

5.9 HYDROLOGY AND WATER QUALITY

This section describes the potential impacts on water resources from development and operation of the project. With implementation of the applicant-proposed mitigation measures, construction and operation of all phases of the project are expected to have less than significant impacts on hydrology and water quality.

5.9.1 Significance Criteria

Significance criteria were derived from Appendix G of the revised CEQA Guidelines. Impacts to surface water or groundwater quality would be considered potentially significant if the project were to:

- Permanently decrease the capacity of drainages or alter drainage patterns
- Cause a detrimental increase in site erosion or downstream siltation
- Increase the potential for substantial flood damage
- Expose people or structures to flooding in the event of a dam failure
- Result in a substantial degradation of surface or groundwater quality to the extent that beneficial uses are impacted or water quality criteria are exceeded

When evaluating the potential impacts, it was assumed that all applicable federal, state, and local regulatory requirements that protect surface water and groundwater would be complied with. For example, transmission towers would not be placed within the waterway protection corridors that are defined by city and county codes, and therefore would not impact these waterways. In accordance with the Clean Water Act, a Storm Water Pollution Prevention Plan (SWPPP) would be prepared and implemented, including Best Management Practices (BMPs) to minimize construction impacts on surface and groundwater quality. The SWPPP would be prepared once the project is approved and after project facilities are sited and designed. The SWPPP would then be approved by Los Angeles County.

5.9.2 Construction Impacts**5.9.2.1 Accelerated Soil Erosion, Downstream Sedimentation, and Reduced Surface Water Quality**

Accelerated soil erosion and subsequent downstream sedimentation and reduced surface water quality could potentially increase during construction of the proposed project as described below.

5.9.2.1.1 Overhead T/L. Overhead T/L construction would require excavation, road, tower, and pull pad clearing and grading, and soil stockpiling. Proposed transmission lines and access roads would cross numerous ephemeral and intermittent creeks. Soil erosion rates could potentially be accelerated and sedimentation of downstream waterways could occur. Surface water quality could be diminished as a result of the following: 1) vehicular traffic and foundation excavation in the vicinity of tower locations; 2) vehicular traffic, scraping and grading, and material laydown at pull sites/laydown areas; 3) scraping and grading, construction of culverts in ephemeral creeks; 4) scraping and grading for the construction of new access roads; and 5) scraping, grading, and constructing the proposed substations.

If sediment-laden runoff from the construction sites entered the nearby waterways, it could potentially increase turbidity, increase sedimentation, and reduce the flood-carrying capacity of downstream channels. Construction activities conducted when the ground is wet also creates the potential for increased runoff due to a reduction in infiltration and evaporation through vegetation removal. However, with implementation of measures APM Water-1 and Water-2, impacts would be less than significant.

5.9.2.1.2 Substations. Substations for Segment 1 and Alternative 1 are located on relatively flat alluvial fan or valleyslopes. The sites are not crossed by ephemeral waterways that convey runoff from the upland and adjacent slopes during storm events. Where grading is required for the proposed substation upgrades and expansion, there is a potential for accelerated erosion and siltation in the creeks. With implementation of measures APM Water-1 and Water-2, impacts would be less than significant.

5.9.2.2 Water Quality Degradation Caused by Accidental Release of Environmentally Deleterious Materials

Surface and groundwater quality could potentially be impacted during construction at pole locations, pull sites/laydown areas, or substation expansion sites by an accidental release from a vehicle or motorized piece of equipment (diesel, gasoline, lubrication oil, hydraulic fluid, antifreeze, transmission fluid, or lubricating grease), or from a release of materials during concrete preparation or pouring for the pole foundations. Such spills could wash into nearby drainages or infiltrate into the soil. Surface or groundwater quality could potentially be degraded. However implementation of measures APM Water-2 through Water-4 would reduce impacts to a less than significant level.

5.9.2.3 Increased Runoff Due to Construction of Foundations, Permanent Access Roads, Pull Site/Laydown Areas, and Substations

Construction of the proposed Antelope Substation expansion would require scraping and grading and the installation of concrete foundations and pavement in some areas. These

activities would potentially diminish the storm water infiltration capacity in applicable areas and could result in increased runoff volumes and rates. However, because most of the substation would not be paved, and would be covered with untreated crushed rock, the impact would be less than significant.

Scraping and grading for new access roads would remove vegetation and disturb the soil surface, which would result in a reduction in the infiltration and absorption capacity of the impacted area. The potential impacts would be localized and temporary, and are therefore less than significant.

At each support structure location, a concrete foundation would be constructed. Placement of impervious material would slightly restrict storm water infiltration. However, this impact is considered less than significant because the total area impacted by pole foundations is very small.

5.9.2.4 Construction in a Predicted Dam Inundation Area

T/Ls would be constructed in a dam inundation zone at the southern end of Segment 1. However, the project does not include development of any inhabited structures and would not increase exposure of people or inhabited structures to flooding. There would be no impact from construction in a predicted dam inundation area.

5.9.2.5 Project Construction in Existing Contaminated Sites

T/L towers would not be erected near known sites contaminated with hazardous materials. If any contaminated sites are encountered during construction, workers could potentially be exposed to contaminants or spread the contamination by disposing of soil or groundwater at other locations. Implementation of measures APM Water-5 and Water-6 would reduce impacts to less than significant levels.

5.9.3 Operation Impacts

5.9.3.1 Water Quality Degradation Caused by Accidental Releases of Mineral Oil

Surface water and groundwater quality could potentially be impacted by a mineral oil release from oil-filled electrical equipment at substations. Such releases, either from slow leaks or catastrophic failure, could wash into nearby drainages or infiltrate to the water table. The Federal Clean Water Act and the State Porter-Cologne Water Quality Control Act prohibit the release of any oil to waters of the state. Los Angeles County requires that all necessary measures be taken to regulate runoff from urban uses to protect the quality of surface and

groundwater from detrimental conditions. In the event of a release, surface or groundwater quality could be degraded.

SCE has prepared Spill Prevention, Countermeasure and Control (SPCC) plans for both the Antelope and Pardee substations. The plans would include engineered and operational methods for preventing, containing, and controlling potential releases (for example, by constructing retention pond, motes, or berms), and provisions for a quick and safe cleanup. Current SPCC plans for the existing substations would be revised to include new equipment. Incorporation of SPCC measures into the project design would reduce impacts to a less than significant level.

5.9.4 Mitigation Measures

APM Water-1. An erosion control and sediment transport control plan (part of SWPPP) would be submitted to Los Angeles County along with grading permit applications. Implementation of the plan would help stabilize graded areas and waterways, and reduce erosion and sedimentation. The plan would designate BMPs that would be adhered to during construction activities. Erosion-minimizing efforts such as hay bales, water bars, covers, sediment fences, sensitive area access restrictions (for example, flagging), vehicle mats in wet areas, and retention/settlement ponds would be installed before extensive clearing and grading begins. Standard erosion and dust control practices would be used during construction according to BMPs to protect biological and hydrological resources.

APM Water-2. An environmental training program would be established to communicate environmental concerns and appropriate work practices, including spill prevention and response measures, to all field personnel. A monitoring program would be implemented to ensure that the plans are followed throughout the period of construction.

APM Water-3. The Construction SWPPP would include preparations for quick and safe cleanup of accidental spills. This plan would be submitted with the grading permit application. It would prescribe hazardous materials handling procedures for reducing the potential for a spill during construction, and would include an emergency response program to ensure quick and safe cleanup of accidental spills. The plan would identify areas where refueling and vehicle maintenance activities and storage of hazardous materials, if any, would be permitted.

APM Water-4. Oil-absorbent materials, tarps, and storage drums would be used to contain and control any minor releases of transformer oil. In the event that excess water and liquid concrete escapes from pole foundations during pouring, it would be directed to bermed areas adjacent to the borings where the water would infiltrate or evaporate and the concrete would

remain and begin to set. Once the excess concrete had been allowed to set up (but before it is dry), it would be removed and transported to an approved landfill for disposal.

APM Water-5. If hazardous materials are encountered in excavated soils, work would be stopped until the material is properly characterized and appropriate measures are taken to protect human health and the environment. If excavation of hazardous materials is required, they would be handled, transported, and disposed of in accordance with federal, state, and local regulations.