and Sediment Control Plan.**
- H-1n Route D Alternative construction to be by helicopter.** Route D Alternative construction shall be by helicopter in areas where existing roads are not adequate for construction without extensive modification or extension. A plan for construction along this alternative route shall be submitted to the CPUC and Forest Service prior to construction describing which areas can be accessed through existing roads, which areas are to be built by helicopter, and what would be the helicopter construction procedures. This plan shall be reviewed and approved by CPUC and Forest Service prior to initiation of construction.

Impact H-2: Construction activity would degrade water quality through spills of potentially harmful materials (Class II)

Watercourses listed in Table E.3.12-9 could be affected by accidental contaminant spills during construction. APMs WA-APM-3, WQ-APM-8, WQ-APM-9, WQ-APM-13, and WQ-APM-14 address the issue of water quality contamination through material spills. WQ-APM-8 requires that excavated groundwater, which could be contaminated from construction, not be returned to the natural system without treatment. WQ-APM-9 requires storage of hazardous materials away from groundwater supply wells. WQ-APM-13 requires proper disposal of hazardous materials and trash, as well as prompt clean-up of spills. WQ-APM-14 requires compliance with State regulations and implementation of a SWPPP which would address materials disposal and clean-up during construction. WQ-APM-3 requires that fragile watersheds be clearly marked on-site before any construction or surface disturbing activities begin.

Additionally, APMs WQ-APM-1, WQ-APM-2 and WQ-APM-15 situate construction activities away from streams where possible. Nevertheless, as with Impact H-1, Impact H-2 is potentially significant in Forest Service land. With implementation of Mitigation Measures H-1k, H-1l, and H-1n, Impact H-1 would be less than significant (Class II).

Mitigation Measures for Impact H-2: Construction activity would degrade water quality through spills of potentially harmful materials

- H-1k Comply with Forest Service Conditions.**
- H-1l Construction on Forest Service land to be subject to an approved, site-specific SWPPP and Sediment Control Plan.**
- H-1n Route D Alternative construction to be by helicopter.**

Operational Impacts

There are no contaminants associated with the project facilities. Therefore, Impact H-7 (Accidental releases of contaminants from project facilities would degrade water quality) would not occur. There are no underground portions except as otherwise described under Impact H-6. Therefore, Impact H-8 (Underground portions of the power line could be exposed during flow events causing damage to the line or to adjacent property) does not apply.

Impact H-5: Creation of new impervious areas would cause increased runoff resulting in flooding or increased erosion downstream (Class III)

Impervious area created by the new towers and foundations is very small compared to the size of the watershed. Therefore, Impact H-5 would be less than significant (Class III).

Impact H-6: Transmission towers or other aboveground project features located in a floodplain or watercourse would result in flooding, flood diversions, or erosion (Class II)

Placement of towers in or near the watercourses listed in Table E.3.12-9 could result in flooding, flood diversions, or erosion. APMs WQ-APM-2 and WQ-APM-10 require avoidance of watercourses where possible, and protection against scour where avoidance is not possible. The placement of towers in a watercourse or drainageway along the Route D Alternative is considered unlikely because of the terrain. In hilly terrain such as this, watercourses are generally spanned. However, impacts from H-6 could still be significant. With Mitigation Measures H-1k and H-6a in place, Impact H-6 will be reduced to less than significant (Class II).

Mitigation Measures for Impact H-6: Transmission towers or other aboveground project features located in a floodplain or watercourse would result in flooding, flood diversions, or erosion

H-1k Comply with Forest Service Conditions.

H-6a Scour protection to include avoidance of bank erosion and effects to adjacent property.

E.3.12.3 Central South Substation Alternative

Environmental Setting

The Central South Substation Alternative would be used only with the Route D Alternative. It is in a natural hilly area with terrain and climate typical of the Central Link. There are no identified water resources at the site of the substation. Located at the top of some local hills, the site includes a small local valley.

Environmental Impacts and Mitigation Measures

A number of potential impacts applicable elsewhere on the project do not apply to the Central South Substation Alternative. There is no groundwater basin at the substation site. Therefore, Impact H-3 (Excavation could degrade groundwater quality in areas of shallow groundwater) and Impact H-4 (Groundwater dewatering for project construction could deplete local water supplies) do not apply.

Impact H-6, transmission towers or other aboveground project features located in a floodplain or watercourse could result in flooding, flood diversions, or erosion, is closely related to Impact H-5 in the case of this substation. These issues are addressed under the H-5 discussion below.

Impact H-1: Construction activity would degrade water quality due to erosion and sedimentation (Class II)

The Central South Substation would require a substantial amount of local grading. The Central South Substation location is in a mountainous area where existing drainageways are at or near their headwaters, meaning watershed areas are small and surface flows minimal and infrequent except during periods of rainfall. Since grading will be substantial, it is expected that the potential for erosion will be substantial during a rainfall event, but disturbance of surface flows during construction is unlikely due to the upland location.

APMs and the SWPPP will apply to the effects of Impact H-1. WQ-APM-1 would minimize disturbance to drainage channels. WQ-APM-3 would require marking sensitive areas for avoidance and provide for employee training. WQ-APM-4 requires the use of erosion control best management practices. WQ-APM-14 requires complying with the State of California General Permit for Storm Water Discharge Associated with Construction Activity. WQ-APM-15 requires situating access roads away from stream channels and minimizing stream disturbance.

However, due to the size of this area (approximately 40 acres), and probable extent of grading and earthwork involved in this currently undisturbed area, standard BMPs may not be sufficient to prevent significant local erosion and downstream watercourse siltation if heavy rains occur during construction. Therefore, impacts could be significant without mitigation. Mitigation Measure H-1a is required to ensure these impacts are less than significant. Mitigation Measure H-1a requires grading to occur during the dry season to avoid water quality impacts, and erosion and sediment control BMPs to be in place prior to the onset of seasonal rains. With Mitigation Measure H-1a implemented, the impact would be less than significant (Class II).

Mitigation Measure for Impact H-1: Construction activity would degrade water quality due to erosion and sedimentation

H-1a Prepare Substation Grading and Drainage Plan; construct during the dry season.

Impact H-2: Construction activity would degrade water quality through spills of potentially harmful materials (Class II)

Accidental spills or disposal of potentially harmful materials such as lead-based paint flakes, diesel fuel, gasoline, lubrication oil, cement slurry, hydraulic fluid, antifreeze, transmission fluid, lubricating grease, and other fluids could occur during construction. Although it is likely that some spills will occur in this large construction area, surface water resources in the area are limited and there are no groundwater resources. Since construction will occur during the dry season (Mitigation Measure H-1a), and a construction SWPPP addressing spill prevention, containment and clean-up will be required. Nevertheless, prior to mitigation, Impact H-2 remains significant. With implementation of Mitigation Measure H-1a, Impact H-2 would be less than significant (Class II).

Mitigation Measure for Impact H-2: Construction activity would degrade water quality through spills of potentially harmful materials

H-1a Prepare Substation Grading and Drainage Plan; construct during the dry season.

Impact H-5: Creation of new impervious areas would cause increased runoff resulting in flooding or increased erosion downstream (Class II)

The substation will change the rainfall/runoff characteristics of an area approximately 40 acres in size. The expected effect is higher potential for runoff and higher peak flow rates. This impact would be local and diminish to negligible in the downstream direction as overall watershed size increases. However, local increases in runoff could be substantial, resulting in a potential for local offsite erosion that would occur in the area immediately downstream of the substation. This would be a significant impact. With implementation of the runoff control specified in Mitigation Measure H-5a this impact would be less than significant (Class II).

Mitigation Measure for Impact H-5: Creation of new impervious areas would cause increased runoff resulting in flooding or increased erosion downstream

H-5a Install substation runoff control.

Impact H-7: Accidental releases of contaminants from project facilities would degrade water quality (Class II)

Oil and other contaminants from equipment at the substation could be released accidentally and contaminate local surface water or downstream groundwater. Due to the upland nature of this site, most spills would not likely enter directly into surface water, but a large uncontained spill could reach local drainageways. WQ-APM-13 requires clean-up of spills and proper storage and disposal of contaminants. However, even with APMs incorporated, this impact would be significant. Mitigation Measure H-7a requires development of a Hazardous Substance Control and Emergency Response Plan for project operation. With Mitigation Measure H-7a implemented, Impact H-7 would be less than significant (Class II).

Mitigation Measure for Impact H-7: Accidental releases of contaminants from project facilities would degrade water quality

H-7a Develop Hazardous Substance Control and Emergency Response Plan for Project Operation.

E.3.12.4 Future Transmission System Expansion

For the Proposed Project and route alternatives along the Proposed Project route, Section B.2.7 identifies Future Transmission System Expansion routes for both 230 kV and 500 kV future transmission lines. These routes are identified, and impacts are analyzed in Section D of this EIR/EIS, because SDG&E has indicated that transmission system expansion is foreseeable, possibly within the next 10 years. For the SWPL alternatives, 500 kV and 230 kV expansions would also be possible. The potential expansion routes for the Route D Alternative are described in the following paragraphs.

230 and 500 kV Future Transmission System Expansion

The Route D Alternative would begin at approximately MP I8-70 and would head northward until it reached the Central South Substation Alternative at approximately MP 114.5 of the Proposed Project. The Route D Alternative would convert to 230 kV at the Central South Substation and a double-circuit 230 kV line would be constructed southwest from that substation to the Sycamore Canyon Substation. The Central South Substation would accommodate up to six 230 kV circuits and an additional 500 kV circuit. Only two 230 kV circuits are proposed at this time, but construction of additional 230 kV circuits and a 500 kV circuit out of the Central South Substation may be required in the future. There are two routes that are most likely for these future lines; each is addressed below. Figure E.1.1-6 illustrates the potential routes of the future transmission lines.

Additional 230 and 500 kV circuits could follow the Proposed Project corridor starting at MP 114.5. The routes could either: (1) follow the Proposed Project corridor southwest to the Chicarita Substation and then follow the Proposed Project's 230 kV Future Transmission Expansion System (see description in Section B.2.7) from Chicarita to the Escondido Substation; or (2) the Proposed Project northeast to the Proposed Central East Substation and then follow the Proposed Project's 500 kV Future Transmission Expansion route shown in Figure B-12b (see description in Section B.2.7). See Section D.12.2, D.12.7, D.12.8, and D.12.9 for the Water Resources setting, impacts, and mitigation measures for the Central, Inland Valley, and Coastal Links of the Proposed Project. See Section D.12.11 for the Water Resources setting, impacts, and mitigation measures for the Future Transmission System Expansion of the Proposed Project.