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RIVERSIDE TRANSMISSION RELIABILITY PROJECT

Hydrology and Water Quality Technical Report

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Hydrology and Water Quality Technical Report

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1.0 INTRODUCTION

1.1 PROJECT OVERVIEW

In 2004, pursuant to Southern California Edison's (SCE) Federal Energy Regulatory Commission (FERC)-approved Transmission Owner (TO) Tariff, Riverside Public Utilities (RPU) submitted a request for SCE to provide additional transmission capacity to meet projected load growth and to provide for system reliability. SCE determined that in order to meet RPU's request, SCE should expand its regional electrical system to provide RPU a second source of transmission capacity to import bulk electric power. This would be accomplished by creation of a new SCE 230 kilovolts (kV) transmission interconnection, the construction of a new SCE substation, the construction of a new RPU substation, and the expansion of the RPU 69 kV subtransmission system. The proposed Project, called the Riverside Transmission Reliability Project (RTRP), would provide RPU with long-term system capacity for load growth, and needed system reliability and flexibility.

The additional transmission capacity to RPU would be available through the proposed SCE Wildlife Substation at 230 kV and then transformed to 69 kV for integration into the RPU electrical system serving the City of Riverside (City). The transformation or "stepping down" of power from 230 kV to 69 kV would take place at the proposed RPU Wilderness Substation. Wilderness and Wildlife Substations would be located adjacent to each other on property that is presently owned by and within the City.

In order to integrate the additional transmission capacity into RPU's electric system, RPU's 69 kV system would be expanded and divided into eastern and western systems. The existing source of energy from Vista Substation would continue to supply the eastern system, while the western system would be supplied through the proposed Wilderness Substation. Creating two separate 69 kV subsystems is necessary for prudent electric utility operation and would also help provide the required level of emergency back-up service, particularly in the event of an interruption to either 230/69 kV substation source.

Several new double-circuit 69 kV subtransmission lines would need to be constructed between 69 kV substations within the City. To accommodate these new subtransmission lines, upgrades would be required at four existing RPU 69 kV substations. The upgrades would take place within the existing boundaries of each substation.

New fiber optic communications would also be required for system control of Wilderness and Wildlife Substations and associated 69 kV and 230 kV transmission lines. The 69 kV communication facilities would be incorporated into the existing RPU fiber optic network. The 230 kV communications would meet SCE's reliability standards.

1.2 WATER RESOURCES OVERVIEW

This technical report was developed as a supporting document to the Draft Environmental Impact Report (DEIR) required under the California Environmental Quality Act (CEQA) for the Proposed Project. It includes analysis of environmental impacts associated with both the Proposed Project (sometimes referred to as the I-15 Route or Build Option B) and the 230 kV Van Buren Offset Route alternative (sometimes referred to as Build Option A). The report was completed prior to refinement of the Proposed Project and may contain outdated component identification information (e.g., segment, line, link identifiers) that may differ in description in the DEIR.

1.3 PROJECT LOCATION

The Project area is located in the western and northern sections of the City of Riverside and extends north into unincorporated areas of western Riverside County. The Project area is bordered to the north by State Route 60 (SR-60) and the existing Mira Loma to Vista SCE Transmission Lines to the west by Interstate 15, and to the south and east by State Route 91 (SR-91). The Santa Ana River roughly divides the Project area into northern and southern halves.

The natural topography of the Project area is valley lowland intersected by a sinuous river corridor, isolated bluffs, and rolling hills, and surrounded by mountain ranges. Elevations within the Project area range from 680 to above 1900 feet above mean sea level (MSL); however, Project components would be located in relatively level portions within this area. The Project area is almost entirely developed; the only remaining large areas of native habitats occur along the Santa Ana River and in the nearby Jurupa Mountains.

The Project area is characterized by rural, urban, and suburban development intermixed with agriculture and undeveloped lands. Extensive areas in the central portion of the Project area (Santa Ana River floodplain) are preserved open space, set aside for recreation, wildlife, and protected species. Rapid population growth in the Project area has resulted in increased development with accompanying changes in land use.

1.4 ENVIRONMENTAL SETTING

The proposed 230 kV and 69 kV transmission line routes, new substation, and substation upgrade sites are located within the Santa Ana River watershed (Hydrologic Unit Code 18070203) in Riverside County, California. The Santa Ana River is the largest stream system in southern California, extending from its headwaters in the San Bernardino Mountains and flowing over 100 miles in a southwesterly direction to its mouth at the Pacific Ocean between Newport Beach and Huntington Beach in Orange County. The Prado Dam and Reservoir is located downstream of the Project area, approximately two miles west of the City of Corona, and provides flood control and water storage for Orange County.

The climate of the Santa Ana Region is classified as Mediterranean: hot, dry summers, and cool, wet winters. Average annual precipitation ranges from 10 inches per year in the coastal plain to 40 inches per year in the San Bernardino Mountains (WRCC 2009). Within the inland alluvial valleys of the Project area, precipitation averages 10 inches per year with most of the precipitation occurring between November and April. High surface water flows occur in the spring and low flows occur in the summer. Winter and spring floods commonly result from storms during wet years. Similarly, during the dry season, infrequent summer storms can cause floods in local streams.

1.5 PROJECT COMPONENTS

The RTRP project components would be located within Riverside County. Overall, the proposed RTRP would require approximately one year (with workers working 10-hour days, five days a week) to construct. The proposed RTRP includes the following:

1. Construction of approximately 10 miles of new double-circuit 230 kV transmission line from the existing Mira Loma – Vista #1 Transmission Line to the proposed Wildlife Substation;
2. Construction of approximately 11 miles of new 69 kV subtransmission lines between 69 kV substations and other existing subtransmission lines within the City of Riverside:
 - Wilderness – Jurupa double-circuit subtransmission lines
 - RERC – Harvey Lynn/Freeman single- and double-circuit subtransmission lines
 - Wilderness – Mountain View double-circuit subtransmission line
3. Construction of two new substations (Wilderness and Wildlife);

4. Upgrade of two 230 kV substations to replace line protection relays (within existing control houses): Mira Loma and Vista;
5. Upgrade of four substations to conduct minor pole re-alignments: Harvey Lynn, Mountain View, Freeman, and RERC; and
6. New fiber optic communications for system control of Wildlife and Wilderness substations and associated 230 kV transmission and 69 kV subtransmission lines.

The Proposed Project adds a new source of transmission capacity to the City by construction of a new double-circuit 230 kV transmission line that would extend from the existing Mira Loma – Vista #1 230 kV Transmission Line to the proposed Wildlife Substation. This new double-circuit 230 kV transmission line would provide additional capacity to the City by interconnecting at the proposed Wildlife Substation, which would be constructed, owned and operated by SCE. To transfer increased capacity to the City, the proposed RPU-owned Wilderness Substation would be constructed immediately adjacent to Wildlife Substation and would transform or “step down” power from 230 kV to 69 kV.

With SCE providing a second point of delivery for bulk power to the City of Riverside’s electrical system, RPU would split its 69 kV subtransmission system into an eastern system served from the existing Vista Substation and a western system served from Wilderness Substation. To facilitate this, several 69 kV subtransmission lines would be constructed within the City by adding circuits to existing routes or by constructing new lines. Upgrades would be made at various existing RPU substations, as well.

1.5.1. Construction of New 69 kV Subtransmission Lines

The proposed Project would include construction of approximately 11 miles of 69 kV sub-transmission lines located in three discrete sections of RPU’s subtransmission system. Within two of these system sections, new lines would consist of multiple subtransmission lines in some segments or would be installed on shared subtransmission poles in others. The proposed new lines include Wilderness – Jurupa Avenue (Segments A and B); RERC – Harvey Lynn/Freeman (Segments A, B, and C); and Wilderness – Mountain View. Construction of the 69 kV subtransmission line component of the Project would require the following tasks:

- Surveying;
- Setting up Marshalling Yards;
- Construction Inspection;
- Foundations;
- Steel (Hauling, Assembly, and Erection);
- Wreck-Out (Conductors and Structures);
- Guard Poles;
- Conductor Installation;
- Transfer Existing Facilities;
- Possible Underground Activities (RERC – Harvey Lynn/Freeman segment only);
- Transmission Pole Installation Activities;
- Conductor Installation; and
- Clean-Up

Most sections of the new 69kV subtransmission lines would be installed on existing ROW and would not require new access road construction, although many of the existing structures would be replaced as part of construction. Subtransmission line steel poles would be a mix of direct-embedded poles and poles requiring foundation construction.

Wilderness – Jurupa Avenue

Segments A and B

Segments A and B are proposed to consist of a double-circuit 69 kV subtransmission line constructed from the proposed Wilderness Substation to the existing double-circuit 69 kV subtransmission line located along Jurupa Ave. and originating from RERC Substation. The double-circuit lines would exit Wilderness Substation to the south and would be constructed along both sides of Wilderness Ave. within public rights-of-way. Segment A would be located on the west side of Wilderness Ave. to Jurupa Ave. and Segment B would be located on the east side of Wilderness Ave. to Jurupa Ave. Both lines would then interconnect to the existing 69 kV double-circuit line. Total length of Segment A would be 1,647 feet, and Segment B 1,588 feet.

RERC – Harvey Lynn/Freeman

Subtransmission lines would be needed as part of the Project to connect the RERC Substation to both Harvey Lynn and Freeman Substations. The subtransmission lines would be single-circuit connections between the substations but would be constructed utilizing both double-circuit and single-circuit poles. The descriptions of these subtransmission lines are described below within Segments A, B, and C.

Segment A

Segment A would be constructed with double-circuit 69 kV poles that would carry both the RERC – Harvey Lynn and RERC – Freeman 69 kV subtransmission lines. From RERC Substation, Segment A would cross over the southern perimeter of the Riverside Water Quality Control Plant and then proceed south on Acorn Ave and west on Jurupa Ave. At the intersection of Jurupa Ave. and Van Buren Blvd., Segment A would continue south along Doolittle Ave. and then Van Buren Blvd. to Arlington Ave, where it would head west for approximately one mile. At the intersection of Arlington Ave. and Rutland Ave., Segment A would turn south and then west on Cypress Ave. to Crest Ave. continuing south along Crest Ave. At the intersection of Crest and Wells Avenues, the line would follow Wells to the intersection of Wells Ave. and Tomlinson Ave., following Tomlinson for a short distance before turning southwest onto Mull Ave. and continuing to the intersection with Tyler St. At this intersection, Segment A ends by “splitting” the circuits into two separate single-circuit subtransmission lines (Segments B and C as described below). The total length of the RERC-Harvey Lynn/Freeman Segment A would be 4.4 miles.

Segment B

Segment B consists of a single-circuit 69 kV subtransmission line beginning from the intersection of Mull Ave. and Tyler St. Segment B would continue southwest along Mull Ave., continue southwest along Mull Ave., then northwest on Mobley Ave., and then south along Jones Ave. At the intersection of Jones Ave. and Cook Ave., Segment B would join an existing single-circuit 69 kV subtransmission line and would be placed on double-circuit poles continuing to Hiers Ave., where it would leave the existing 69 kV line, and then rejoin it along Minnier Ave., continuing to Harvey Lynn Substation. This segment would have a length of 1.5 miles.

Segment C

Segment C would begin at the same intersection as Segment B (Mull Ave. and Tyler St.). The single-circuit subtransmission line would continue south along Tyler St. on single-circuit poles to the intersection of Tyler St. and Magnolia Ave. From this location, Segment C would join with an existing 69 kV subtransmission line onto new double-circuit poles. Segment C would then continue south along Tyler St. and then east along Indiana Ave. into Freeman Substation. To extend from the end of Segment A to Freeman Substation, Segment C would have a length of 3.2 miles.

Wilderness – Mountain View

One double-circuit 69 kV subtransmission line would be constructed from the proposed Wilderness Substation to an existing 69 kV line adjacent to Mountain View Substation. The new double-circuit line would exit Wilderness Substation and parallel the Santa Ana River eastward for approximately 1,000 feet, and then travel along Industrial Avenue to the west side of the Union Pacific railroad corridor and near Martha McLean Anza Narrows Park. The line would then head southeast, parallel to but outside of the railroad right-of-way, and then east parallel to Jurupa Ave., to the connection point with the existing 69 kV subtransmission line near Mountain View Substation. This new 69 kV subtransmission line would have a length of 1.4 miles.

1.5.2. Construction of New 230 kV Double-Circuit Transmission Line

The proposed Project would include construction of approximately 10 miles of 230 kV transmission line. The 230 kV transmission line component of the Project would require the following construction tasks:

- Surveying;
- Setting up Marshalling Yards;
- Right-of-Way Clearing;
- Road and Landing Work;
- Guard Structure Installation;
- Install Tubular Steel Pole (TSPs) Foundations;
- TSP - Hauling, Assembly, and Erection;
- Install Lattice Steel Towers (LSTs);
- LST - Hauling, Assembly, and Erection;
- Conductor Installation;
- Guard Structure Removal; and
- Restoration

Under the Proposed Project, new double-circuit 230 kV transmission line would be constructed that would “loop” the existing Mira Loma – Vista #1 230 kV Transmission Line into the proposed Wildlife Substation. The “loop” would be created by connecting each of the new circuits into the existing single-circuit line between Mira Loma and Vista Substations. The interconnection would occur at approximately the point where the Mira Loma – Vista #1 Transmission Line crosses Wineville Avenue, east of Interstate 15. From here, the new double-circuit line would run south and then west to roughly follow I-15 south, cutting east at 68th Street to a Santa Ana River crossing point within Goose Creek Golf Course. It would then continue east, mostly within the City of Riverside and parallel to the Santa Ana River. In some locations, the line would cross into the Hidden Valley Wildlife Area. Eventually the line crosses over Van Buren Boulevard, and then through the City of Riverside Water Quality Control Plant, before reaching the proposed Wildlife Substation on the south side of the Santa Ana River, east of Wilderness Avenue.

Temporary marshalling yards would be needed along or near the proposed transmission lines for construction crews to store materials and vehicles. Access to structure sites for construction and maintenance would be required at several locations along the corridors. Access work, which would take place primarily within the ROW, would consist of making improvements to existing roads, constructing new roads, and constructing spurs to individual structure sites.

Most new permanent access roads are proposed for construction on previously disturbed areas. Any temporary roads constructed would be removed, and the ground would be restored to its original contour when the line is completed. Land rights, usually easements, for access roads would be acquired from

property owners as necessary. After the line is built, access roads would also be used for line maintenance. Subtransmission lines are located along or within existing public road ROWs and would not require new access road construction.

The ROW would not be de-vegetated; however, limited cutting of trees and tall brush in the ROW may occur if they interfere with the construction, operation, and maintenance of the transmission line. Trees would be cut outside the ROW only if, due to their height and condition, they may pose a threat to the transmission line. All potential tree cutting within the City of Riverside would require approval by the City’s Public Works Department.

Steel structures for the 230 kV transmission lines would be anchored to the ground with concrete footings. Typically, the footing site is excavated, a steel cage and anchor plates or bolts are positioned, and the excavated site is filled with formed concrete. Structures are assembled at the site and lifted into place by a large crane. Drilling mud will be used for wet holes. The structures are bolted to the footings after they are set in place. After transmission structures are in place, conductors are strung from structure to structure through pulleys. Subtransmission line wood poles would be direct-embedded and would not require foundation construction. Subtransmission line steel poles would be a mix of direct-embedded poles and poles requiring foundation construction.

TABLE 1A. ELECTRICAL DESIGN CHARACTERISTICS TRANSMISSION LINES

Feature	230 kV Transmission Line	69 kV Subtransmission Lines
Line Length	10 miles	11 miles
Type of Structure	57 Tubular Steel Poles 24 Lattice Steel Towers	Single Wood or Steel Pole
Structure Height	90-170 feet (TSPs) 113-180 feet (LSTs)	65-90 feet
Structure Footprint	6-10 ft diameter (TSPs) 34 feet x 34 feet (LSTs)	1.5-6 ft diameter
Span Length	600-800 feet typical Up to 2,200 feet	150-300 feet
Number of Structures per Mile	7-8	20-30
Transmission Line ROW	100 feet	Up to 40 feet
Pulling/Tension Sites	100 x 400 feet	100 x 25 feet
Circuit Configuration	Double-circuit	Double-circuit & Single-circuit
Conductor Size	Double Bundle 1590 kcmil ACSR ¹ 45/7 “Lapwing”	954 kcmil ACSR

1: Aluminum conductor, steel-reinforced

Note: All estimates above are preliminary and are subject to change upon final engineering.

1.5.3. Construction of New Substations

The proposed Project would also include construction of one 230/69 kV substation (Wilderness Substation) and one 230 kV switching station (Wildlife Substation). The proposed substations would require the following construction tasks:

- Surveying;
- Setting up Marshalling Yards;

- Grading;
- Civil Engineering Activities;
- Electrical Engineering Activities;
- Transformer Activities (69 kV only);
- Paving Activities;
- Fencing Activities; and
- Testing Activities

Wilderness Substation

The new RPU 230/69 kV Wilderness Substation would be located on 6.4 acres adjacent to the southern end of SCE's Wildlife Substation. Wilderness Substation would be connected to the SCE Wildlife Substation via two short 230 kV transmission line spans over a separating fence between the two substations. The voltage would be transformed to 69 kV through two transformers located within the Wilderness Substation. Electricity would be delivered to the RPU electrical system and ultimately City customers via 69 kV subtransmission lines exiting the substation. As described above, Wilderness Substation would be separated from the Wildlife Substation by a chain link fence. The outside perimeter of the substation would be built with a 10-foot block wall. The anticipated construction duration for the 230/69 kV Wilderness Substation is approximately 125 working days (6.3 months).

Wildlife Substation

The SCE Wildlife Substation would be constructed on three acres of land currently owned by RPU and located near the northeast corner of Wilderness Avenue and Ed Perkic Street. This area is within the City limits. If the Project is approved, SCE would purchase property from RPU to accommodate the new Wildlife Substation. The proposed substation would connect to the SCE system via the proposed double-circuit 230 kV transmission line described above, and would also connect into RPU's proposed adjacent Wilderness Substation. The proposed substation would be enclosed on three sides by a ten-foot high perimeter wall typically constructed of light-colored decorative blocks, with the fourth side being the shared chain-link fence separating Wildlife Substation from Wilderness Substation.

1.5.4. 69 kV Substation Upgrades

To accommodate the new subtransmission lines to be added to the RPU 69 kV system, upgrades would be required at four existing RPU 69 kV substations. Upgrades would include minor structure (pole) re-alignments outside of substations to accommodate modifications of substation layout. All other upgrades would take place within the existing boundaries of each substation.

The four existing 69 kV substations within the City that would require upgrades are Harvey Lynn, Mountain View, Freeman, and RERC. The upgrades consist of the addition of new 69 kV power circuit breakers and associated disconnect switches and busing at RERC and Harvey Lynn Substations, as well as protective relay and control modifications to all four substations. All substation upgrades and equipment installations would occur within the existing footprint.

- **Harvey Lynn Substation.** The substation would be upgraded to include a new 69 kV circuit breaker and associated equipment to form a new line position for relocation of the existing Freeman line. The existing Freeman line position would be reconfigured to terminate a new line to RERC Substation. New line protection would be installed for both the new and reconfigured lines. A new Substation Automation System (SAS) and digital fault recorder would be integrated into the new and existing equipment.

- **Mountain View Substation.** The substation would be reconfigured to add two new lines to Wilderness Substation. One line would terminate in the existing Riverside line position and the other in the existing Freeman line position. New line protective relaying would be included for the two new Wilderness lines.
- **Freeman Substation.** The substation modifications would include changing the existing Mountain View line into the new Wilderness line and adding a new line to the RERC switchyard. A line bypass switch would be installed to directly connect the Orangecrest and Riverside lines and bypass the Freeman Substation. The Orangecrest line termination would be disconnected and the new RERC line would be terminated in its place. New line protection would be added for the relocated line and the one new line. A new SAS and digital fault recorder would be integrated into the new and existing equipment.
- **RERC Substation.** Two new lines would be installed and connected to Harvey Lynn Substation and Freeman Substation. The two existing lines connected to Mountain View and Riverside Substations would be reconnected to Wilderness Substation.

1.5.5. 230 kV Substation Upgrades

Line protection relays would be replaced at both Mira Loma and Vista Substations as part of the Proposed Project. The relay replacements would be placed within existing control houses within each substation.

1.5.6. New Telecommunication Facilities

New fiber optic communications would be required for system control of Wildlife and Wilderness Substations and associated 230 kV transmission and 69 kV subtransmission lines. Communication facilities supporting RTRP 69 kV subtransmission components would be incorporated into the existing RPU fiber optic network. The communications facilities that would support the 230 kV transmission line would meet SCE's reliability standards and connect to the existing SCE network at multiple locations. The 230 kV communication facilities would require construction of diverse communication paths for operation and monitoring of the substation and transmission line equipment. The diverse paths would connect Wildlife Substation to Mira Loma Substation, and Wildlife Substation to Vista Substation. New telecommunication infrastructure would be installed to provide protective relay circuit, Supervisory Control and Data Acquisition (SCADA) circuit, data, and telephone services to Wildlife Substation. For the 69 kV portion of the Proposed Project, telecommunications lines would be installed on new or existing 69 kV subtransmission poles.

SCE Fiber Optic Lines

The Proposed Project would include connecting three diverse fiber optic telecommunication lines to the existing SCE fiber optic network. These three lines would be required for the protective relay circuit between the proposed Wildlife Substation and Mira Loma Substation, for the protective relay circuit between the proposed Wildlife Substation and Vista Substation, and the fiber optic telecommunication line that would provide the SCADA circuit, data, and telephone services to the proposed Wildlife Substation. Approximately seven miles of new fiber optic cable would be constructed as part of the Proposed Project, of which approximately six miles would be placed on existing overhead distribution poles and approximately 3,900 feet would be installed in underground conduit.

Path 1: The first fiber optic telecommunication line is OPGW (Optical Ground Wire) that is proposed for installation on the new 230 kV transmission line structures for the Proposed Project and described above

in Section 2.3.1. This OPGW line would intercept and connect to the existing fiber wrap cable on OHGW (Over Head Ground Wire) on the Mira Loma – Vista #1 transmission line tower.

Path 2: A new ADSS (All Dielectric Self Supporting) fiber optic telecommunication line is proposed for installation on the existing SCE distribution structures between the existing Pedley Substation and the new Wildlife Substation, with a path length of approximately six miles. This new line would tie into the existing Mira Loma to Corona fiber optic telecommunication line. A preliminary engineering survey conducted in 2010 of the approximate 100 distribution poles in the existing ADSS fiber optic telecommunication route between Pedley substation and the Wildlife Substation site determined that no new poles would need to be added, and that no existing poles would need to be replaced. However, a final determination of the need for pole replacement will not be made until final engineering is completed. The fiber optic telecommunication line would enter into Pedley and Wildlife Substations in an underground conduit that would be installed to the fence line of the substations for fiber optic telecommunication line entry. This construction method allows ADSS cables on the distribution line poles to be brought into the substations. The approximate length of the underground conduit outside the substations' property lines would be 200 feet at Pedley Substation and 500 feet at Wildlife Substation. In addition, because of the proximity of the proposed new 230 kV transmission line to the existing SCE distribution line, five fiber optic telecommunication line intersection locations would need to be placed underground for cable path reliability. The required underground paths for the proposed fiber optic telecommunication line are as follows:

- The first proposed fiber optic telecommunication line crossing location would be located approximately 0.25 miles west of the Harrell Street and Etiwanda Avenue intersection under the existing Mira Loma – Vista 230 kV transmission line. The two cables at the crossing location would be: 1) the existing ADSS cable on the distribution line poles, and 2) the existing fiber wrap cable on Mira Loma – Vista 230 kV transmission line OHGW. An approximately 900-foot section of the existing ADSS fiber cable would need to be placed underground. For this diverse path, both (crossed) fiber cables would carry protection circuits to protect against the event that the circuit would fail as a result of the crossed fiber cables failing concurrently.
- The second proposed fiber optic telecommunication line crossing location would be located in an area south of the Santa Ana Regional Park, adjacent to residential areas along the proposed 230 kV transmission line route. The two intersecting fiber cables would be: 1) the proposed new Path 2 ADSS fiber optic telecommunication route between Pedley Substation and new Wildlife substation, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 1,000-foot section of the proposed ADSS fiber optic telecommunication line would need to be placed underground in order to prevent single-point failure for the circuit as a result of the crossing fiber optic telecommunication lines.
- The third proposed fiber optic telecommunication line crossing location would be located in an area approximately 1,000 feet west of the proposed Wildlife Substation between Wilderness Avenue and Payton Avenue, along the existing distribution line north of Jurupa Avenue around the northwest perimeter of the existing building and parking area. The two intersecting fiber optic telecommunication lines would be: 1) the proposed new Path 2 ADSS route between Pedley Substation and the new Wildlife substation, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 600-foot section of the proposed ADSS fiber optic telecommunication line would need to be placed underground in order to prevent single point failure for the circuit as a result of the crossing fiber optic telecommunications lines.
- The fourth proposed fiber optic telecommunications line crossing location would be located

approximately 500 feet southwest of Pedley Substation, close to Pedley Substation Rd. The two cables at the crossing location would be: 1) the existing ADSS cable on the 12 kV pole line, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 400-foot section of the proposed ADSS fiber optic telecommunication line would need to be placed underground in order to prevent single point failure.

- The fifth proposed fiber optic telecommunications line crossing location would be located approximately 1,000 feet west of Pedley Substation on the Lab 12 kV distribution pole line. The two cables at the crossing location would be: 1) the existing ADSS cable on the 12 kV pole line, and 2) the Path 1 OPGW on the proposed 230 kV transmission line. An approximately 300-foot section of the proposed ADSS fiber optic telecommunication line would need to be placed underground in order to prevent single point failure.

Path 3: The third proposed SCE fiber optic telecommunications line associated with the 230 kV portion of the Proposed Project would connect the new Wildlife Substation and a fiber optic demarcation point to the Vista Substation to meet the telecommunication diverse path requirements. SCE would lease fiber optic strands within the RPU fiber optic network to create this third telecommunication path. Existing and available fiber optic cable is in place for most of this pathway between Wildlife and Vista Substations. The new portion of this path would utilize planned RPU telecommunication fiber optic cable to be installed along the proposed 69 kV subtransmission lines as described below.

RPU Fiber Optic Telecommunication Lines

As part of the Proposed Project, the existing RPU fiber optic network would be extended approximately 2,000 feet from the intersection of Jurupa Avenue and Wilderness Avenue to the proposed Wilderness Substation. The new fiber optic telecommunication line would be installed on the new 69 kV subtransmission line poles that would be constructed along both sides of Wilderness Avenue (Wilderness – Jurupa Ave., Segments A and B). This new fiber optic telecommunication line would connect the proposed Wilderness Substation to RPU’s existing communication system. Additionally, a new fiber optic telecommunication line would be included as part of the new Wilderness – Mountain View subtransmission line construction.

1.5.7. Construction Work Force and Schedule

Construction of the 230 kV components of the Project is scheduled to begin after the issuance to SCE of a Certificate of Public Convenience and Necessity (CPCN) by the California Public Utilities Commission (CPUC). The CPUC review of SCE’s CPCN application, which would include the Final EIR, is expected to be completed within 12 months following the City of Riverside’s CEQA Lead Agency determination for the Project. Construction activities associated with the Proposed Project consist of new 230 kV transmission line and 69 kV subtransmission line construction, building two new substations (Wildlife and Wilderness), and upgrading four existing 69 kV substations.

Project components would likely be constructed using a variety of construction crews. These would consist of successful competitively bid contractor(s) and subcontractors, SCE crews (230 kV transmission line, telecommunications, and Wildlife Substation only) or RPU crews (69 kV subtransmission lines, telecommunications, Wilderness Substation, 69 kV substation upgrades). RPU and SCE would be responsible to provide quality assurance, environmental protection oversight, and final design approval. All construction work would be performed with conventional construction techniques in accordance with SCE and RPU construction specifications and other industry-specific standards. Construction crews would be required to work within the stipulations of documents governing compliance with regional environmental, storm water pollution prevention, and fire prevention criteria, as well as owner/operator

best management practices, standardized environmental protection elements, and those additional mitigation measures identified within the DEIR.

The workforce necessary for construction of the proposed Project is anticipated to range from approximately 10 to 100 persons, with an estimated average daily workforce of 50 persons. Summaries of the labor force requirements and primary equipment associated with the various Project construction activities can be found in Chapter 2, Proposed Project, of the DEIR.

1.6 CONSTRUCTION SCHEDULE

In general, construction efforts would occur in accordance with accepted construction industry and RPU and SCE standards. Construction activities would generally be scheduled during daylight hours, more specifically 6:00 a.m. to 6:00 p.m. (June to September) and 7:00 a.m. to 6:00 p.m. (October to May), Monday through Friday. In the event construction activities need to occur outside the local noise ordinance, SCE would obtain any variance as necessary from appropriate jurisdictions. All materials associated with construction efforts would be delivered by truck to established marshalling yards. Delivery activities requiring major street use would be scheduled to occur during off-peak traffic hours.

1.6.1. 230 kV Components (SCE)

SCE anticipates that construction of the proposed 230 kV portion of the Proposed Project (which includes the transmission line, Wildlife Substation, and associated telecommunications work) would take approximately 370 working days. Construction would commence following CPUC and regulatory agency approval, final engineering, and procurement activities.

1.6.2. 69 kV Components (RPU)

RPU anticipates that construction of components of the proposed 69 kV portion of the Proposed Project (which includes the subtransmission lines, Wilderness Substation, substation upgrades, and associated telecommunications work) could begin following publication of the Notice of Determination on the Final EIR by the RPU Board and Riverside City Council, including any conditions of approval and statements of overriding considerations (anticipated early 2012). Completion would be timed to synchronize completion date with the 230 kV portion of the Proposed Project, anticipated to be May 2015.

2.0 REGULATORY FRAMEWORK

2.1 FEDERAL AND STATE

Section 404 Clean Water Act (CWA). Waters of the U.S. including wetlands are subject to United States Army Corps of Engineers (USACE) jurisdiction under Section 404 of the CWA. A Section 404 permit is required for the discharge of dredged or fill material into Waters of the U.S. The Los Angeles District of the USACE would provide review and permitting services for this Project.

Section 401 CWA. Pursuant to Section 401 of the CWA, a water quality certification is required from the Santa Ana Regional Water Quality Control Board (RWQCB) for Section 404 permit activities. The Santa Ana RWQCB certifies that the discharge complies with state water quality standards and ensures that there is no net loss of wetlands through impact avoidance, minimization, and mitigation.

Section 303(d) Clean Water Act. Section 303(d) unites the water quality management strategies of the CWA. Section 303(d) requires that states make a list of waters that exceed the minimum level of pollutants put in place by the CWA. For waters on this list the states must develop total maximum daily loads (TMDLs) which account for all sources of the pollutants that caused the water to be listed. The TMDLs must account for contributions from both point sources and nonpoint sources, as defined by Section 502 of the CWA. In California, the State Water Resources Control Board (SWRCB) has interpreted state law (see Porter-Cologne Water Quality Control Act below) to require that implementation of TMDLs be addressed when incorporated into Basin Plans (water quality control plans).

Construction Stormwater Program. The State Water Resources Control Board and the nine RWQCBs implement water quality regulations under the federal CWA and the California Porter Cologne Water Quality Control Act. Existing water quality regulations require compliance with the National Pollutant Discharge Elimination System (NPDES) for discharges of stormwater runoff associated with construction activity.

Dischargers are required to obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction and Land Disturbance Activities (Construction General Permit, 2009-2009-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground, such as stockpiling or excavation, but does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP should contain a site map(s) which shows the construction site perimeter, existing and proposed structures, lots, roadways, stormwater collection and discharge points, general topography both before and after construction, and drainage patterns across the Project. The SWPPP must list Best Management Practices (BMPs) the discharger will use to protect stormwater runoff and the placement of those BMPs. Additionally, the SWPPP must contain a monitoring program for visible and non-visible pollutants, and to changes in water quality such as substantial alteration in pH.

Lake or Streambed Alteration Agreement. Sections 1601-1603 of the California Department of Fish and Game (CDFG) Code protect the natural flow, bed, channel, and bank of any river, stream, or lake designated by the CDFG, in which there is at any time an existing fish or wildlife resource, or from which these resources derive benefit. General Project plans must be submitted to CDFG in sufficient detail to indicate the nature of a project for construction, if the project would:

- Divert, obstruct, or change a streambed, bank, or riparian zone

- Use material from the streambeds
- Result in the disposal or deposition of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a stream

The Inland Deserts Region of the CDFG serves Riverside and San Bernardino Counties.

Porter-Cologne Water Quality Control Act. The Porter-Cologne Water Quality Control Act defines “water quality objectives” as the allowable “limits or levels of water quality constituents or characteristics which are established for the reasonable protection of beneficial uses of water or the prevention of nuisance within a specific area.” Thus, water quality objectives are intended to protect the public health and welfare, and to maintain or enhance water quality in relation to the existing and/or potential beneficial uses of the water. Water quality objectives apply to both Waters of the United States and Waters of the State.

Basin Plans. The SWRCB requires individual Regional Water Quality Control Boards (RWQCBs) to develop Basin Plans (water quality control plans) designed to preserve and enhance water quality and protect the beneficial uses of all Regional waters. Specifically, Basin Plans designate beneficial uses for surface waters and groundwater, set narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the States antidegradation policy, and describe implementation programs to protect all waters in the Regions. In addition, Basin Plans incorporate by reference all applicable State and Regional Board plans and policies, and other pertinent water quality policies and regulations. The RTRP is under the jurisdiction of the Basin Plan of the Santa Ana Regional Water Quality Control Board.

2.2 REGIONAL AND LOCAL

The Riverside County Flood Control and Water Conservation District is located in the western portion of Riverside County and regulates floodplain and drainage development. The District requires an encroachment permit for work within the District’s rights-of-way, which include the Santa Ana River floodplain. The permit application must include a copy of the approved and filed CEQA document (e.g., Environmental Impact Report), proof of compliance with the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), National Pollutant Discharge Elimination System (NPDES) requirements, and compliance with all applicable regulatory permits. Encroachment permits within the Santa Ana River watershed also must meet the requirements of Section 6 of the Riverside County Drainage Area Management Plan.

3.0 INVENTORY METHODS

Water resources within the Project study area were inventoried and evaluated using Geographic Information System (GIS) data obtained from government agencies, review of relevant studies and agency programs, agency consultation, and inspection of resources in the field (February 2007).

Wetlands were identified within the Project area primarily using the National Wetland Inventory (NWI) from the U.S. Fish and Wildlife Service. The Project area comprises a total of four quadrangle maps: Corona North, Fontana, Riverside West, and Guasti. NWI maps were available for all quadrangles except Fontana. Wetlands associated with the Santa Ana River that were not available from NWI were photo-interpreted using aerial imagery and reference NWI classifications. The NWI provides approximate locations of wetlands one acre or larger and may or may not be jurisdictional based on the 1987 USACE Wetlands Delineation Manual.

4.0 INVENTORY RESULTS

4.1 230 KV TRANSMISSION CORRIDORS

4.1.1. Surface Water

The upper reach of the Santa Ana River flows intermittently and often runs dry. The upper reach receives flow from three tributaries and receives discharge from the Rialto Waste Water Treatment Plant and the Rapid Infiltration and Extraction Facility. The lower reach of the Santa Ana River has perennial flow, low gradient, and slow velocity. There are two tributaries in the lower reach, which consists of flow from the Riverside Water Quality Control Plant (WQCP) and runoff from Hole Lake. These tributaries merge and flow parallel to the river and discharge to the Hidden Valley Wildlife Area and Wetlands Enhancement Area. These wetlands provide tertiary treatment of the effluent from the Riverside WQCP by removing nitrogen. There are three additional intermittent tributaries further downstream that contribute flow to the Hidden Valley wetlands. The drainage running parallel to Bain Street is a concrete-lined channel. Under base-flow conditions, a substantial percentage of the Santa Ana River consists of treated wastewater (Mendez and Belitz 2002).

One man-made water body, Hole Lake, is located on the south side of the river, west of Van Buren Boulevard. Hole Lake is a wide, vegetated channel that receives flow through runoff (Figure 1). The 1,500-acre Hidden Valley Wildlife Area and Wetlands Enhancement Area is located downstream of the Van Buren Boulevard bridge in the southwestern portion of the Project area. The wetlands were constructed by the City of Riverside to provide additional nitrogen removal for effluent from the Riverside WQCP (RWQCB 2004).

4.1.2. Groundwater

As precipitation and snowmelt flow into creeks, streams, and rivers, much of the water percolates into the ground. These alluvial groundwater basins cover nearly 40 percent of the State of California. Approximately 43 percent of Californians obtain drinking water from groundwater, through both municipal and privately owned wells. The RTRP study area crosses three groundwater sub-basins within the Upper Santa Ana Valley Groundwater Basin: the Riverside-Arlington Sub-basin, the Temescal Sub-basin, and a portion of the Chino Sub-basin. These sub-basins are described in California's Groundwater Bulletin 118.

Well data was obtained from the Western Municipal Water District (WMWD), and analyzed to estimate local water table depths within the study area. North of the Santa Ana River, available depth to water measurements range from an average of 14.7 feet along the Santa Ana River to 53.5 feet just south of SR-60. South of the river, available depth to water measurements range from 10.6 feet near the intersection of Arlington Avenue and Tyler Street to 37.3 feet near Crestlawn Cemetery (WMWD 2008).

4.1.3. Floodplain

The floodplain of the Santa Ana River has been significantly modified for flood control and development. Portions of the river within the study area have been channelized with levees and other flood control structures constricting the natural floodplain. Figure 1 presents 100-year floodplain data from the Federal Emergency Management Agency (FEMA) National Flood Insurance (FIRM) maps and 10-year floodplain data for selected areas based on modeling and field delineation (POWER 2009). Table 1 presents an inventory of floodplain resources potentially affected by the 230 kV alternative routes.

4.1.4. Water Quality

Water quality is the physical, chemical, and biological characteristics of water, when assessed according to standards related to ecosystem health, the safety of drinking water, and the safety of human contact. The State of California Water Resources Control Board and the nine Regional Boards are responsible for setting policies and developing regulations for the implementation of water quality control programs mandated by federal and state water quality statutes and regulations. Water Quality Control Plans (Basin Plans), developed and implemented by the RWQCBs, consider regional beneficial uses, water quality characteristics, and water quality problems (RWQCB 1995).

Surface and groundwater quality objectives in the study area are described in the Water Quality Control Plan (Basin Plan) for the Santa Ana Region. Additional groundwater quality objectives are described in California's Groundwater Bulletin 118. Water quality objectives were established to protect the existing and potential beneficial uses of surface and groundwater.

Beneficial uses are goals or desired uses of a water body as specified in the Basin Plan, and may include existing, proposed or, in some cases, historic uses. Beneficial uses for Reach 3 of the Santa Ana River are Agricultural Supply (AGR), Ground Water Recharge (GWR), Water Contact Recreation (REC-1), Non-contact Water Recreation (REC-2), Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), and Spawning, Reproduction, and/or Early Development (SPWN).

Reach 3 of the Santa Ana River lies within the Middle Santa Ana River Watershed Management Area (WMA), which is managed by the RWQCB. The Middle Santa Ana River WMA extends from Prado Dam south of the Project area to the foothills of the San Bernardino and San Gabriel Mountains.

Non-point source (NPS) pollution is the leading cause of water quality impairment in the region. The Middle Santa Ana River WMA is impaired from NPS pollutants including nutrients, pathogens, sediment, and dissolved minerals/salinity/chloride from agriculture, urban, and hydromodification sources. The RWQCB has identified construction-related erosion and sedimentation as a significant NPS problem in the WMA (RWQCB 2004).

Twenty six (26) miles of the Santa Ana River, Reach 3 are listed on the 2002 Clean Water Act (CWA) Section 303(d) list of water quality impaired segments. The list was approved by the United States Environmental Protection Agency (USEPA) in July 2003. The cause of impairment is pathogens (fecal coliform and *E. coli*) from dairies (confined animal feeding operations) in the Chino Basin, which is downstream of the study area. In June 2007, the Santa Ana River, Reach 3 was placed in the Water Quality Limited Segments Being Addressed category of the Section 303(d) list because a Total Maximum Daily Load (TMDL) has been approved by USEPA and an implementation plan has been approved (SWRCB 2007).

The TMDL for Reach 3 of the Santa Ana River establishes compliance targets for fecal coliform and *E. coli*:

- *Fecal Coliform*: 5-day sample/30-day logarithmic mean less than 180 organisms per 100 mL and not more than 10% of the samples to exceed 360 organisms per 100 mL for any 30-day period;
- *E. coli*: 5-sample/30-day logarithmic mean less than 113 organisms per 100 mL and not more than 10% of the samples to exceed 212 organisms per 100 mL for any 30-day period (CDM 2008).

Groundwater quality in the study area is predominantly calcium-sodium bicarbonate, with average total dissolved solid (TDS) content ranging from 200 mg/l in the Chino Sub-basin to 889 mg/l in the Riverside-Arlington Sub-basin. Impairments to groundwater in the Temescal and Chino Sub-basins include primary inorganics and nitrates. Information on groundwater impairments to groundwaters in the Arlington-Riverside Sub-basin was available (DWR 2003).

TABLE 1. SURFACE WATER, WETLAND, AND FLOODPLAIN CROSSINGS – 230 kV TRANSMISSION STRUCTURES AND ACCESS ROADS

Link Name	Disturbance Area Type or Road Number	FEMA 100-year Floodplain Crossing (Y/N)	Water Crossing Description	National Wetlands Inventory Wetland Crossing
A	Tubular Steel Pole 2	N	None	PSSW
	Tubular Steel Pole 19	N	None	PSSW
	Tubular Steel Pole 20	N	Canal	PSSW
	TSP Assembly Area (TSP 2)	N	None	PSSW
	TSP Assembly Area (TSP 5)	N	Intermittent Stream	None
	TSP Assembly Area (TSP 19)	N	Canal	PSSW
	TSP Assembly Area (TSP 20)	N	Canal	PSSW
	TSP Assembly Area (TSP 22)	N	Canal, Intermittent Stream	PSSW
	Pulling & Tensioning Site (TSP 7)	N	Canal (West Riverside Aqueduct)	None
	Pulling & Tensioning Site (TSP 8)	N	Canal (MWD Upper Feeder)	None
	Pulling & Tensioning Site (TSP 9)	N	Canal (MWD Upper Feeder)	None
	Pulling & Tensioning Site (TSP 10)	N	Canal (West Riverside Aqueduct)	None
	Pulling & Tensioning Site (TSP 22)	N	Canal, Intermittent Stream	None
	Access Road 3	N	Canal	None
Access Road 99	N	Intermittent Stream	POWKZ	
B	Tubular Steel Pole 29	N	None	PSSY
	Tubular Steel Pole 31	N	Canal	None
	Tubular Steel Pole 195	N	Canal	None
	TSP Assembly Area (TSP 24)	N	Intermittent Stream	None

Link Name	Disturbance Area Type or Road Number	FEMA 100-year Floodplain Crossing (Y/N)	Water Crossing Description	National Wetlands Inventory Wetland Crossing
	TSP Assembly Area (TSP 34)	N	Intermittent Stream	None
	TSP Assembly Area (TSP 50)	N	Canal	None
	TSP Assembly Area (TSP 195)	N	Canal	None
	Pulling & Tensioning Site (TSP 25)	N	Intermittent Stream	None
	Pulling & Tensioning Site (TSP 29)	N	Canal	PSSY
	Pulling & Tensioning Site (TSP 34)	N	Intermittent Stream	PSSW
	Access Road 10	N	Aqueduct	None
D	TSP Assembly Area (TSP 22)	N	Canal, Intermittent Stream	PSSW
	Access Road 3	N	Canal	None
	Access Road 20	N	Canal	None
H	TSP Assembly Area (TSP 55)	N	Intermittent Stream	None
	Pulling & Tensioning Site (TSP 61)	N	Canal	None
	Access Road 30	N	Intermittent Stream	None
	Access Road 50	N	Canal	None
I	TSP Assembly Area (TSP 65)	N	Canal	None
	Pulling & Tensioning Site (TSP 61)	N	Canal	None
	Access Road 35	N	Canal	None
	Access Road 50	N	Canal	None
J	Tubular Steel Pole 66, 67, 68, 87, 89	Y	None	None
	Pulling & Tensioning Site (TSP 61)	N	Canal	None
	Pulling & Tensioning Site (TSP 89)	N	Intermittent Stream	None
	Access Road 41	Y	None	None
	Access Road 42	Y	None	None
	Access Road 50	N	Canal	None

Link Name	Disturbance Area Type or Road Number	FEMA 100-year Floodplain Crossing (Y/N)	Water Crossing Description	National Wetlands Inventory Wetland Crossing
K	Tubular Steel Pole 111	Y	None	None
	Tubular Steel Pole 112	Y	None	R2FLW
	Tubular Steel Pole 113	Y	None	None
	Access Road 53	Y	None	PSS/FLW, R2FLW
	Access Road 59	Y	None	None
	Access Road 60	Y	None	None
	Access Road 61	Y	None	R2FLW
K	Tubular Steel Pole 114	Y	None	PSS/FLW
	Tubular Steel Pole 115	Y	None	None
	Tubular Steel Pole 135, 136	Y	None	None
	TSP Assembly Area (TSP 112)	N	None	R2FLW
	TSP Assembly Area (TSP 113)	N	None	R2FLW
	TSP Assembly Area (TSP 114)	N	None	PSS/FLW
	Pulling & Tensioning Site (TSP 136)	N	None	R2FLW
L	Tubular Steel Pole 139	Y	None	None
	Pulling & Tensioning Site (TSP 34)	N	Intermittent Stream (1001 Ranch Storm Drain)	PSSW
	Access Road 64	Y	None	None
	Access Road 66	N	Canal	None
M	Access Road 66	N	West Riverside Canal	None
N	Tubular Steel Pole 150, 151	Y	None	None
	Access Road 66	N	West Riverside Canal	None
	Access Road 68	Y	None	None
P	None	N/A	N/A	N/A

Link Name	Disturbance Area Type or Road Number	FEMA 100-year Floodplain Crossing (Y/N)	Water Crossing Description	National Wetlands Inventory Wetland Crossing
Q	Pulling & Tensioning Site (TSP 156)	N	Canal	None
	Access Road 75	N	Canal	None
R	Tubular Steel Pole 177	Y	None	None
	Tubular Steel Pole 179, 180, 181, 182	Y	None	None
	Pulling & Tensioning Site (TSP 177)	N	Intermittent Stream (Bly Channel)	None
	Access Road 77	Y	Intermittent Stream (Bly Channel)	None
	Access Road 78	Y	None	None
	Access Road 85	Y	None	None
	Access Road 86	Y	None	None
	Access Road 87	Y	None	None
	Access Road 88	Y	None	None
S	Tubular Steel Pole 191	Y	None	None
T	Pulling & Tensioning Site (TSP 22)	N	Canal, Intermittent Stream	None
	Access Road 3	N	Canal	None
U	TSP Assembly Area (TSP 34)	N	Intermittent Stream	None

Key:

MWD = Metropolitan Water District of Southern California
 POWKZ = Palustrine, Open Water/Unknown Bottom, Artificial, Intermittently Exposed/Permanent
 PSS/FLW = Palustrine, Scrub/Shrub, Flat, Intermittently Flooded, Temporary
 PSSW = Palustrine, Scrub/Shrub, Intermittently Flooded, Temporary
 PSSY = Palustrine, Scrub/Shrub, Saturated/Semipermanent/Seasonal
 R2FLW = Riverine, Lower Perennial Riverine System, Flat, Intermittently Flooded, Temporary
 TSP = Tubular Steel Pole

4.1.5. Wetlands

The regulatory definition of Section 404 (CWA) jurisdictional wetlands, according to the USEPA and USACE, is “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

Figure 2 shows the distribution of NWI and photo-interpreted wetlands in the Project study area. As shown, wetlands in the area of the 230 kV alternative routes are primarily associated with the Santa Ana River and its tributary drainages. The NWI identifies two wetland systems within the Project study area: palustrine and riverine.

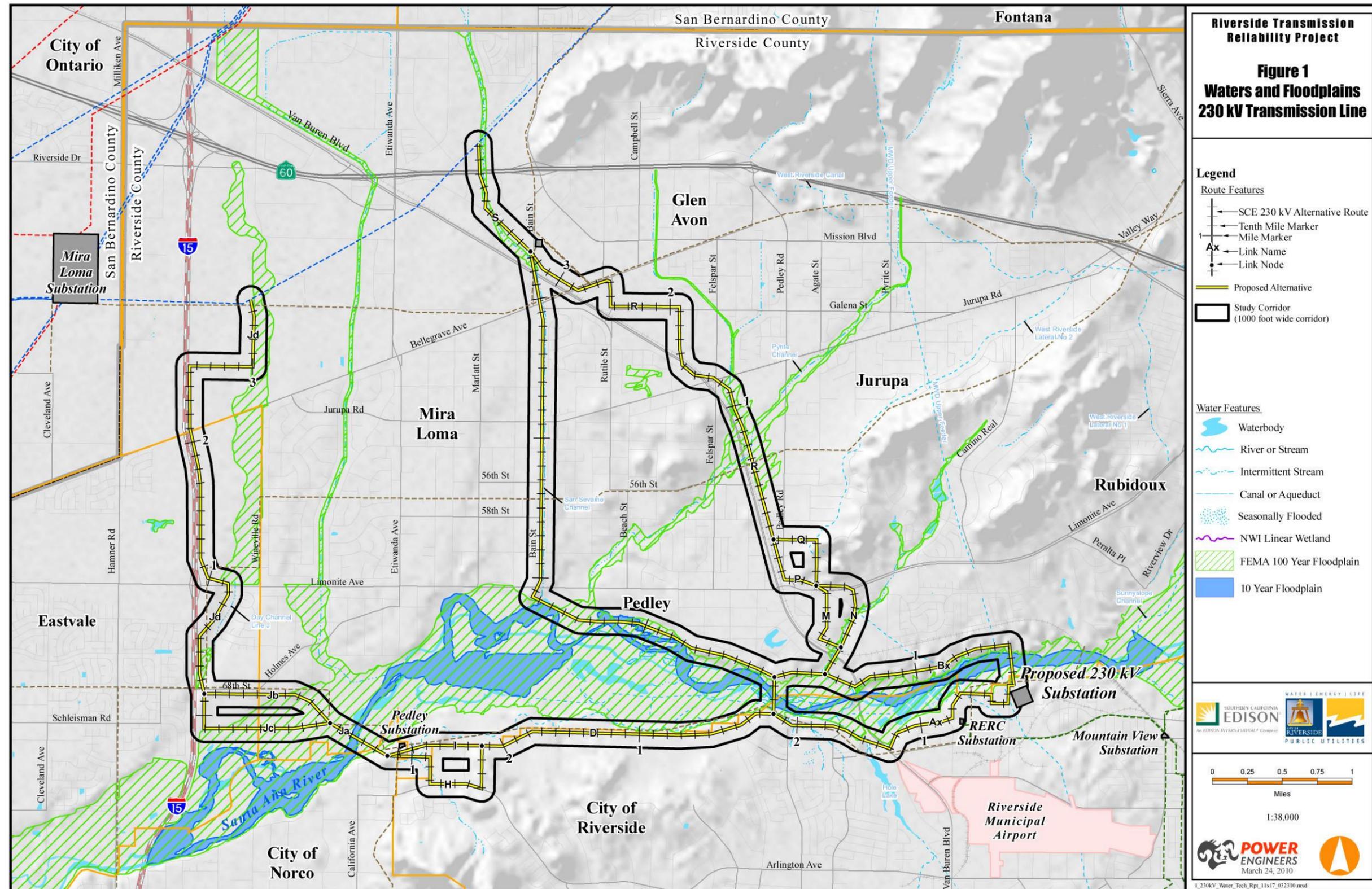
The palustrine system includes all non-tidal wetlands dominated by vegetation and small, shallow, permanent or intermittent ponds. The palustrine wetlands include forested (PFO), scrub-shrub (PSS), emergent (PEM), and open water (POW) wetlands primarily associated with the Santa Ana River, Hole Lake, and intermittent drainages. The PFO wetlands are dominated by trees such as cottonwoods (*Populus fremontii*), and willows (*Salix exigua*, *S. lasiolepis*, and *S. laevigata*). The PSS wetlands are dominated by shrubs such as mule fat (*Baccharis salicifolia*), arrowweed (*Pluchea sericea*), and cottonwood and willow saplings. Water regimes of the palustrine wetlands are characterized as intermittently flooded/temporary and saturated/semi-permanent/seasonal. The PFO and PSS wetlands within the Santa Ana River corridor provide valuable riparian habitat for fish and wildlife, habitat connectivity, pollutant removal, sediment transport and storage, water temperature control, riverbank stability, flood water retention, groundwater recharge, and energy and nutrient cycling.

The riverine system includes all wetlands and deepwater habitats contained within a channel. The upper and lower reaches of the Santa Ana River are classified by NWI as intermittent riverine (R4) and lower perennial riverine (R2), respectively. Five of the river’s tributaries are classified as R4. The water regimes of the riverine wetlands are characterized as intermittently flooded/temporary, intermittently exposed/permanent, and saturated/semi-permanent/seasonal.

Wetland acreages by type were also identified within the 200-foot study corridor (100 feet either side of centerline) along the 230 kV alternative routes to determine the extent of potentially affected wetlands by type. The majority of wetlands potentially affected by the 230 kV disturbance areas or access roads are PSS wetlands associated with the Santa Ana River, as shown in Table 1.

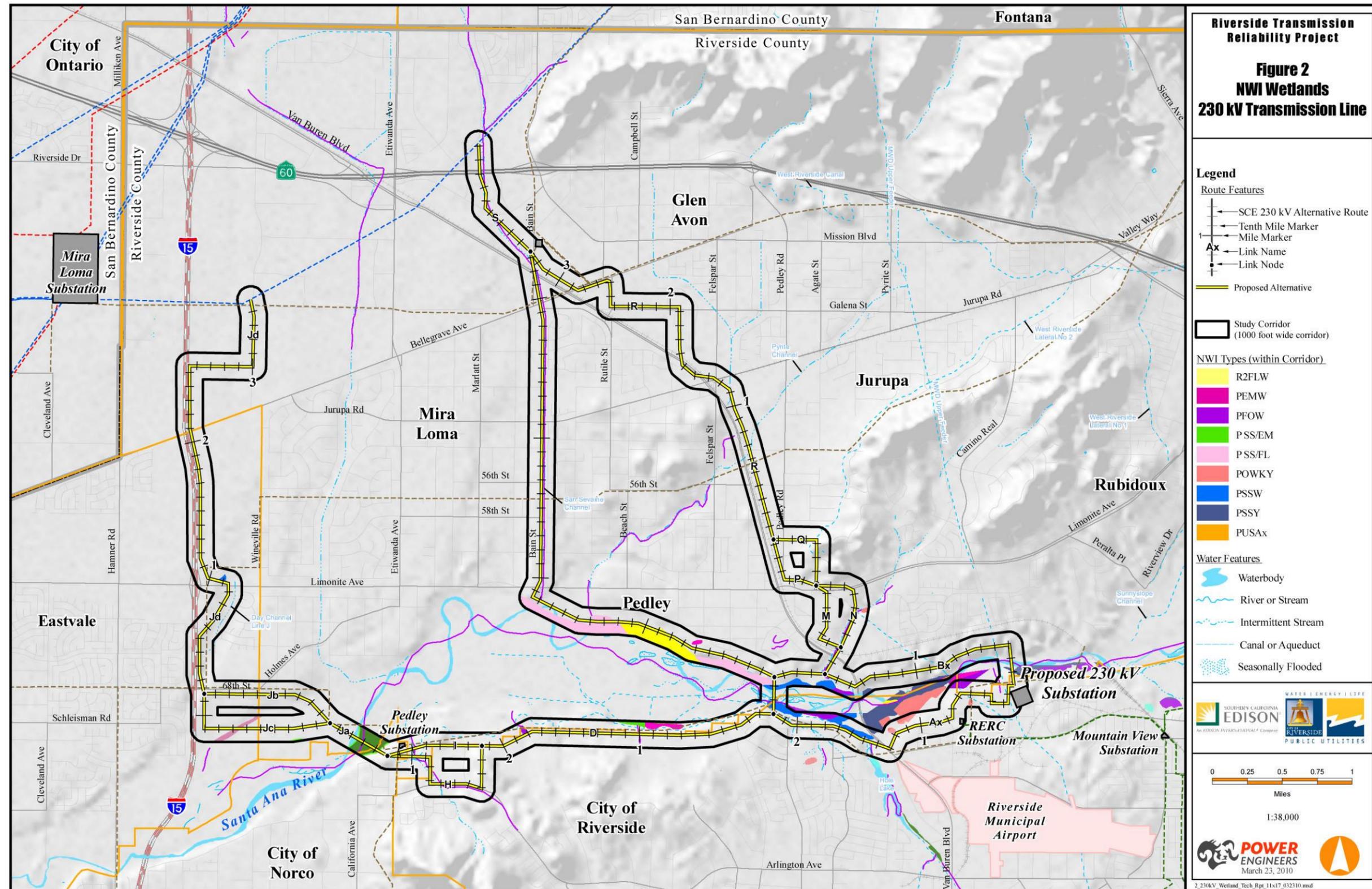
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FIGURE 1. WATERS AND FLOODPLAINS, 230 kV MAP



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FIGURE 2. NWI WETLANDS, 230 kV MAP



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4.2 69 KV TRANSMISSION CORRIDORS

Tables 2, 3, and 4 present an inventory of water resources potentially affected by the 69 kV alternative routes. Each resource is identified by alternative route link and milepost (tenth of mile).

TABLE 2. SURFACE WATER, WETLAND, AND FLOODPLAIN CROSSINGS: WILDERNESS TO MOUNTAIN VIEW 69 KV ALTERNATIVE ROUTES

Link #	Milepost		FEMA Floodplain Crossing (Y/N)	Water Crossing Description	NWI Wetland Crossing
	Begin	End			
MV-1	0.0	0.3	N	Canal or aqueduct (MWD Upper Feeder, West Riverside Canal Lateral No. 2)	None
MV-2	0.0	0.1	N	None	None
MV-3	0.0	1.2	Y	None	None
MV-4	0.0	0.6	N	None	None
MV-5	0.0	0.3	N	None	None
MV-6	0.0	0.2	N	None	None
MV-7	0.0	0.2	N	None	None
MV-8	0.0	0.1	N	None	None
MV-9	0.0	0.1	N	None	None
MV-10	0.0	0.0	N	None	None
MV-11	0.0	0.2	N	None	None
MV-12	0.0	0.2	N	None	None
MV-13	0.0	0.1	N	None	None

TABLE 3. SURFACE WATER, WETLAND, AND FLOODPLAIN CROSSINGS: RERC TO HARVEY LYNN, RERC TO FREEMAN 69 KV ALTERNATIVE ROUTES

Link Number	Milepost		FEMA Floodplain Crossing (Y/N)	Water Crossing Description	NWI Wetland Crossing
	Begin	End			
HL-1	0.0	0.1	N	None	None
HL-2	0.0	0.6	N	None	None
HL-3	0.0	0.6	N	None	None
HL-4	0.0	0.9	N	None	None
HL-5	0.0	0.2	N	Intermittent stream	None
HL-6	0.0	0.5	N	Intermittent stream (2)	POW ¹ PEM ²

Link Number	Milepost		FEMA Floodplain Crossing (Y/N)	Water Crossing Description	NWI Wetland Crossing
	Begin	End			
HL-7	0.0	0.9	N	Intermittent stream	None
HL-8	0.0	0.8	N	None	None
HL-9	0.0	0.3	N	Canal or aqueduct	None
HL-10	0.0	0.2	N	Canal or aqueduct	PFO ³
HL-11	0.0	0.7	N	Canal or aqueduct	None
HL-12	0.0	0.5	N	None	None
HL-13	0.0	0.2	N	None	None
HL-14	0.0	0.3	N	None	None
HL-15a	0.0	1.0	N	None	None
HL-15b	0.0	1.2	N	None	None
HL-16	0.0	1.4	N	None	None
HL-17a	0.0	0.1	N	None	None
HL-17b	0.0	0.1	N	None	None
HL-18	0.0	0.9	N	Canal (Arlington Valley Channel)	None
HL-19	0.0	0.8	N	None	None
HL-20a	0.0	0.4	N	None	None
HL-20b	0.0	0.1	N	None	None
HL-21	0.0	0.1	N	None	None
HL-22	0.0	0.0	N	None	None
HL-23	0.0	0.1	N	None	None
HL-24	0.0	0.4	N	None	None
HL-25	0.0	0.8	N	None	None
HL-26	0.0	0.3	N	Intermittent stream	R4 ⁴
HL-27	0.0	0.1	N	Canal (Arlington Valley Channel)	None
HL-28	0.0	0.2	N	None	None
HL-29	0.0	0.0	N	None	None
HL-30	0.0	0.1	N	None	None
HL-31	0.0	0.8	N	None	None
HL-32	0.0	0.3	N	None	None
HL-33	0.0	0.8	N	Canal (Arlington Valley Channel)	None

Link Number	Milepost		FEMA Floodplain Crossing (Y/N)	Water Crossing Description	NWI Wetland Crossing
	Begin	End			
HL-34	0.0	0.3	N	Canal (Arlington Valley Channel)	None
HL-35	0.0	0.1	N	Canal (Arlington Valley Channel)	None
HL-36	0.0	0.2	N	None	None
HL-37	0.0	0.4	N	None	None
HL-38	0.0	0.8	N	None	None
HL-39	0.0	0.1	N	None	None
HL-40	0.0	0.8	N	None	None
HL-41	0.0	0.1	N	None	None
HL-42	0.0	0.1	N	None	None
N-1	0.0	0.1	N	None	None
N-2	0.0	0.2	N	None	None
N-3	0.0	0.5	N	None	None
N-4	0.0	0.2	N	None	None
N-5	0.0	0.1	N	None	None

¹POW = Palustrine open water

²PEM = Palustrine emergent

³PFO = Palustrine forested

⁴R4 = Intermittent riverine

TABLE 4. SURFACE WATER, WETLAND, AND FLOODPLAIN CROSSINGS: RERC 69 kV ALTERNATIVE ROUTE

Link #	Milepost		FEMA Floodplain Crossing (Y/N)	Water Crossing Description	NWI Wetland Crossing
	Begin	End			
RERC-1	0.0	0.3	N	Canal or aqueduct (MWD Upper Feeder, West Riverside Canal Lateral No. 2)	None

4.2.1. Surface Water

The 69 kV alternative routes are located within mostly developed urban areas outside the Santa Ana River corridor where most major drainages have been engineered for flood control and are lined with concrete. The aqueducts supply water to communities in Southern California. The 69 kV lines cross intermittent streams and canals/aqueducts as described in Tables 2, 3 and 4. The RERC to Harvey Lynn, RERC to Freeman route crosses streams and canals/aqueducts in 13 locations, and the Wilderness to Mountain View route crosses streams and canals/aqueducts in three locations, as shown in Figure 3.

4.2.2. Floodplain

Figure 3 presents 100-year floodplain data from the Federal Emergency Management Agency (FEMA) National Flood Insurance (FIRM) maps. Tables 2, 3 and 4 identify floodplain crossings of the 69 kV alternative routes. The RERC to Harvey Lynn, RERC to Freeman route does not cross floodplains. Link 3 of the Wilderness to Mountain View route crosses the floodplain of the Santa Ana River.

4.2.3. Water Quality

The streams, canals, and aqueducts in the area of the 69 kV alternative routes lie within the Middle Santa Ana River Watershed Management Area (WMA). The Santa Ana RWQCB has identified construction-related erosion and sedimentation as a significant non-point source pollution (NPS) problem in the WMA (RWQCB 2004). There is no specific water quality data available for the streams and canals in the area.

4.2.4. Wetlands

Figure 4 shows the distribution of NWI and photo-interpreted wetlands in the Project study area. As shown, wetlands within the area of the 69 kV alternative routes are primarily associated with tributary drainages to the Santa Ana River and intermittent streams.

Wetland types were identified within the 200-foot study corridor (100 feet each side of centerline) along the 69 kV alternative routes to determine the extent of potentially affected wetlands. The wetlands within the 69 kV study corridor are POW, R4, and PFO. The R4 and PFO wetlands are associated with a tributary drainage to the Santa Ana River.

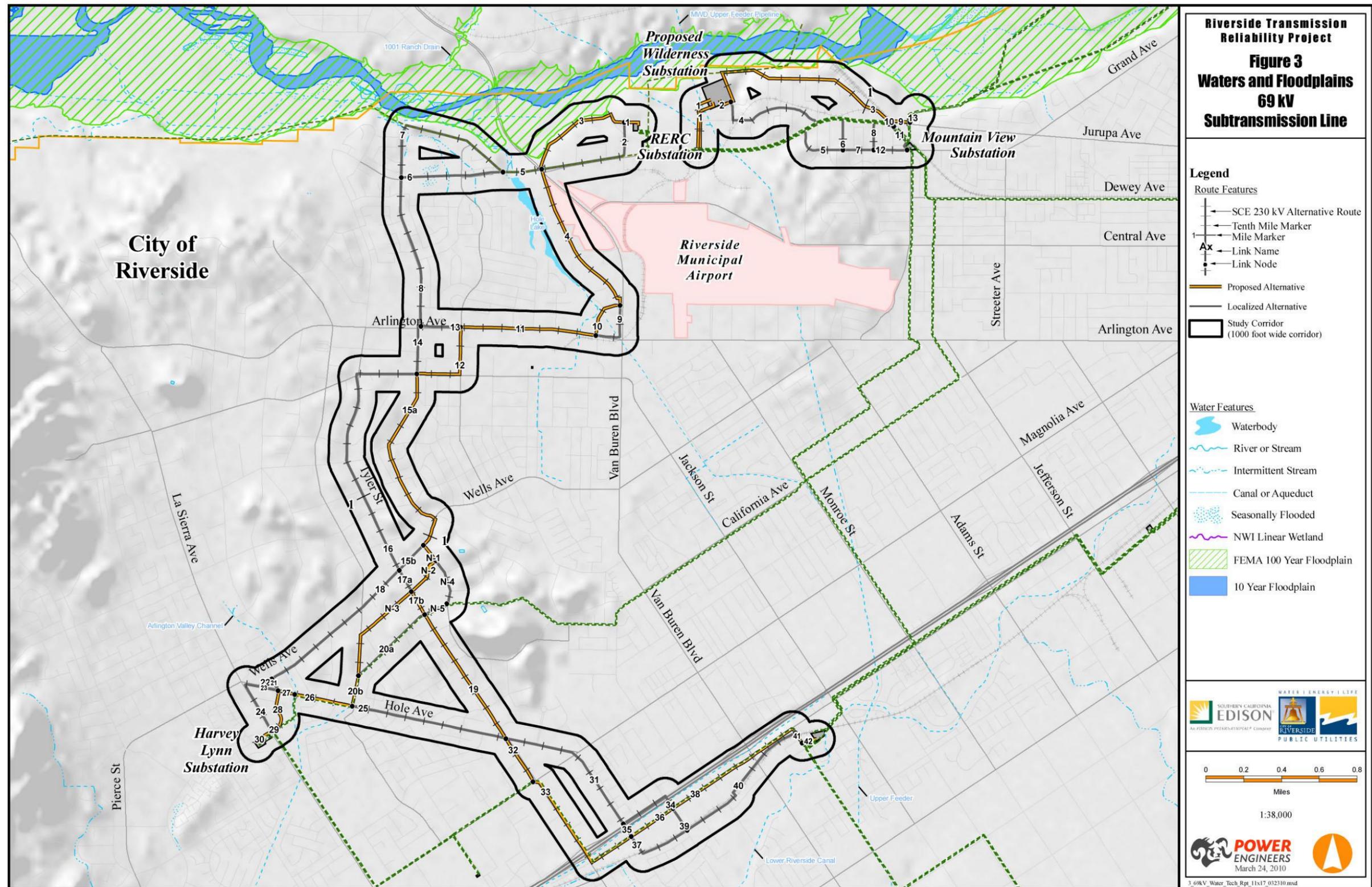
4.3 WILDLIFE/WILDERNESS SUBSTATIONS

There are no water resources within the proposed footprint of the Wildlife/Wilderness Substations. The substation sites are located in an industrial area on an upland bench of the Santa Ana River above the floodplain. The land cover of the site is comprised of manicured lawn, ruderal/disturbed field, and non-native grassland.

4.4 69 KV SUBSTATION UPGRADES

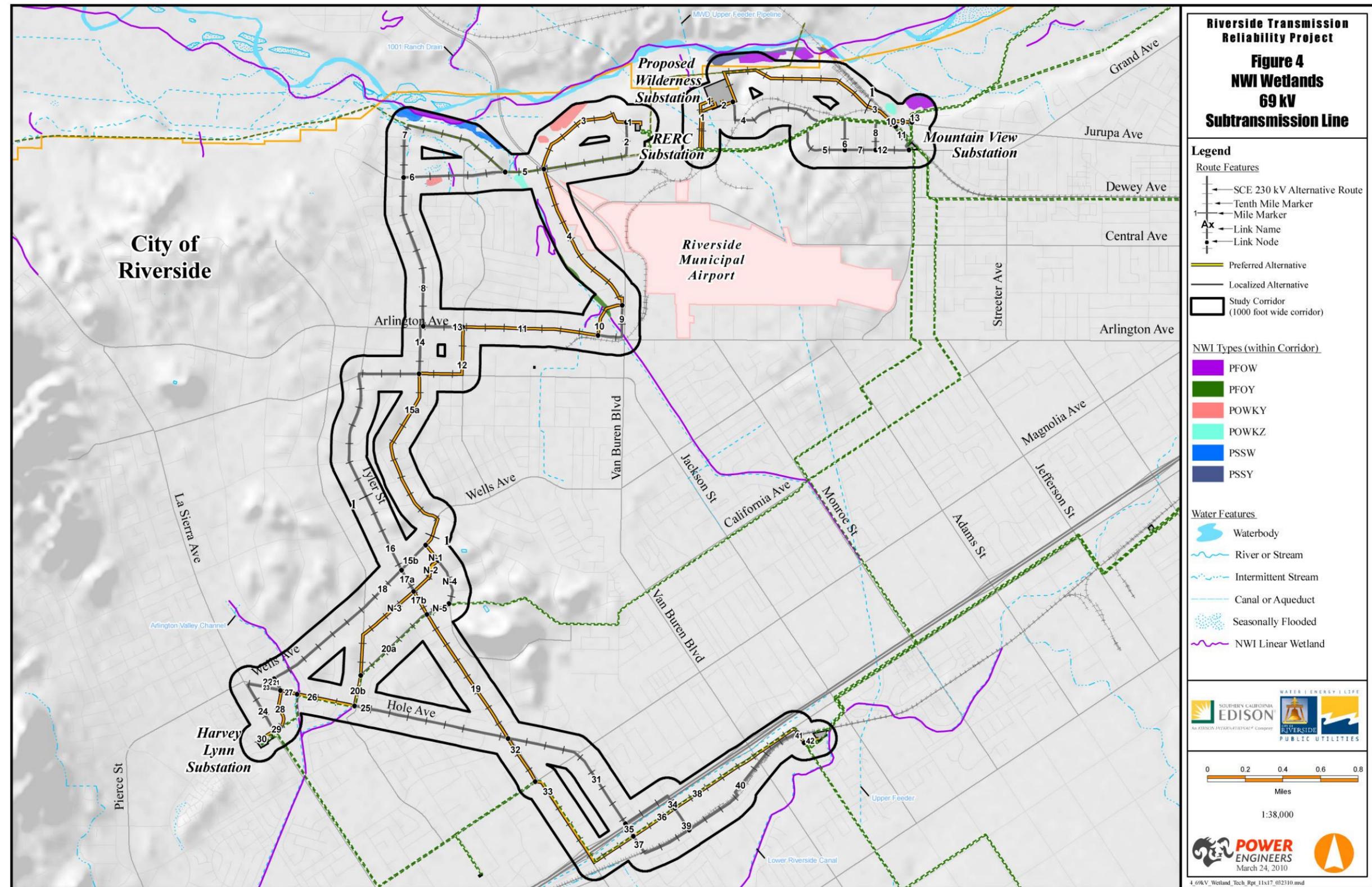
There are no water resources within the existing footprints of the Harvey Lynn, Mountain View, RERC, and Freeman substations.

FIGURE 3. WATERS AND FLOODPLAINS, 69 KV MAP



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FIGURE 4. NWI WETLANDS, 69 kV MAP



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5.0 IMPACT METHODS

5.1 METHODS

Initial impact levels of each segment were evaluated by combining resource sensitivity and build level category (i.e., level of impact expected from ground disturbance). All known water resources within the study corridors of each segment were inventoried and evaluated to determine potential impacts resulting from the Project.

Impacts to inventoried water resources were evaluated considering the following factors:

1. Construction, operation, and maintenance related impacts
2. Occurrence of affected water resource areas
3. Water resource sensitivity levels
4. Build level category (level of impact expected from ground disturbance)
5. Environmental Protection Elements to reduce impact levels

Resource Sensitivity

Resource sensitivity is the measure of the probable adverse effect that a resource would have to direct or indirect impacts associated with construction, operation, and maintenance of the Project. Adverse effects to water resources were assessed using three major criteria: the susceptibility of the resource to the potential changes resulting from construction, operation, and maintenance activities; significance of the potential change on the resource; and occurrence or abundance of affected water resources within the study area. Also considered were hydrological capacity, accessory benefits (e.g., plant and wildlife habitat), and potential to affect engineering and design.

Determination of Potential Change

Changes are brought about by construction of the Project, the physical presence and operation of the Project facilities, and management and maintenance of the Project facilities. This potential for change is predicted by evaluating environmental conditions, the Project description, and implementation specifications.

Significance of Changes

The effect of potential changes on resources is described in levels of significance. The significance of any change relates to the immediate- and long-term effects that the change may have, either directly or indirectly, on the resource. Accordingly, a sensitivity value of maximum, moderate, or minimal was assigned to each resource to represent to potential level of significance.

5.2 SENSITIVITY VALUES

A **maximum** sensitivity value was assigned to:

- perennial rivers, including R2 wetlands
- PSS, PEM, PFO, and POW wetlands
- riparian areas

A **moderate** sensitivity value was assigned to:

- 100-year floodplains (Zone A) or floodways
- intermittent streams and R4 wetlands

A **minimal** sensitivity was assigned to:

- canals and aqueducts

Sensitivity values are based on the function and value of the resource, and the level of impacts to that resource. For example, wetlands are designated a maximum sensitivity level because they provide high functional values and would be permanently impacted by clearing, ROW maintenance, and filling for access road construction. Lands not associated with water resource features or indicators are not assigned a sensitivity value.

5.3 BUILD LEVELS AND GROUND DISTURBANCE

The criteria for assessing the initial ground disturbance impacts to water resources are summarized in Table 5. Build level categories and resource sensitivity levels were the main factors used in estimating potential impact levels. Classifications for build level categories (i.e., ground disturbance) are as follows:

1. Paved roads are present, and no new access required.
2. Dirt or gravel roads are present, and no new access required.
3. Dirt or gravel roads are present, but need to be upgraded.
4. Two-track roads or trails are present, but need to be upgraded.
5. No existing access, new roads will be required.

5.4 IMPACT ASSESSMENT

To determine intensity of Project-related impacts, resource sensitivity was combined with access levels. The combination of these assessment variables determined the level of impact (high, moderate, low). The results of the impact assessment are presented in detail at the end of this report.

Once initial impacts levels were established for each segment, specific measures for mitigating or reducing predicted high- or moderate-level impacts were applied. Residual impacts are the impacts remaining after applying Environmental Protection Elements.

TABLE 5. POTENTIAL IMPACTS TO RESOURCES BY BUILD LEVEL CATEGORY

Resource		Build Level Categories				
		1	2	3	4	5
Perennial river		Low	Low	Moderate	Moderate	High
Intermittent stream		Low	Low	Moderate	Moderate	High
Canal		Low	Low	Moderate	Moderate	High
Riparian areas		Low	Low	High	High	High
NWI Wetland	PSS	Low	Low	High	High	High
	PEM	Low	Low	High	High	High
	POW	Low	Low	High	High	High
	R2	Low	Low	High	High	High
	R4	Low	Low	Moderate	Moderate	High
100-year Floodplain		Low	Low	High	High	High

5.5 SIGNIFICANCE CRITERIA

Water resources impact determinations are based on significance criteria derived from CEQA Guidelines. Water resources impacts are considered significant if the project:

1. Violates any water quality standards or waste discharge requirements, creates new sources of polluted runoff, or otherwise substantially degrades water quality.
2. Substantially depletes groundwater supplies or interferes substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).
3. Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.
4. Substantially alters the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increases the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.
5. Creates or contributes runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provides substantial additional sources of polluted runoff.
6. Has a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, and coastal) through direct removal, filling, hydrological interruption, or other means.
7. Places housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.
8. Places within a 100-year flood hazard area structures which would impede or redirect flood flows.
9. Exposes people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.
10. Results in or is subject to damage from inundation by seiche, tsunami, or mudflow.

When evaluating the Project's potential impacts to water resources, it was assumed that the Project would comply with all applicable federal, state, and local regulatory requirements that protect surface water and groundwater.

In accordance with the CWA, the RPU and SCE would prepare and implement a SWPPP that would include BMPs to minimize impacts to surface water and ground water quality. The SWPPP would be prepared when the Project is approved, and after Project facilities and structures are designed and sited. The SWPPP must be submitted to the Santa Ana Regional Water Quality Control Board.

Potential environmental effects on water resources were evaluated in the Initial Study prepared for the Project in January 2007. The evaluation addressed the significance criteria listed above and determined that there would be no impact from criteria numbers 2, 7, 9, and 10; therefore, these criteria are not addressed in this report.

5.6 ENVIRONMENTAL PROTECTION ELEMENTS

The Environmental Protection Elements (EPEs) listed in Table 6 below will be used utilized as part of the proposed Project to minimize impacts to water resources. EPEs were developed in accordance with applicable federal, state and local policies.

TABLE 6. ENVIRONMENTAL PROTECTION ELEMENTS – WATER RESOURCES

EPE	Description
HYDRO – 1	Jurisdictional Waters: Wherever possible, infrastructure associated with the Transmission Lines and the Substations would be situated outside jurisdictional waters as defined by the Clean Water Act (e.g., stream channels and banks).
HYDRO – 2	Minimize the number of Santa Ana River crossings.
HYDRO – 3	Transmission Operations & Maintenance: Areas that do not offer perpetual access to transmission structures for routine operations and maintenance would be avoided.
HYDRO – 4	Dewatering Plan. If groundwater is encountered during construction as indicated by geologic borings, a dewatering plan would be prepared and included in the construction SWPPP, as appropriate. If required, a dewatering permit would be obtained from the Regional Water Quality Control Board RWQCB prior to discharge.
HYDRO – 5	Maintaining Natural Drainage Patterns. The substations and poles would be designed and engineered to facilitate natural drainage patterns to minimize or avoid any potential impacts to erosion and siltation.
HYDRO – 6	New Impervious Areas Returned to Existing Conditions. To the extent feasible, new impervious areas associated with temporary construction would be returned to preconstruction conditions after the completion of project construction.

6.0 IMPACT RESULTS

The results of the water resources impacts evaluation as a result of construction of the 230 kV and 69 kV routes is provided in Appendix A of this report. Impacts are provided by link number and milepost in the impact tables. A detailed description of these impacts is provided below.

6.1 230 KV TRANSMISSION LINE IMPACT SUMMARY

Construction of the 230 kV transmission would potentially degrade water quality from stormwater runoff and accidental spills of petroleum, oil, and lubricant (POL); degrade and cause the loss of Waters of the U.S. including wetlands; and alter drainage patterns and floodplains. These potential impacts are discussed below.

6.1.1. Construction-Related Impacts

Water Quality Degradation Caused by Stormwater Runoff – Indirect, short-term impacts to water quality could result from stormwater runoff during construction of the 230 kV transmission line. Overhead transmission line construction requires ground-disturbing activities, including clearing and grading for structure installation and work areas, and access road construction. Disturbed soils accelerate erosion and increase sediment in stormwater runoff to receiving waters (i.e., Santa Ana River and its tributaries), causing increased turbidity and channel sedimentation.

The Santa Ana RWQCB has identified construction-related erosion and sedimentation as a significant NPS problem in the WMA; however, the Santa Ana River and its tributaries within the Project area are not 303(d) listed as sediment-impaired water bodies. Additional discharges of sediment would not contribute to the exceedance of the water quality standard for sediment.

In compliance with the federal CWA and California Porter Cologne Water Quality Control Act, the Project would obtain an NPDES construction general permit for stormwater runoff associated with construction activities disturbing one or more acres of soil. The permit requires the development and implementation of a SWPPP to protect receiving waters from stormwater runoff during and after construction. The Project would implement EPEs, including stabilization measures for disturbed areas and structural controls, to divert runoff and remove sediment.

The Project would also obtain a Section 401 water quality certification from the Santa Ana RWQCB for Section 404 permit activities to certify that the discharge complies with state water quality standards.

In addition to compliance with federal and state regulations, implementation of EPE HYDRO-05 would minimize impacts to less-than-significant levels.

Water Quality Degradation Caused by Accidental Spills– Indirect, short-term impacts to water quality could result from accidental spills and leaks of POL from equipment and vehicles used during construction of the Project. Concrete spills can also occur during concrete preparation and pouring of structure foundations. Such spills could run off-site into receiving waters and degrade water quality.

Non-stormwater Management, Material Management, and Materials Pollution Control BMPs, as specified in the required Project SWPPP, would minimize impacts to less-than-significant levels.

Depletion of Groundwater Supplies or Interference with Groundwater Recharge – Construction of the 230 kV transmission line would potentially encounter groundwater along the Santa Ana River corridor. Boring for installation of transmission line structures would not occur to depths such that they would be

likely to deplete the local groundwater table, nor would they interfere with nearby wells. Installation of transmission line structures would not, individually or collectively, create impervious surfaces great enough to interfere with groundwater recharge resulting in a net deficit in aquifer volume.

Should groundwater be encountered during construction of the RTRP, implementation of EPE HYDRO-04 would minimize impacts to groundwater to a less-than-significant level.

Degradation and Loss of Waters of the U.S. (including wetlands) – Direct, permanent impacts to Waters of the U.S. could result from the installation of tower and pole structure foundations. Each tubular steel pole for the 230 kV transmission line requires a permanent disturbance area of approximately 380 square feet that may cause a permanent loss of Waters of the U.S. due to the discharge of fill material.

Direct, temporary impacts to Waters of the U.S. could result from the construction of new roads needed to access the ROW during construction of the transmission line. Road construction may require grading and filling of wetlands and temporary bridge crossings of streams.

Direct, permanent impacts to PSS and PFO wetlands could result from vegetation clearing for construction of the transmission line ROW. Conversion of a PSS or PFO wetland to a PEM wetland is considered a permanent impact to wetland functions and values.

Direct, short- to long-term impacts to wetland vegetation, hydrology, and soils could result from temporary work areas (e.g., pulling and tensioning and guard structure sites) associated with construction of the transmission line. Work areas would be cleared to some extent for the safe operation of construction equipment, which would adversely impact wetland vegetation. Operation of heavy equipment has the potential to cause soil compaction and rutting, which could in turn alter wetland hydrology.

In compliance with the federal CWA, the Project would obtain a 404 permit from the USACE for any fill or permanent loss of Waters of the U.S. as a result of the proposed Project. As part of the permitting, the Project would be required to conduct a jurisdictional wetlands delineation of the affected Project area and submit it to the USACE Los Angeles District for verification and approval. The delineation would provide surveyed locations of jurisdictional wetlands and Waters of the U.S. for identifying the exact locations and areas of impact.

The Project would also obtain a Streambed Alteration Agreement from CDFG for any direct impacts to streambeds.

In addition to compliance with federal and state regulations, EPEs HYDRO-01, HYDRO-02, HYDRO-05, and HYDRO-06 would minimize wetland impacts to less-than-significant levels.

Alteration of Drainage Patterns – Direct, temporary impacts to existing drainage patterns may result from construction of the temporary access roads used during construction to access the transmission line ROW. Minor drainage diversions are expected as a result of grading. Stream and river courses would not be altered. Approximately two-thirds of required access roads are existing access roads that would require upgrading; the remaining required access roads would be constructed, and would be surfaced with pervious material such as gravel. With use of pervious materials for access road construction, the volume and rate of stormwater runoff is not expected to increase substantially from pre-construction levels in a manner that would result in off-site erosion and flooding. With implementation of EPEs, runoff is not expected to exceed the capacity of existing or planned stormwater drainage systems and impacts would be less than significant.

Any work within the Santa Ana River watershed under the jurisdiction of the Riverside County Flood Control and Water Conservation District would require an encroachment permit that must meet the requirements of Section 6 of the Riverside County Drainage Area Management Plan. The SWPPP would also address stormwater management and evaluate if downstream drainage facilities are adequate to handle potential increased runoff flows.

With implementation of EPE HYDRO-06, runoff is not expected to exceed the capacity of existing or planned stormwater drainage systems, and impacts related to temporary alteration of drainage patterns would be less than significant.

Alteration of Floodplains – As required by final engineering design, transmission line structures could be placed within the 100-year floodplain of the Santa Ana River and other drainages. However, these structures would not impede or redirect flood flows or raise the flood elevation.

The Riverside County Flood Control and Water Conservation District would require an encroachment permit for work within the Santa Ana River floodplain. The District also does not allow for structures to be built on the Santa Ana River levee and/or at the bottom of the river due to FEMA and USACE regulations.

The Project would comply with regional and federal regulations, and would implement EPEs HYDRO-03 and HYDRO-06 to minimize impacts to less-than-significant levels.

6.1.2. Operation- and Maintenance-Related Impacts

Operation of the 230 kV transmission line would potentially degrade water quality from accidental spills of POL by maintenance vehicles, and placement of structures in floodplains.

Water Quality Degradation Caused by Accidental Spills – Indirect, short-term impacts to water quality could result from accidental spills and leaks of POL from equipment and vehicles used during operation and maintenance of the Project. Such spills could run off-site into receiving waters and degrade water quality. Operation and maintenance of the transmission line and associated access roads would involve periodic inspections, and maintenance visits would be conducted on an as-needed basis. Best Available Control Measures (BACMs) would be utilized by SCE maintenance crews, and operational impacts to water quality would be less than significant.

Alteration of Floodplains – As required by final engineering design, transmission line structures would be placed within the 100-year floodplain of the Santa Ana River and other drainages. However, construction of these structures would not impede or redirect flood flows or raise the flood elevation.

The Project would comply with regional and federal regulations, and would implement EPE measures HYDRO-03 and HYDRO-06 to minimize impacts to less-than-significant levels.

6.2 230 KV TRANSMISSION LINE IMPACTS

Project-related impacts were assessed with inclusion of EPEs. Areas of potential impacts were determined using the methodology described in Section 5.1, and EPEs were applied to minimize potential impacts resulting from construction, operation, and maintenance of the Project. Impact results for each link are described below.

6.2.1. Link Ax

Link Ax is approximately 2.2 miles long, beginning at the proposed Wilderness Substation and generally paralleling the Santa Ana River to a point approximately 0.6 mile west of the Van Buren Street Bridge.

Link Ax would potentially impact several canals or aqueducts, including the West Riverside Aqueduct and the MWD Upper Feeder, several unnamed intermittent streams, and PSS wetlands, as shown in Table 1. With implementation of EPEs shown in Table 6, potential impacts would be less than significant.

6.2.2. Link Bx

Link Bx is approximately 1.7 miles long, begins at the proposed Wilderness Substation, crosses the Santa Ana River west of the MWD Upper Feeder, and generally parallels the river, ending approximately 0.2 mile west of the intersection of Van Buren Boulevard and Clay Street.

Link Bx would potentially impact the West Riverside Aqueduct, the MWD Upper Feeder, PSS wetlands, and several intermittent streams, as shown in Table 1. With implementation of the EPEs shown in Table 6, potential impacts would be less than significant.

6.2.3. Link D

Link D is approximately 2.2 miles long, beginning at the western terminus of Link Ax and generally paralleling the bluffs along the southern edge of the Santa Ana River, terminating at a point approximately 0.3 mile north of Arlington Avenue and 0.5 mile east of Pedley Substation.

Link D would potentially impact several intermittent streams, one unnamed canal, and one PSS wetland, as shown in Table 1. With implementation of the EPEs shown in Table 6, potential impacts would be less than significant.

6.2.4. Link H

Link H is approximately one mile in length. Link H begins at the western terminus of Link D, travels south toward Arlington Avenue, generally parallels Arlington Avenue for approximately 0.4 mile, turns south once more for approximately 0.1 mile, and ends on a small hilltop approximately 0.1 mile southwest of Pedley Substation.

Link H would potentially impact two intermittent streams and one unnamed canal, as shown in Table 1. With implementation of the EPEs shown in Table 6, potential impacts would be less than significant.

6.2.5. Link I

Link I is approximately 0.7 mile in length, beginning at the western terminus of Link D and travelling west, ending on a small hilltop approximately 0.1 mile southwest of Pedley Substation.

Link I would potentially impact two intermittent streams and one unnamed canal; in addition, five Tubular Steel Poles (TSPs) would be located within the 100-year floodplain. With implementation of the EPEs shown in Table 6, potential impacts would be less than significant.

6.2.6. Link J

Link J is comprised of Links Ja, Jb, and Jd. Link J is approximately 4.9 miles long, beginning at the western terminus of Links H and I. This link crosses the Santa Ana River in a northwest direction, and then travels west along 68th Street toward Interstate 15. At Interstate 15, Link J turns north and parallels

Pat's Ranch Road to Limonite Avenue, where it turns west and parallels Interstate 15 north to Landon Drive, then turns east toward Wineville Avenue. At Wineville Avenue, Link J turns north once again and continues to the tap point northwest of the intersection of Wineville Avenue and Cantu-Galleano Ranch Road.

Although Link J crosses the Santa Ana River, access roads and disturbance areas are not located within the bed, banks, or floodplain and thus would have no impact on the river. Link J would potentially impact one unnamed canal and one intermittent stream. Portions of Access Roads 41 and 42 would be located within the 100-year floodplain of the intermittent stream. With implementation of the EPEs in Table 6, potential impacts would be less than significant.

6.2.7. Link K

Link K is approximately 4.3 miles in length. Link K begins approximately 0.2 mile south of Horseshoe Lake and generally parallels the Santa Ana River west to Bain Street, where it turns north and parallels Bain Street and the San Sevaine Channel to a point 0.1 mile north of Van Buren Boulevard.

Link K would potentially impact PSS and R2 wetlands associated with the Santa Ana River. In addition, seven TSPs, three TSP Assembly Areas, one Pulling & Tensioning Site, and portions of four access roads would be within the 100-year floodplains of the Santa Ana River, the Pyrite Channel, and the San Sevaine Channel north of Van Buren Boulevard. Link K crosses 10-year floodplain of the Santa Ana River as the Link crosses the Paradise Knolls Golf Course

Given that approximately 1.2 miles of Link K would be located within 100-year floodplains, levels of impact to floodplains have the potential remain high in areas where access roads would have to be constructed or upgraded. With implementation of EPEs presented in Table 6, however, potential impacts would be reduced to a less-than-significant level.

6.2.8. Link L

Link L is approximately 0.22 mile in length, beginning at the western terminus of Link Bx and travelling northeast, ending approximately 350 feet north of Van Buren Boulevard.

Link L would potentially impact the 100-year floodplain, streambed, and PSS wetland associated with the 1001 Ranch Storm Drain, as presented in Table 1. Pulling & Tensioning Sites and TSP Assembly Areas would impact riparian habitat associated with the 1001 Ranch Storm Drain. In addition, a portion of Access Road 66 would potentially impact the West Riverside Canal. With implementation of EPEs in Table 6, potential impacts to riparian habitat, floodplains, and natural drainage patterns would be moderate, and the remaining potential impacts would be less than significant.

6.2.9. Link M

Link M is approximately 0.6 miles in length. Link M begins at the northern terminus of Link L and travels northeast for approximately 0.15 mile before turning north toward Limonite Avenue. At Limonite Avenue, Link M travels northeast once more for approximately 0.08 mile, ending approximately 210 feet northeast of the intersection of Eucalyptus Avenue and Limonite Avenue.

A portion of Access Road 66 would potentially impact the West Riverside Canal. With implementation of the EPEs in Table 6, potential impacts would be less than significant.

6.2.10. Link N

Link N is approximately 0.7 mile long, beginning at the northern terminus to Link L and travelling north to Limonite Avenue, then west to the northern terminus of Link M.

Two TSPs and a portion of Access Road 68 would be within the 100-year floodplain associated with the 1001 Ranch Storm Drain. A portion of Access Road 66 would potentially impact the West Riverside Canal. With implementation of the EPEs listed in Table 6, potential impacts would be less than significant.

6.2.11. Link P

Link P is approximately 0.5 mile long. It begins at the western terminus of Link M and Link N, travels west toward Pedley Road, then parallels Van Buren Boulevard for approximately 0.3 mile.

None of the TSPs, disturbance areas, or access roads associated with Link P would have potential to impact water resources such as Waters of the U.S., wetlands, or floodplains; however, Link P would potentially impact water quality and natural drainage patterns. With implementation of the EPEs listed in Table 6, potential impacts would be less than significant.

6.2.12. Link Q

Link Q is approximately 0.6 mile in length. Link Q begins at the western terminus of Link M and Link N, travels north for approximately 0.3 miles, and then heads west for approximately 0.3 mile.

One Pulling & Tensioning Site and a portion of Access Road 75 would potentially impact the West Riverside Canal. With implementation of the EPEs listed in Table 6, potential impacts would be less than significant.

6.2.13. Link R

Link R is approximately 3.3 miles in length. Link R begins at the northern terminus of Link P and travels north, generally paralleling Van Buren Boulevard for approximately 1.5 miles before turning north to Galena Street. Link R turns west on Galena Street, then turns north on Rutile Street and southwest on Bellegrave Avenue, then generally parallels Van Buren Boulevard for approximately 0.5 mile, ending at the northern terminus of Link K.

Link R would not impact Waters of the U.S. or wetlands; however, one Pulling & Tensioning Site and a portion of Access Road 77 would potentially impact Bly Channel. In addition, five TSPs and portions of Access Roads 77, 78, 85, 86, 87, and 88 are within the 100-year floodplain of Bly Channel and Pyrite Channel.

With implementation of EPEs listed in Table 6, potential impacts to floodplains and natural drainage patterns would be moderate, while potential impacts to water quality would be less than significant.

6.2.14. Link S

Link S is approximately one mile in length. Link S begins at the northern terminus of Links K and R, and generally parallels the San Sevaive Channel north to the tap point approximately 0.2 mile north of State Route 60.

One TSP associated with Link S is at the edge of the 100-year floodplain of the San Sevaive Channel. Because the San Sevaive Channel has been improved to contain the flow of a 100-year flood event, it is

unlikely that this TSP would impact the floodplain; however, implementation of EPEs listed in Table 6 will reduce potential impacts to less than significant.

Link S would not impact Waters of the U.S., but would potentially impact water quality and natural drainage patterns. With implementation of the EPEs in Table 6, potential impacts would be less than significant.

6.2.15. Link T

Link T is approximately 0.25 mile in length. Link T begins at the junction of Links Ax and D and crosses the Santa Ana River, ending at the southern terminus of Link K.

Although Link T crosses the Santa Ana River, access roads and disturbance areas are not located within the bed, banks, or floodplain, and thus would have no impact on the river or associated wetlands. One Pulling & Tensioning Site and a portion of Access Road 3 would potentially impact an unnamed canal and one unnamed intermittent stream. With implementation of EPEs listed in Table 6, potential impacts would be less than significant.

6.2.16. Link U

Link U is approximately 0.4 mile long, beginning at the western terminus of Link Bx and paralleling the Santa Ana River west, ending at the eastern terminus of Link K.

One Pulling & Tensioning Site associated with Link U is within the 100-year floodplain of the Santa Ana River. In addition, this Pulling & Tensioning Site would potentially impact riparian vegetation associated with the 1001 Ranch Storm Drain. Implementation of the EPEs in Table 6 would reduce impacts to the floodplain and riparian vegetation to moderate, and potential impacts to water quality and natural drainage patterns would be less than significant.

6.3 69 KV TRANSMISSION CORRIDORS

Construction of the 69 kV subtransmission lines would potentially degrade water quality from stormwater runoff and accidental spills of petroleum, oil, and lubricant (POL); degrade and cause the loss of Waters of the U.S. including wetlands; and alter drainage patterns and floodplains. These potential impacts are equivalent to potential impacts resulting from construction of the 230 kV transmission line, as discussed in Section 6.2.

6.3.1. Wilderness-Mountain View 69 kV Subtransmission Line

Links associated with the proposed Wilderness – Mountain View subtransmission line are located in industrial and suburban areas with few natural waterways and wetland areas. Only three links of the proposed subtransmission line have potential to impact water resources. As shown in Table 3, Link MV-1 crosses the MWD Upper Feeder and the West Riverside Canal Lateral No. 2 and a portion of Link MV-3 is located within the 100-year floodplain of the Santa Ana River.

Both the MWD Upper Feeder and the West Riverside Canal Lateral No. 2 are underground where they are crossed by Link MV-1, and would not be impacted by construction or operation of the Project. Link MV-3 would potentially impact the 100-year floodplain and natural drainage patterns in undeveloped or unpaved areas. Implementation of EPEs listed in Table 6 would reduce potential impacts to a less-than-significant level.

6.3.2. RERC-Harvey Lynn-Freeman 69 kV Subtransmission Line

Links associated with the proposed RERC-Harvey Lynn-Freeman subtransmission line are located within industrial, commercial, and suburban residential areas. Of the fifty potential links that comprise this route, only twelve contain or cross water resources (as shown in Table 3).

Links HL-5, HL-6, HL-7, and HL-26 cross unnamed intermittent streams. The stream crossed by Link HL-26 has been channelized; however, the intermittent streams crossed by Links HL-5, HL-6, and HL-7 remain in natural channels. Links HL-9, HL-10, and HL-11 cross two unnamed canals, and Links HL-18, HL-27, HL-33, HL-34, and HL-35 cross the Arlington Valley Channel. Link HL-6 crosses PFO and POW wetlands approximately 0.4 mile west of Hole Lake, and Link HL-10 crosses a PFO wetland associated with the unnamed canal that drains into Hole Lake.

The above-mentioned Links would potentially impact Waters of the U.S., including wetlands. These Links would also potentially impact water quality and natural drainage patterns where the links cross undeveloped areas. With implementation of the EPEs listed in Table 6, potential impacts would be less than significant.

6.4 WILDLIFE/WILDERNESS SUBSTATIONS

Construction and operation of the proposed Wildlife/Wilderness substations would potentially degrade water quality of the Santa Ana River from increased stormwater runoff and accidental oil spills, and alter drainage patterns of the site. These potential impacts are discussed below.

Increased Stormwater Runoff and Alternation of Drainage Patterns – Direct, permanent impacts to existing stormwater drainage and indirect, temporary impacts to water quality may result from the construction of the substations. The footprint of the proposed substations would be approximately twelve acres. The site will require substantial clearing and grading (cut and fill) to achieve the designed grade for the site. The Wilderness/Wildlife substations would be surfaced with crushed rock, and a paved asphalt road for access to the Wildlife substation would be built. Concrete foundations would be constructed to support electrical equipment and structures.

Development of the sites would reduce the stormwater infiltration capacity of the ground surface, resulting in increased stormwater runoff flows from pre-construction levels. The Project would design appropriate drainage facilities to manage increased stormwater flows to existing and planned stormwater drainage systems. The Project would obtain an encroachment permit from the Riverside County Flood Control and Water Conservation District, which would meet the requirements of Section 6 of the Riverside County Drainage Area Management Plan for the Santa Ana watershed region of Riverside County. The Project would also obtain an NPDES construction general permit for stormwater runoff associated with construction activities disturbing one or more acres of soil. The permit requires the development and implementation of a SWPPP to protect receiving waters from stormwater runoff during and after construction. The Project would implement stormwater management controls (e.g., retention/detention ponds, infiltration measures) after construction of the substation is completed.

Removal of vegetation and grading activities at the substation sites would result in increased erosion and sediment runoff from the sites. The Project would obtain an NPDES construction general permit as described above that would include development and implementation of a SWPPP to protect receiving waters from stormwater runoff during and after construction. The Project would implement EPEs, including stabilization measures, for disturbed areas and structural controls to divert runoff and remove sediment.

In addition to compliance with federal and state regulations, implementation of EPEs as described in Table 6 would minimize impacts to less-than-significant levels.

Water Quality Degradation Caused by Stormwater Runoff – Removal of vegetation and grading activities at the substations site would temporarily result in increased erosion and sediment runoff from the sites during construction. Implementation of the required SWPPP would protect receiving waters from stormwater runoff during and after construction. The Project would implement BMPs, including stabilization measures, for disturbed areas as well as runoff and sediment controls, and the impacts would be less than significant.

Depletion of Groundwater Supplies or Interference with Groundwater Recharge – Construction of the site would reduce stormwater infiltration capacity of the natural ground surface, as described above. Reduction of infiltration capacity would potentially interfere with groundwater recharge; however, given with implementation of stormwater management controls, this impact would be less than significant.

Water Quality Degradation Caused by Accidental Spills – Surface water quality of the Santa Ana River could be degraded by accidental spills from oil-filled electrical equipment (i.e., circuit breakers, transformers, regulators, and capacitors) and storage facilities at the proposed Wildlife/Wilderness substations site. Spills could migrate off-site and reach the Santa Ana River. USEPA's Oil Pollution Prevention regulation (40 CFR part 112) requires Spill Prevention, Countermeasure and Control (SPCC) plans for facilities with a total above-ground oil storage capacity of greater than 1,320 gallons or completely buried oil storage capacity greater than 42,000 gallons to prevent oil spills from reaching Waters of the U.S.

The Project would prepare SPCC plans (HYDRO-6) for the proposed substation sites. The SPCC plans would include engineered and operational methods for preventing, containing, and controlling potential releases and provisions for a quick and safe cleanup. In general, the substations site would be surfaced with gravel to reduce the migration of oil spills. The substations would also be gated with a combination of block walls and chain link fencing to prevent access to equipment by unauthorized persons. The plan would be certified by a professional engineer and a complete copy would be maintained on-site. Implementation of the SPCC plans for operation of the substations would reduce potential impacts to a less-than-significant level.

6.5 69 KV SUBSTATION UPGRADES

Upgrades to the four existing 69 kV substations would occur within the existing footprints of each substation, with the exception of minor pole re-alignments to accommodate the substation modifications. The substations are in urbanized areas, and ground disturbance would be minimal. Impacts to water resources resulting from the substation upgrades would be through stormwater runoff.

Water Quality Degradation Caused by Stormwater Runoff – Excavation to accommodate re-alignment of poles would temporarily result in increased erosion and sediment runoff from the sites during construction. Implementation of the required SWPPP would protect receiving waters from stormwater runoff during and after construction. The Project would implement BMPs for runoff and sediment controls, and the impacts would be less than significant.

Water Quality Degradation Caused by Accidental Spills – Water quality of the Santa Ana River could be degraded by accidental spills from oil-filled electrical equipment (i.e., circuit breakers, transformers, regulators, and capacitors) and storage facilities at the proposed Wildlife/Wilderness Substation sites. Spills could migrate off-site and reach the Santa Ana River via storm drains. USEPA's Oil Pollution Prevention regulation (40 CFR part 112) requires SPCC plans for facilities with a total above-ground oil

storage capacity of greater than 1,320 gallons or completely buried oil storage capacity greater than 42,000 gallons to prevent oil spills from reaching Waters of the U.S.

As required by the USEPA, the Project would prepare SPCC plans for the proposed 69 kV substation sites. The SPCC plans would include engineered and operational methods for preventing, containing, and controlling potential releases and provisions for a quick and safe cleanup. In general, the substations site would be surfaced with gravel to reduce the migration of oil spills. The substations would also be gated with a combination of block walls and chain link fencing to prevent access to equipment by unauthorized persons. The plan would be certified by a professional engineer and a complete copy would be maintained on-site. Implementation of the SPCC plans for operation of the substations would reduce potential impacts to a less-than-significant level.

7.0 REFERENCES

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APPENDIX A—HYDROLOGY AND WATER QUALITY IMPACT TABLES

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
1Sub	Tubular Steel Pole	1	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	2	0	0.008726	No	0	0	0	0	No	PSSW	Maximum	3, 4, 11, 12	M
A	Tubular Steel Pole	3	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	4	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	5	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	6	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	7	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	8	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	9	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	10	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	11	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	12	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	13	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	14	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	16	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	17	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	18	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	19	0	0.008726	No	0	0	0	0	No	PSSW	Maximum	3, 4, 11, 12	H
A	Tubular Steel Pole	20	0	0.008726	No	0	0	0	0	Canal	PSSW	Maximum	3, 4, 7, 11 - 17	M
A	Tubular Steel Pole	21	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	Tubular Steel Pole	196	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
A	TSP Assembly Area	400	0.461400002	0	N/A	0	0	0	0	No	PSSW	Maximum	3, 4, 11, 12	M
A	TSP Assembly Area	401	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	TSP Assembly Area	402	0.461400002	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	L
A	TSP Assembly Area	403	0.461400002	0	N/A	0	0	0	0	Canal	PSSW	Maximum	3, 4, 7, 11 - 17	M
A	TSP Assembly Area	404	0.461400002	0	N/A	0	0	0	0	Canal	PSSW	Maximum	3, 4, 7, 11 - 17	M
A	TSP Assembly Area	405	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	TSP Assembly Area	406	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	TSP Assembly Area	407	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	TSP Assembly Area	408	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	TSP Assembly Area	409	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	TSP Assembly Area	410	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	200	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
A	Pulling&Tensioning	201	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	202	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	203	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
A	Pulling&Tensioning	204	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	205	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	206	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
A	Pulling&Tensioning	207	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
A	Pulling&Tensioning	208	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	209	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
A	Pulling&Tensioning	210	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	211	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	212	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	213	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	214	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	299	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Pulling&Tensioning	300	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Guard Pole Holes/Truck Damage	600	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Guard Pole Holes/Truck Damage	601	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Guard Pole Holes/Truck Damage	602	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Guard Pole Holes/Truck Damage	603	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Guard Pole Holes/Truck Damage	604	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A	Guard Pole Holes/Truck Damage	605	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
A-D	TSP Assembly Area	411	0.461400002	0	N/A	0	0	0	0	Canal, Int	PSSW	Maximum	3, 4, 7, 11 - 17	M
A-T	Pulling&Tensioning	215	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
A-T	Pulling&Tensioning	216	0.690999985	0	N/A	0	0	0	0	Canal, Int	None	Moderate	4, 7, 12 - 17	L
A-T, A-D	Tubular Steel Pole	22	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	23	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
B	Tubular Steel Pole	24	0	0.062075	Floodway	692	695	5	2704	No	None	Moderate	7, 10	M
B	Tubular Steel Pole	25	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	26	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	27	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	28	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	29	0	0.008726	No	0	0	0	0	No	PSSY	Maximum	3, 4, 11, 12	H
B	Tubular Steel Pole	30	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	31	0	0.008726	No	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
B	Tubular Steel Pole	32	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	33	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
B	Tubular Steel Pole	195	0	0.008726	No	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
B	TSP Assembly Area	413	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	TSP Assembly Area	414	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	TSP Assembly Area	415	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	TSP Assembly Area	416	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	TSP Assembly Area	417	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	TSP Assembly Area	418	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	TSP Assembly Area	419	0.461400002	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	L
B	TSP Assembly Area	421	0.461400002	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
B	TSP Assembly Area	552	0.461400002	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
B	Pulling&Tensioning	217	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	Pulling&Tensioning	218	0.690999985	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	L
B	Pulling&Tensioning	219	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	Pulling&Tensioning	220	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	Pulling&Tensioning	221	0.690999985	0	N/A	0	0	0	0	Canal	PSSY	Maximum	3, 4, 7, 11 - 17	H
B	Pulling&Tensioning	222	0.690999985	0	N/A	0	0	0	0	Canal	PSSY	Maximum	3, 4, 7, 11 - 17	H
B	Guard Pole Holes/Truck Damage	606	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B	Guard Pole Holes/Truck Damage	607	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
B-L	Pulling&Tensioning	223	0.690999985	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	H
B-L	Pulling&Tensioning	224	0.690999985	0	N/A	0	0	0	0	Int Stream	PSSW	Maximum	3, 4, 7, 11 - 17	H
B-L, B-U	Tubular Steel Pole	34	0	0.008726	Floodway	694	690	0	0	No	None	Moderate	7, 10	M
B-U	TSP Assembly Area	420	0.461400002	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	H
D	Tubular Steel Pole	35	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	36	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	37	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	38	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	39	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	40	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	41	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	42	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	43	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	44	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	45	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	46	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	47	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	48	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	49	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	Tubular Steel Pole	50	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	421	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	422	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	423	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	424	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	425	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	426	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	427	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	428	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	429	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	430	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	431	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	432	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
D	TSP Assembly Area	433	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	434	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	TSP Assembly Area	435	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	Pulling&Tensioning	225	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	Pulling&Tensioning	226	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	Pulling&Tensioning	227	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D	Pulling&Tensioning	228	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D-H	Pulling&Tensioning	229	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D-H	Pulling&Tensioning	230	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D-I	TSP Assembly Area	436	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
D-I, D-H	Tubular Steel Pole	51	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	52	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	53	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	54	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	55	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	56	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	57	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	58	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	59	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	Tubular Steel Pole	60	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H	TSP Assembly Area	437	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	TSP Assembly Area	438	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	TSP Assembly Area	439	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	TSP Assembly Area	440	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	TSP Assembly Area	441	0.461400002	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	L
H	TSP Assembly Area	442	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Pulling&Tensioning	231	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Pulling&Tensioning	232	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Pulling&Tensioning	233	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Pulling&Tensioning	234	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Pulling&Tensioning	235	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Pulling&Tensioning	236	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Guard Pole Holes/Truck Damage	608	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Guard Pole Holes/Truck Damage	609	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Guard Pole Holes/Truck Damage	610	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H	Guard Pole Holes/Truck Damage	611	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
H-J, I-J	Tubular Steel Pole	61	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
H-J, I-J	Pulling&Tensioning	237	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
H-J, I-J	Pulling&Tensioning	238	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
I	Tubular Steel Pole	62	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
I	Tubular Steel Pole	63	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
I	Tubular Steel Pole	64	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
I	Tubular Steel Pole	65	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
I	TSP Assembly Area	443	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
I	TSP Assembly Area	444	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
I	TSP Assembly Area	445	0.461400002	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
I	TSP Assembly Area	446	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
I	Guard Pole Holes/Truck Damage	612	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
I	Guard Pole Holes/Truck Damage	613	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
I	Guard Pole Holes/Truck Damage	614	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
I	Guard Pole Holes/Truck Damage	615	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	66	0	0.0826445	Yes	611	616	7	3600	No	None	Moderate	7, 10	M
J	Tubular Steel Pole	67	0	0.008726	Yes	632	616	0	0	No	None	Moderate	7, 10	M
J	Tubular Steel Pole	68	0	0.008726	Yes	630	613	0	0	No	None	Moderate	7, 10	M
J	Tubular Steel Pole	69	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	70	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	71	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	72	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	73	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
J	Tubular Steel Pole	74	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	75	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	76	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	77	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	78	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	79	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	80	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	81	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	82	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	83	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	84	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	85	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	86	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	87	0	0.062075201	Yes	632	635	5	2704	No	None	Moderate	7, 10	H
J	Tubular Steel Pole	88	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	89	0	0.044444401	Yes	641	642	3	1936	No	None	Moderate	7, 10	M
J	Tubular Steel Pole	90	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	91	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	92	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	93	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	94	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	95	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	96	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	Tubular Steel Pole	97	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	447	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	448	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	449	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	450	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	451	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	452	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	453	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	454	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	455	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	456	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	457	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	458	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	459	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	460	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	461	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	462	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	463	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	464	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	465	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	466	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	467	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	468	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	469	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	470	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	471	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	472	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	TSP Assembly Area	473	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	239	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	240	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	241	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	242	0.690999985	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	L
J	Pulling&Tensioning	243	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	244	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	245	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
J	Pulling&Tensioning	246	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	247	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	248	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	249	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	250	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	251	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	252	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Pulling&Tensioning	253	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	616	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	617	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	618	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	619	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	620	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	621	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	622	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	623	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	624	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J	Guard Pole Holes/Truck Damage	625	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Pulling&Tensioning	254	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Pulling&Tensioning	255	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Pulling&Tensioning	256	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Pulling&Tensioning	257	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	474	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	475	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	476	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	477	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	478	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	479	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	480	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	TSP Assembly Area	481	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Tubular Steel Pole	98	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Tubular Steel Pole	99	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Tubular Steel Pole	100	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
J (old)	Tubular Steel Pole	101	0	0.119007997	Yes	599	607	10	5184	No	None	Moderate		H
J (old)	Tubular Steel Pole	102	0	0.132597998	Floodway	600	609	11	5776	No	None	Moderate		H
J (old)	Tubular Steel Pole	103	0	0.177777007	Floodway	603	615	14	7744	No	None	Moderate		H
J (old)	Tubular Steel Pole	104	0	0.161982998	Floodway	600	611	13	7056	No	None	Moderate		H
J (old)	Tubular Steel Pole	105	0	0.161982998	Floodway	602	613	13	7056	No	None	Moderate		H
J	Tubular Steel Pole	106	0	0.146924004	Floodway	607	617	12	6400	No	None	Moderate	7, 10	H
J	Tubular Steel Pole	107	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	108	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	109	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	110	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	111	0	0.062075201	Yes	662	665	5	2704	No	None	Moderate	7, 10	M
K	Tubular Steel Pole	112	0	0.062075201	Yes	659	662	5	2704	No	R2FLW	Maximum	3, 4, 7, 10, 11, 12	H
K	Tubular Steel Pole	113	0	0.008726	Yes	656	654	0	0	No	None	Moderate	7, 10	M
K	Tubular Steel Pole	114	0	0.044444401	Yes	650	651	3	1936	No	P SS/FL W	Maximum	3, 4, 7, 10, 11, 12	H
K	Tubular Steel Pole	115	0	0.071992502	Yes	643	647	6	3136	No	None	Maximum	7, 10	H
K	Tubular Steel Pole	116	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	117	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	118	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	119	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	120	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	121	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	122	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	123	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
K	Tubular Steel Pole	124	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	125	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	126	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	127	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	128	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	129	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	130	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	131	0	0.04444401	Floodway	747	748	3	1936	No	None	Moderate	7, 10	M
K	Tubular Steel Pole	132	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	133	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	134	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	135	0	0.071992502	Yes	644	648	6	3136	No	None	Moderate	7, 10	H
K	Tubular Steel Pole	136	0	0.052892499	Yes	658	660	4	2304	No	None	Moderate	7, 10	H
K	Tubular Steel Pole	137	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	Tubular Steel Pole	138	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	482	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	483	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	484	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	485	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	486	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	487	0.461400002	0	N/A	0	0	0	0	No	R2FLW	Maximum	3, 4, 11, 12	H
K	TSP Assembly Area	488	0.461400002	0	N/A	0	0	0	0	No	R2FLW	Maximum	3, 4, 11, 12	H
K	TSP Assembly Area	489	0.461400002	0	N/A	0	0	0	0	No	P SS/FL W	Maximum	3, 4, 11, 12	H
K	TSP Assembly Area	490	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	491	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	492	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	493	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	494	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	495	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	496	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	497	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	498	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	499	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	500	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	501	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	502	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	503	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	504	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	505	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	506	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	507	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	508	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	TSP Assembly Area	509	0.461400002	0	N/A	736	738	0	0	No	None	N/A	N/A	NI
K	Pulling&Tensioning	258	0.690999985	0	N/A	0	0	0	0	No	R2FLW	Maximum	3, 4, 11, 12	H
K	Pulling&Tensioning	259	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Pulling&Tensioning	260	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Pulling&Tensioning	261	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Pulling&Tensioning	262	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	626	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	627	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	628	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	629	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	630	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	631	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	632	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	633	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	634	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	635	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	636	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	637	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
K	Guard Pole Holes/Truck Damage	638	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	639	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K	Guard Pole Holes/Truck Damage	640	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K-S	Pulling&Tensioning	263	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
K-S	Pulling&Tensioning	264	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
L	Tubular Steel Pole	139	0	0.062075201	Yes	713	716	5	2704	No	None	Moderate	7, 10	H
L	TSP Assembly Area	510	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
L	Guard Pole Holes/Truck Damage	641	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
L	Guard Pole Holes/Truck Damage	642	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
L-M	Pulling&Tensioning	265	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
L-M	Pulling&Tensioning	266	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
L-N	TSP Assembly Area	511	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
L-N, L-M	Tubular Steel Pole	140	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
M	Tubular Steel Pole	141	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
M	Tubular Steel Pole	142	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
M	Tubular Steel Pole	143	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
M	Tubular Steel Pole	144	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
M	TSP Assembly Area	512	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	TSP Assembly Area	513	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Pulling&Tensioning	267	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Pulling&Tensioning	268	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Pulling&Tensioning	269	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Pulling&Tensioning	270	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Guard Pole Holes/Truck Damage	643	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Guard Pole Holes/Truck Damage	644	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Guard Pole Holes/Truck Damage	645	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M	Guard Pole Holes/Truck Damage	646	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M-P, N-P	TSP Assembly Area	514	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
MPMQ	Tubular Steel Pole	145	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
M-Q, N-Q	Pulling&Tensioning	271	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
M-Q, N-Q	Pulling&Tensioning	272	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	Tubular Steel Pole	146	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
N	Tubular Steel Pole	147	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
N	Tubular Steel Pole	148	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
N	Tubular Steel Pole	149	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
N	Tubular Steel Pole	150	0	0.0826445	Yes	730	735	7	3600	No	None	Moderate	7, 10	H
N	Tubular Steel Pole	151	0	0.044444401	Yes	718	719	3	1936	No	None	Moderate	7, 10	H
N	TSP Assembly Area	515	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	TSP Assembly Area	516	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	TSP Assembly Area	517	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	TSP Assembly Area	518	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	TSP Assembly Area	519	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	Pulling&Tensioning	273	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	Pulling&Tensioning	274	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	Guard Pole Holes/Truck Damage	647	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	Guard Pole Holes/Truck Damage	648	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	Guard Pole Holes/Truck Damage	649	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
N	Guard Pole Holes/Truck Damage	650	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
P	Tubular Steel Pole	152	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
P	Tubular Steel Pole	153	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
P	Tubular Steel Pole	154	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
P	TSP Assembly Area	520	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
P	TSP Assembly Area	521	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
P	Pulling&Tensioning	275	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
P	Pulling&Tensioning	276	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
P	Guard Pole Holes/Truck Damage	651	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
P	Guard Pole Holes/Truck Damage	652	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
P-R	TSP Assembly Area	522	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q	Tubular Steel Pole	155	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
Q	Tubular Steel Pole	156	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
Q	Tubular Steel Pole	157	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
Q	Tubular Steel Pole	158	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
Q	TSP Assembly Area	523	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q	TSP Assembly Area	524	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q	TSP Assembly Area	525	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q	Pulling&Tensioning	277	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q	Pulling&Tensioning	278	0.690999985	0	N/A	0	0	0	0	Canal	None	Minimal	4, 7, 12 - 17	L
Q	Guard Pole Holes/Truck Damage	653	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q	Guard Pole Holes/Truck Damage	654	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q-R	Pulling&Tensioning	279	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q-R	Pulling&Tensioning	280	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
Q-R, P-R	Tubular Steel Pole	159	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	160	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	161	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	162	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	163	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	164	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	165	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	166	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	167	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	168	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	169	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	170	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	171	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	172	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	173	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	174	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	175	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	176	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	177	0	0.052892499	Yes	712	714	4	2304	No	None	Moderate	7, 10	M
R	Tubular Steel Pole	178	0	0.044444401	Floodway	714	715	3	1936	No	None	Moderate	7, 10	M
R	Tubular Steel Pole	179	0	0.044444401	Yes	712	713	3	1936	No	None	Moderate	7, 10	M
R	Tubular Steel Pole	180	0	0.052892499	Yes	703	705	4	2304	No	None	Moderate	7, 10	M
R	Tubular Steel Pole	181	0	0.044444401	Yes	703	704	3	1936	No	None	Moderate	7, 10	M
R	Tubular Steel Pole	182	0	0.044444401	Yes	710	711	3	1936	No	None	Moderate	7, 10	H
R	Tubular Steel Pole	183	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	Tubular Steel Pole	184	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	526	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	527	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	528	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	529	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	530	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	531	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	532	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	533	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	534	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	535	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	536	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	537	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	538	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	539	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	540	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	541	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	542	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	TSP Assembly Area	543	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	281	0.690999985	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	L
R	Pulling&Tensioning	282	0.690999985	0	N/A	0	0	0	0	Int Stream	None	Moderate	4, 7, 12 - 17	L
R	Pulling&Tensioning	283	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	284	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	285	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 1. 230 kV Disturbance Area Impacts

Associated Link	Type	Reference Number	Temporary Disturbance (acres)	Permanent Disturbance (acres)	FEMA 100-year Floodplain	Elevation	Base Flood Elevation	Pad Height	Pad Base Area (square feet)	Stream Crossing	NWI Type	Resource Sensitivity	Site-specific APMs	Impact
R	Pulling&Tensioning	286	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	287	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	288	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	289	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	290	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	291	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	292	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Pulling&Tensioning	293	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	655	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	656	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	657	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	658	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	659	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	660	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	661	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	662	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	663	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	664	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	665	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	666	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	667	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R	Guard Pole Holes/Truck Damage	668	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R-S	TSP Assembly Area	544	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
R-S, K-S	Tubular Steel Pole	185	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
S	Tubular Steel Pole	186	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
S	Tubular Steel Pole	187	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
S	Tubular Steel Pole	188	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
S	Tubular Steel Pole	189	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
S	Tubular Steel Pole	190	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
S	Tubular Steel Pole	191	0	0.008726	Yes	776	773	0	0	No	None	Moderate	7, 10	M
S	Tubular Steel Pole	192	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
S	TSP Assembly Area	545	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	TSP Assembly Area	546	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	TSP Assembly Area	547	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	TSP Assembly Area	548	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	TSP Assembly Area	549	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	Pulling&Tensioning	294	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	Pulling&Tensioning	295	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	Pulling&Tensioning	296	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	Guard Pole Holes/Truck Damage	669	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	Guard Pole Holes/Truck Damage	670	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	Guard Pole Holes/Truck Damage	671	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
S	Guard Pole Holes/Truck Damage	672	0.003053	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
U	Tubular Steel Pole	193	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
U	Tubular Steel Pole	194	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
U	TSP Assembly Area	550	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
U	TSP Assembly Area	551	0.461400002	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
UK UT TK	Tubular Steel Pole	85	0	0.008726	No	0	0	0	0	No	None	N/A	N/A	NI
UK UT TK	Pulling&Tensioning	297	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI
UK UT TK	Pulling&Tensioning	298	0.690999985	0	N/A	0	0	0	0	No	None	N/A	N/A	NI

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
Ax	1	0	100	New Access Road	5	No	16	0	0	0.0370044	8.7063	750.3994	756.599	No	N/A	N/A	NI
Ax	1	100	155.53	New Access Road	5	No	16	0	0	0.020398401	1.0249	758.1595	758.4218	No	N/A	N/A	NI
Ax	2	0	100	Trail Access Road	4	No	16	0	0	0.036733199	1.1152	733.4363	733.7523	No	N/A	N/A	NI
Ax	2	100	200	Trail Access Road	4	No	16	0	0	0.036734302	1.327	731.8624	732.2665	No	N/A	N/A	NI
Ax	2	200	300	Trail Access Road	4	No	16	0	0	0.036734	1.294	731.8154	732.264	No	N/A	N/A	NI
Ax	2	300	400	Trail Access Road	4	No	16	0	0	0.036735501	1.5845	731.738	732.5303	No	N/A	N/A	NI
Ax	2	400	500	Trail Access Road	4	No	16	0	0	0.036743499	2.5654	730.229	731.6412	No	N/A	N/A	NI
Ax	2	500	600	Trail Access Road	4	No	16	0	0	0.036743	2.5217	725.4258	726.6568	No	N/A	N/A	NI
Ax	2	600	700	Trail Access Road	4	No	16	0	0	0.036969401	11.2141	713.6257	718.7055	No	N/A	N/A	NI
Ax	2	700	800	Trail Access Road	4	No	16	0	0	0.036976799	11.2371	706.3507	712.6595	No	N/A	N/A	NI
Ax	2	800	900	Trail Access Road	4	No	16	0	0	0.036753099	3.2709	700.7332	702.6638	No	N/A	N/A	NI
Ax	2	900	1000	Trail Access Road	4	No	16	0	0	0.036756702	3.5205	694.6453	696.0827	No	N/A	N/A	NI
Ax	2	1000	1100	Trail Access Road	4	No	16	0	0	0.036738999	1.8408	708.8395	709.3199	No	N/A	N/A	NI
Ax	2	1100	1200	Trail Access Road	4	No	16	0	0	0.0368382	6.1985	701.7773	704.8067	No	N/A	N/A	NI
Ax	2	1200	1300	Trail Access Road	4	No	16	0	0	0.0368752	8.3568	699.688	704.0134	No	N/A	N/A	NI
Ax	2	1300	1400	Trail Access Road	4	No	16	0	0	0.0368076	6.4209	710.4632	712.2352	No	N/A	N/A	NI
Ax	2	1400	1500	Trail Access Road	4	No	16	0	0	0.036777701	5.0142	700.0656	702.7216	No	N/A	N/A	NI
Ax	2	1500	1600	Trail Access Road	4	No	16	0	0	0.036736902	1.7839	709.9506	710.8906	No	N/A	N/A	NI
Ax	2	1600	1700	Trail Access Road	4	No	16	0	0	0.0368356	4.9641	692.3843	694.5226	No	N/A	N/A	NI
Ax	2	1700	1800	Trail Access Road	4	Floodway	16	694	0	0.036835101	7.4747	708.4592	710.5348	No	N/A	13	M
Ax	2	1800	1900	Trail Access Road	4	Floodway	24	697	2.001499891	0.055098999	0.9353	696.9985	697.4134	No	N/A	13	H
Ax	2	1900	2000	Trail Access Road	4	Floodway	24	696	2.001499891	0.055549499	9.1441	702.986	705.0638	No	N/A	13	H
Ax	2	2000	2100	Trail Access Road	4	Floodway	16	696	0	0.036799598	4.2241	722.8823	726.1136	No	N/A	13	M
Ax	2	2100	2200	Trail Access Road	4	No	16	0	0	0.036954802	8.5644	706.1691	708.6027	No	N/A	N/A	NI
Ax	2	2200	2300	Trail Access Road	4	No	16	0	0	0.036758501	3.2578	697.4812	698.5896	No	N/A	N/A	NI
Ax	2	2300	2400	Trail Access Road	4	No	16	0	0	0.037411898	17.3549	710.8887	717.3994	No	N/A	N/A	NI
Ax	2	2400	2500	Trail Access Road	4	No	16	0	0	0.036924299	9.1357	731.259	736.9924	No	N/A	N/A	NI
Ax	2	2500	2600	Trail Access Road	4	No	16	0	0	0.0367934	5.8358	734.507	737.3809	No	N/A	N/A	NI
Ax	2	2600	2700	Trail Access Road	4	No	16	0	0	0.036732499	0.8099	742.7668	743.0525	No	N/A	N/A	NI
Ax	2	2700	2800	Trail Access Road	4	No	16	0	0	0.036731798	0.4926	743.863	744.23	No	N/A	N/A	NI
Ax	2	2800	2875.28	Trail Access Road	4	No	16	0	0	0.0276505	0.409	744.1548	744.3087	No	N/A	N/A	NI
Ax, D, T	3	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.036764599	4.0254	711.433	712.2303	No	N/A	N/A	NI
Ax, D, T	3	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036739301	2.1429	703.463	704.5345	No	N/A	N/A	NI
Ax, D, T	3	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.0367411	2.0149	708.2971	708.9362	No	N/A	N/A	NI
Ax, D, T	3	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.036751602	3.3066	695.3564	697.1525	No	N/A	N/A	NI
Ax, D, T	3	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.036741	2.1237	700.451	701.1594	No	N/A	N/A	NI
Ax, D, T	3	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.036856301	7.6421	686.9644	690.1099	No	N/A	N/A	NI
Ax, D, T	3	600	700	Unimproved Two-Track Road	4	No	16	0	0	0.036779299	4.5937	694.3629	696.3032	No	N/A	N/A	NI
Ax, D, T	3	700	800	Unimproved Two-Track Road	4	No	16	0	0	0.036739301	1.7447	682.81	683.3467	Canal	N/A	4, 7-9, 11-13, 15, 17	L
Ax, D, T	3	800	900	Unimproved Two-Track Road	4	No	16	0	0	0.036851	6.3043	691.8651	693.6701	No	N/A	N/A	NI
Ax, D, T	3	900	1000	Unimproved Two-Track Road	4	No	16	0	0	0.036859099	6.7317	694.8094	698.5456	No	N/A	N/A	NI
Ax, D, T	3	1000	1100	Unimproved Two-Track Road	4	No	16	0	0	0.036810301	6.2155	696.1974	699.8201	No	N/A	N/A	NI
Ax, D, T	3	1100	1200	Unimproved Two-Track Road	4	No	16	0	0	0.036771402	4.0846	698.186	699.8923	No	N/A	N/A	NI
Ax, D, T	3	1200	1227.14	Unimproved Two-Track Road	4	No	16	0	0	0.00998738	6.0238	698.1941	699.0116	No	N/A	N/A	NI
Bx	4	0	61.44	New Spur	5	Floodway	26	695	2.394500017	0.0367225	5.3264	694.6055	696.2417	No	N/A	13	H
Bx	5	0	81.46	New Spur	5	No	16	0	0	0.0299995	6.2047	736.2834	739.5149	No	N/A	N/A	NI
Bx	6	0	100	Jeep Trail	4	No	16	0	0	0.036732599	0.9683	742.83	743.3066	No	N/A	N/A	NI
Bx	6	100	200	Jeep Trail	4	No	16	0	0	0.036733199	1.0709	743.5564	744.0243	No	N/A	N/A	NI
Bx	6	200	300	Jeep Trail	4	No	16	0	0	0.0367321	0.8223	743.7853	744.2022	No	N/A	N/A	NI
Bx	6	300	400	Jeep Trail	4	No	16	0	0	0.036731299	0.3931	743.5803	743.8199	No	N/A	N/A	NI
Bx	6	400	500	Jeep Trail	4	No	16	0	0	0.036731798	0.612	744.6252	744.8878	No	N/A	N/A	NI
Bx	6	500	600	Jeep Trail	4	No	16	0	0	0.036737598	1.8908	744.8716	745.7534	No	N/A	N/A	NI
Bx	6	600	700	Jeep Trail	4	No	16	0	0	0.036741801	2.334	747.0133	747.6039	No	N/A	N/A	NI
Bx	6	700	800	Jeep Trail	4	No	16	0	0	0.0367391	1.902	744.5546	745.2289	No	N/A	N/A	NI
Bx	6	800	900	Jeep Trail	4	No	16	0	0	0.036739301	1.2813	742.6431	742.8647	No	N/A	N/A	NI
Bx	6	900	943.91	Jeep Trail	4	No	16	0	0	0.016153799	5.4687	742.8157	744.0221	No	N/A	N/A	NI
Bx	7	0	100	Jeep Trail	4	No	16	0	0	0.036954101	11.0184	727.2172	732.8786	No	N/A	N/A	NI
Bx	7	100	200	Jeep Trail	4	No	16	0	0	0.037126198	14.3066	718.6451	721.9885	No	N/A	N/A	NI
Bx	7	200	300	Jeep Trail	4	No	16	0	0	0.0374262	17.7597	727.4858	738.2192	No	N/A	N/A	NI
Bx	7	300	360.15	Jeep Trail	4	No	16	0	0	0.0224507	16.9811	735.289	740.7516	No	N/A	N/A	NI
Bx	8	0	64.91	Unimproved Two-Track Road	5	No	16	0	0	0.023850501	2.5281	765.1628	765.9419	No	N/A	N/A	NI
Bx	9	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.0372715	15.8533	751.3199	759.8754	No	N/A	N/A	NI
Bx	9	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036911201	9.5486	756.2708	759.8418	No	N/A	N/A	NI
Bx	9	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036767401	4.2845	754.3613	755.3178	No	N/A	N/A	NI
Bx	9	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.037182599	10.4943	740.2693	742.7185	No	N/A	N/A	NI
Bx	9	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.036972102	9.4008	736.4617	739.989	No	N/A	N/A	NI
Bx	9	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.036829401	5.588	741.3116	743.6314	No	N/A	N/A	NI
Bx	9	600	700	Unimproved Two-Track Road	4	No	16	0	0	0.037145101	9.5959	739.7335	741.5543	No	N/A	N/A	NI
Bx	9	700	800	Unimproved Two-Track Road	4	No	16	0	0	0.036966398	9.8115	743.3569	747.9315	No	N/A	N/A	NI
Bx	9	800	815.85	Unimproved Two-Track Road	4	No	16	0	0	0.00587668	11.1231	750.8906	752.0864	No	N/A	N/A	NI
Bx	10	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.037066702	13.164	730.0929	737.4724	No	N/A	N/A	NI
Bx	10	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036885198	9.1302	728.6861	733.3061	Aqueduct	N/A	4, 7-9, 11-13, 15, 17	L
Bx	10	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.037108202	13.9928	714.4686	722.2893	No	N/A	N/A	NI
Bx	10	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.0372875	17.0051	706.5903	715.0529	No	N/A	N/A	NI

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
Bx	10	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.037135702	13.7717	719.8745	725.2764	No	N/A	N/A	NI
Bx	10	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.037544198	19.7381	732.5519	744.2121	No	N/A	N/A	NI
Bx	10	600	700	Unimproved Two-Track Road	4	No	16	0	0	0.037256598	14.9973	748.2925	757.7739	No	N/A	N/A	NI
Bx	10	700	741.52	Unimproved Two-Track Road	4	No	16	0	0	0.0152858	6.786	763.5325	764.9453	Aqueduct	N/A	4, 7-9, 11-13, 15, 17	L
Bx	13	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	10.4442	756.9567	764.076	No	N/A	N/A	NI
Bx	13	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	6.4881	759.7114	762.956	No	N/A	N/A	NI
Bx	13	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	7.7856	759.7114	763.9508	No	N/A	N/A	NI
Bx	13	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	1.6263	768.6304	769.3562	No	N/A	N/A	NI
Bx	13	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	4.5492	770.0722	772.0422	No	N/A	N/A	NI
Bx	13	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	4.5473	776.2315	778.9524	No	N/A	N/A	NI
Bx	13	600	700	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	3.2559	772.2682	774.1348	No	N/A	N/A	NI
Bx	13	700	800	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	1.6506	777.0102	778.0459	No	N/A	N/A	NI
Bx	13	800	900	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	3.1907	774.861	775.7474	Aqueduct	N/A	4, 7-9, 11-13, 15, 17	L
Bx	13	900	932.13	Unimproved Two-Track Road	4	No	16	0	0	0.0118032	1.4462	776.672	776.9389	No	N/A	N/A	NI
Bx	14	0	100	New Access Road	5	No	16	0	0	0.037723299	22.9666	742.7288	755.0333	No	N/A	N/A	NI
Bx	14	100	200	New Access Road	5	No	16	0	0	0.0373259	16.8177	730.246	734.0195	No	N/A	N/A	NI
Bx	14	200	300	New Access Road	5	No	16	0	0	0.036844	6.8132	738.7362	741.6264	No	N/A	N/A	NI
Bx	14	300	343.55	New Access Road	5	No	16	0	0	0.0160529	8.4175	741.8842	743.7759	No	N/A	N/A	NI
Bx	15	0	100	New Access Road	5	No	16	0	0	0.037018199	12.4943	757.214	760.7682	No	N/A	N/A	NI
Bx	15	100	200	New Access Road	5	No	16	0	0	0.036790099	3.9966	744.7872	745.8824	No	N/A	N/A	NI
Bx	15	200	300	New Access Road	5	No	16	0	0	0.036740899	1.3291	746.7331	747.0842	No	N/A	N/A	NI
Bx	15	300	400	New Access Road	5	No	16	0	0	0.036773302	4.0453	749.0752	750.651	No	N/A	N/A	NI
Bx	15	400	500	New Access Road	5	No	16	0	0	0.036844701	7.1079	749.6494	752.1344	No	N/A	N/A	NI
Bx	15	500	564.82	New Access Road	5	No	16	0	0	0.023814401	1.6053	764.7906	765.5466	No	N/A	N/A	NI
D	16	0	100	New Spur	5	No	16	0	0	0.0367494	3.0418	734.3743	735.8959	No	N/A	N/A	NI
D	16	100	148.74	New Spur	5	No	16	0	0	0.0179043	1.9746	736.4537	736.9348	No	N/A	N/A	NI
D	17	0	100	New Spur	5	No	16	0	0	0.0367417	1.6546	727.7992	728.3243	No	N/A	N/A	NI
D	17	100	155.26	New Spur	5	No	16	0	0	0.020297199	0.7552	727.5471	727.6865	No	N/A	N/A	NI
D	18	0	97.1	New Spur	5	No	16	0	0	0.0357311	5.4078	715.0978	718.3599	No	N/A	N/A	NI
D	19	0	61.32	New Spur	5	No	16	0	0	0.0225359	3.4098	707.4152	708.4579	No	N/A	N/A	NI
D	20	0	100	Jeep Trail	4	No	16	0	0	0.036750302	3.231	742.6221	744.144	No	N/A	N/A	NI
D	20	100	200	Jeep Trail	4	No	16	0	0	0.036755901	2.9096	742.7108	743.5138	No	N/A	N/A	NI
D	20	200	300	Jeep Trail	4	No	16	0	0	0.036750101	2.4811	743.3522	744.9144	No	N/A	N/A	NI
D	20	300	400	Jeep Trail	4	No	16	0	0	0.0367902	2.8812	742.3813	744.5866	No	N/A	N/A	NI
D	20	400	500	Jeep Trail	4	No	16	0	0	0.0367321	0.8038	744.4631	744.8466	No	N/A	N/A	NI
D	20	500	600	Jeep Trail	4	No	16	0	0	0.037187401	15.6959	735.3976	739.4384	No	N/A	N/A	NI
D	20	600	700	Jeep Trail	4	No	16	0	0	0.036738299	1.1505	743.9866	744.4437	No	N/A	N/A	NI
D	20	700	800	Jeep Trail	4	No	16	0	0	0.0367309	0.1074	746.519	746.5838	No	N/A	N/A	NI
D	20	800	900	Jeep Trail	4	No	16	0	0	0.0367309	0.0356	746.0052	746.023	No	N/A	N/A	NI
D	20	900	1000	Jeep Trail	4	No	16	0	0	0.036733601	0.7875	745.1853	745.7305	No	N/A	N/A	NI
D	20	1000	1100	Jeep Trail	4	No	16	0	0	0.0367449	2.5342	743.3586	743.9031	No	N/A	N/A	NI
D	20	1100	1200	Jeep Trail	4	No	16	0	0	0.036766	3.5798	741.8899	743.0752	No	N/A	N/A	NI
D	20	1200	1300	Jeep Trail	4	No	16	0	0	0.0367584	3.0014	743.7057	745.8304	No	N/A	N/A	NI
D	20	1300	1400	Jeep Trail	4	No	16	0	0	0.0367321	0.8022	746.767	747.1891	No	N/A	N/A	NI
D	20	1400	1500	Jeep Trail	4	No	16	0	0	0.0367315	0.5558	746.9617	747.2194	No	N/A	N/A	NI
D	20	1500	1600	Jeep Trail	4	No	16	0	0	0.036731701	0.5745	748.154	748.3649	No	N/A	N/A	NI
D	20	1600	1700	Jeep Trail	4	No	16	0	0	0.036733899	1.0388	747.3281	747.657	No	N/A	N/A	NI
D	20	1700	1800	Jeep Trail	4	No	16	0	0	0.036731299	0.4538	746.7639	747.0077	No	N/A	N/A	NI
D	20	1800	1900	Jeep Trail	4	No	16	0	0	0.036733001	1.0757	745.4095	745.9239	No	N/A	N/A	NI
D	20	1900	2000	Jeep Trail	4	No	16	0	0	0.036761701	4.0754	717.5312	718.5612	No	N/A	N/A	NI
D	20	2000	2100	Jeep Trail	4	No	16	0	0	0.0367743	3.7676	714.5557	715.9969	No	N/A	N/A	NI
D	20	2100	2200	Jeep Trail	4	No	16	0	0	0.036752999	3.4697	712.2814	714.0162	No	N/A	N/A	NI
D	20	2200	2300	Jeep Trail	4	No	16	0	0	0.036773998	4.5248	709.8925	711.6718	No	N/A	N/A	NI
D	20	2300	2400	Jeep Trail	4	No	16	0	0	0.036789302	5.4971	711.8115	714.8267	No	N/A	N/A	NI
D	20	2400	2500	Jeep Trail	4	No	16	0	0	0.0367608	3.8888	714.2532	715.9536	No	N/A	N/A	NI
D	20	2500	2600	Jeep Trail	4	No	16	0	0	0.036744598	2.4565	716.6775	718.0068	No	N/A	N/A	NI
D	20	2600	2700	Jeep Trail	4	No	16	0	0	0.036734901	1.4164	717.6801	717.9779	No	N/A	N/A	NI
D	20	2700	2800	Jeep Trail	4	No	16	0	0	0.036935799	9.2945	713.6044	717.0001	No	N/A	N/A	NI
D	20	2800	2900	Jeep Trail	4	No	16	0	0	0.037101001	14.0588	721.0201	728.4844	No	N/A	N/A	NI
D	20	2900	3000	Jeep Trail	4	No	16	0	0	0.036842901	5.9919	735.6639	737.4567	No	N/A	N/A	NI
D	20	3000	3100	Jeep Trail	4	No	16	0	0	0.0368407	6.3101	737.8055	742.0673	No	N/A	N/A	NI
D	20	3100	3200	Jeep Trail	4	No	16	0	0	0.036733001	0.9548	743.651	744.0059	No	N/A	N/A	NI
D	20	3200	3300	Jeep Trail	4	No	16	0	0	0.036836099	6.4194	738.3488	742.5388	No	N/A	N/A	NI
D	20	3300	3400	Jeep Trail	4	No	16	0	0	0.036835801	6.2528	738.4642	742.7351	No	N/A	N/A	NI
D	20	3400	3500	Jeep Trail	4	No	16	0	0	0.036782701	4.8624	732.2641	734.2466	No	N/A	N/A	NI
D	20	3500	3600	Jeep Trail	4	No	16	0	0	0.036829501	7.0157	720.8337	722.5769	No	N/A	N/A	NI
D	20	3600	3700	Jeep Trail	4	No	16	0	0	0.036734998	1.4299	727.6619	728.4787	No	N/A	N/A	NI
D	20	3700	3800	Jeep Trail	4	No	16	0	0	0.0367378	1.8728	729.1121	729.9159	No	N/A	N/A	NI
D	20	3800	3900	Jeep Trail	4	No	16	0	0	0.036747798	3.0265	730.3956	731.9514	No	N/A	N/A	NI
D	20	3900	4000	Jeep Trail	4	No	16	0	0	0.036731601	0.4853	732.7126	732.86	No	N/A	N/A	NI
D	20	4000	4100	Jeep Trail	4	No	16	0	0	0.036731001	0.2531	734.0108	734.1374	No	N/A	N/A	NI
D	20	4100	4200	Jeep Trail	4	No	16	0	0	0.0367353	1.1932	733.5781	734.3107	No	N/A	N/A	NI
D	20	4200	4300	Jeep Trail	4	No	16	0	0	0.036732901	0.8783	733.6492	734.2198	No	N/A	N/A	NI
D	20	4300	4400	Jeep Trail	4	No	16	0	0	0.0367346	1.4154	731.9351	732.6168	No	N/A	N/A	NI

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
D	20	4400	4500	Jeep Trail	4	No	16	0	0	0.036734398	1.3586	731.0351	731.7731	No	N/A	N/A	NI
D	20	4500	4600	Jeep Trail	4	No	16	0	0	0.0367353	1.5567	729.5707	730.3489	No	N/A	N/A	NI
D	20	4600	4700	Jeep Trail	4	No	16	0	0	0.0367423	2.4933	727.0181	728.2648	No	N/A	N/A	NI
D	20	4700	4800	Jeep Trail	4	No	16	0	0	0.0367423	2.0566	726.2703	727.5997	No	N/A	N/A	NI
D	20	4800	4900	Jeep Trail	4	No	16	0	0	0.036740001	1.6398	724.5962	724.9715	No	N/A	N/A	NI
D	20	4900	5000	Jeep Trail	4	No	16	0	0	0.036731001	0.2743	724.9879	725.125	No	N/A	N/A	NI
D	20	5000	5100	Jeep Trail	4	No	16	0	0	0.0367314	0.5291	724.7636	725.0349	No	N/A	N/A	NI
D	20	5100	5200	Jeep Trail	4	No	16	0	0	0.036731299	0.3339	724.7379	724.9684	No	N/A	N/A	NI
D	20	5200	5300	Jeep Trail	4	No	16	0	0	0.0367372	1.4052	725.0543	725.4411	No	N/A	N/A	NI
D	20	5300	5400	Jeep Trail	4	No	16	0	0	0.036732599	0.7222	725.0543	725.2469	No	N/A	N/A	NI
D	20	5400	5500	Jeep Trail	4	No	16	0	0	0.036738198	1.8043	726.2726	727.3705	No	N/A	N/A	NI
D	20	5500	5600	Jeep Trail	4	No	16	0	0	0.037368499	14.9753	715.6262	725.381	No	N/A	N/A	NI
D	20	5600	5700	Jeep Trail	4	No	16	0	0	0.037919901	25.6494	688.4999	701.2926	No	N/A	N/A	NI
D	20	5700	5800	Jeep Trail	4	No	16	0	0	0.037156299	9.4659	668.6078	670.7042	No	N/A	N/A	NI
D	20	5800	5900	Jeep Trail	4	No	16	0	0	0.037546299	19.1717	668.798	676.943	Canal	N/A	4, 7-9, 11-13, 15, 17	L
D	20	5900	6000	Jeep Trail	4	No	16	0	0	0.037312299	15.6102	669.8107	674.5895	No	N/A	N/A	NI
D	20	6000	6100	Jeep Trail	4	No	16	0	0	0.037250899	12.9467	688.4099	697.0774	Canal	N/A	4, 7-9, 11-13, 15, 17	L
D	20	6100	6200	Jeep Trail	4	No	16	0	0	0.036770999	4.0905	711.4619	713.3614	No	N/A	N/A	NI
D	20	6200	6300	Jeep Trail	4	No	16	0	0	0.036765799	2.9837	708.7603	710.3518	No	N/A	N/A	NI
D	20	6300	6319.46	Jeep Trail	4	No	16	0	0	0.00714691	0.8002	708.7904	708.8683	No	N/A	N/A	NI
D	21	0	100	Trail Access Road	4	No	16	0	0	0.036820401	6.6032	689.3984	692.2551	No	N/A	N/A	NI
D	21	100	200	Trail Access Road	4	No	16	0	0	0.036821701	6.6489	689.3526	692.2128	No	N/A	N/A	NI
D	21	200	300	Trail Access Road	4	No	16	0	0	0.036799401	5.0389	706.0684	708.9361	No	N/A	N/A	NI
D	21	300	400	Trail Access Road	4	No	16	0	0	0.036761802	3.6029	719.011	720.9827	No	N/A	N/A	NI
D	21	400	500	Trail Access Road	4	No	16	0	0	0.036898799	9.0727	715.2193	719.8476	No	N/A	N/A	NI
D	21	500	600	Trail Access Road	4	No	16	0	0	0.036773801	4.6429	725.2001	727.2619	No	N/A	N/A	NI
D	21	600	700	Trail Access Road	4	No	16	0	0	0.036837701	7.6048	727.9286	731.6628	No	N/A	N/A	NI
D	21	700	800	Trail Access Road	4	No	16	0	0	0.0367602	3.3675	740.0352	741.0365	No	N/A	N/A	NI
D	21	800	900	Trail Access Road	4	No	16	0	0	0.036779799	3.6692	739.3849	741.9734	No	N/A	N/A	NI
D	21	900	1000	Trail Access Road	4	No	16	0	0	0.036736	1.6646	743.075	743.8875	No	N/A	N/A	NI
D	21	1000	1100	Trail Access Road	4	No	16	0	0	0.036746599	2.6939	746.1784	747.2335	No	N/A	N/A	NI
D	21	1100	1200	Trail Access Road	4	No	16	0	0	0.036740001	2.1614	749.6713	750.6581	No	N/A	N/A	NI
D	21	1200	1300	Trail Access Road	4	No	16	0	0	0.036731198	0.4465	751.1071	751.3214	No	N/A	N/A	NI
D	21	1300	1386.79	Trail Access Road	4	No	16	0	0	0.031951901	4.5093	744.1987	745.4348	No	N/A	N/A	NI
D	22	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.036741901	1.5667	742.0878	743.3283	No	N/A	N/A	NI
D	22	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036733799	0.934	740.8831	741.1102	No	N/A	N/A	NI
D	22	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036731701	0.5084	743.7819	743.887	No	N/A	N/A	NI
D	22	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.036731999	0.7905	743.904	744.2958	No	N/A	N/A	NI
D	22	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.0367328	0.9933	744.0153	744.5798	No	N/A	N/A	NI
D	22	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.036733702	0.746	745.3361	745.8689	No	N/A	N/A	NI
D	22	600	700	Unimproved Two-Track Road	4	No	16	0	0	0.0367775	4.6822	740.9592	742.2382	No	N/A	N/A	NI
D	22	700	800	Unimproved Two-Track Road	4	No	16	0	0	0.036732201	0.7622	747.4299	747.847	No	N/A	N/A	NI
D	22	800	892.05	Unimproved Two-Track Road	4	No	16	0	0	0.033833101	2.572	745.5998	746.052	No	N/A	N/A	NI
D	23	0	83.31	New Spur	5	No	16	0	0	0.031059301	17.3002	689.701	696.5943	No	N/A	N/A	NI
D	24	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.036791001	5.1971	738.257	741.4563	No	N/A	N/A	NI
D	24	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036751099	3.142	744.4448	745.8464	No	N/A	N/A	NI
D	24	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036740098	2.2244	747.2653	748.0636	No	N/A	N/A	NI
D	24	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.036845502	5.3939	742.6923	744.4442	No	N/A	N/A	NI
D	24	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.036844801	7.2846	742.0256	744.28	No	N/A	N/A	NI
D	24	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.036737699	1.8964	745.3732	745.8896	No	N/A	N/A	NI
D	24	600	626	Unimproved Two-Track Road	4	No	16	0	0	0.00957585	6.8761	745.3896	746.1685	No	N/A	N/A	NI
D	25	0	100	Jeep Trail	4	No	16	0	0	0.036734	1.265	730.9126	731.4766	No	N/A	N/A	NI
D	25	100	200	Jeep Trail	4	No	16	0	0	0.0367334	0.9823	727.7774	728.098	No	N/A	N/A	NI
D	25	200	227.75	Jeep Trail	4	No	16	0	0	0.0101911	0.2143	729.6519	729.6776	No	N/A	N/A	NI
D	26	0	100	Jeep Trail	4	No	16	0	0	0.036796	5.2693	708.0974	711.0325	No	N/A	N/A	NI
D	26	100	200	Jeep Trail	4	No	16	0	0	0.0367731	3.9306	704.3239	705.6064	No	N/A	N/A	NI
D	26	200	300	Jeep Trail	4	No	16	0	0	0.036733001	1.0399	704.7792	705.0945	No	N/A	N/A	NI
D	26	300	400	Jeep Trail	4	No	16	0	0	0.036732201	0.7943	705.5356	705.7299	No	N/A	N/A	NI
D	26	400	500	Jeep Trail	4	No	16	0	0	0.0367327	0.9313	705.9586	706.3414	No	N/A	N/A	NI
D	26	500	600	Jeep Trail	4	No	16	0	0	0.036731102	0.3143	706.9878	707.1797	No	N/A	N/A	NI
D	26	600	700	Jeep Trail	4	No	16	0	0	0.036734801	1.3804	706.1188	706.7026	No	N/A	N/A	NI
D	26	700	800	Jeep Trail	4	No	16	0	0	0.036741901	2.0704	707.5892	708.2489	No	N/A	N/A	NI
D	26	800	900	Jeep Trail	4	No	16	0	0	0.036733299	1.1165	706.4678	706.9662	No	N/A	N/A	NI
D	26	900	1000	Jeep Trail	4	No	16	0	0	0.036738601	1.3111	705.6735	706.4919	No	N/A	N/A	NI
D	26	1000	1100	Jeep Trail	4	No	16	0	0	0.036765501	4.3201	702.0721	704.3465	No	N/A	N/A	NI
D	26	1100	1200	Jeep Trail	4	No	16	0	0	0.036743999	2.5228	702.5761	704.053	No	N/A	N/A	NI
D	26	1200	1300	Jeep Trail	4	No	16	0	0	0.036739301	2.1272	705.059	706.0996	No	N/A	N/A	NI
D	26	1300	1400	Jeep Trail	4	No	16	0	0	0.0367391	2.1133	705.2149	706.2714	No	N/A	N/A	NI
D	26	1400	1500	Jeep Trail	4	No	16	0	0	0.036738101	1.9858	707.1583	708.1678	No	N/A	N/A	NI
D	26	1500	1600	Jeep Trail	4	No	16	0	0	0.036733501	0.9457	709.5935	709.9861	No	N/A	N/A	NI
D	26	1600	1700	Jeep Trail	4	No	16	0	0	0.036731001	0.2575	709.7781	709.9069	No	N/A	N/A	NI
D	26	1700	1800	Jeep Trail	4	No	16	0	0	0.036735501	1.578	708.3633	709.1548	No	N/A	N/A	NI
D	26	1800	1900	Jeep Trail	4	No	16	0	0	0.0367366	1.6105	706.6891	707.3125	No	N/A	N/A	NI
D	26	1900	2000	Jeep Trail	4	No	16	0	0	0.0367328	1.0015	705.4028	705.6773	No	N/A	N/A	NI

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
D	26	2000	2100	Jeep Trail	4	No	16	0	0	0.036745701	2.7814	706.8354	708.0878	No	N/A	N/A	NI
D	26	2100	2200	Jeep Trail	4	No	16	0	0	0.036757201	3.7687	706.4778	708.4567	No	N/A	N/A	NI
D	26	2200	2300	Jeep Trail	4	No	16	0	0	0.036770001	4.585	709.9138	712.1009	No	N/A	N/A	NI
D	26	2300	2400	Jeep Trail	4	No	16	0	0	0.0367734201	1.229	713.3532	713.7171	No	N/A	N/A	NI
D	26	2400	2500	Jeep Trail	4	No	16	0	0	0.036773998	3.6271	707.6754	709.5315	No	N/A	N/A	NI
D	26	2500	2600	Jeep Trail	4	No	16	0	0	0.036742501	1.5444	709.1005	709.3815	No	N/A	N/A	NI
D	26	2600	2700	Jeep Trail	4	No	16	0	0	0.036734201	1.0468	710.5898	711.1572	No	N/A	N/A	NI
D	26	2700	2800	Jeep Trail	4	No	16	0	0	0.036731798	0.5497	710.7739	710.8751	No	N/A	N/A	NI
D	26	2800	2900	Jeep Trail	4	No	16	0	0	0.0367327	0.8687	712.0433	712.5986	No	N/A	N/A	NI
D	26	2900	3000	Jeep Trail	4	No	16	0	0	0.036731198	0.3791	712.4119	712.6535	No	N/A	N/A	NI
D	26	3000	3100	Jeep Trail	4	No	16	0	0	0.036731102	0.3431	713.0046	713.1718	No	N/A	N/A	NI
D	26	3100	3116.09	Jeep Trail	4	No	16	0	0	0.00590864	0.6097	712.8174	712.8665	No	N/A	N/A	NI
D, H, I	27	0	66.02	New Spur	5	No	16	0	0	0.024273399	4.4058	715.2284	716.7194	No	N/A	N/A	NI
D, H, I	28	0	100	Jeep Trail	4	No	16	0	0	0.036745202	2.2345	710.8591	712.3936	No	N/A	N/A	NI
D, H, I	28	100	200	Jeep Trail	4	No	16	0	0	0.0367647	4.285	706.804	708.9339	No	N/A	N/A	NI
D, H, I	28	200	300	Jeep Trail	4	No	16	0	0	0.0367577	3.8233	703.2357	705.1528	No	N/A	N/A	NI
D, H, I	28	300	400	Jeep Trail	4	No	16	0	0	0.0367539	3.543	698.8423	700.6089	No	N/A	N/A	NI
D, H, I	28	400	500	Jeep Trail	4	No	16	0	0	0.036736399	1.1675	697.4592	697.7211	No	N/A	N/A	NI
D, H, I	28	500	554.9	Jeep Trail	4	No	16	0	0	0.020166799	0.2647	697.3326	697.4047	No	N/A	N/A	NI
G, H, I	29	0	98.52	New Access Road	5	No	16	0	0	0.0361869	0.373	697.1877	697.4239	No	N/A	N/A	NI
H	30	0	100	Unpaved Access Road	3	No	16	0	0	0.0367404	1.9988	714.2425	714.9787	Int Stream	N/A	4, 7-9, 11-13, 15, 17	L
H	30	100	200	Unpaved Access Road	3	No	16	0	0	0.036742002	2.4632	716.1619	717.4068	No	N/A	N/A	NI
H	30	200	300	Unpaved Access Road	3	No	16	0	0	0.036784802	5.1002	720.2114	722.2757	No	N/A	N/A	NI
H	30	300	400	Unpaved Access Road	3	No	16	0	0	0.036791701	5.3458	726.472	729.6654	No	N/A	N/A	NI
H	30	400	500	Unpaved Access Road	3	No	16	0	0	0.036788698	5.2718	726.9645	730.0742	No	N/A	N/A	NI
H	30	500	600	Unpaved Access Road	3	No	16	0	0	0.036771402	4.565	735.441	737.9255	No	N/A	N/A	NI
H	30	600	700	Unpaved Access Road	3	No	16	0	0	0.0367461	2.3829	737.8558	739.4427	No	N/A	N/A	NI
H	30	700	800	Unpaved Access Road	3	No	16	0	0	0.036731999	0.7667	740.2993	740.7066	No	N/A	N/A	NI
H	30	800	900	Unpaved Access Road	3	No	16	0	0	0.0367328	1.0093	741.1968	741.7015	Int Stream	N/A	4, 7-9, 11-13, 15, 17	L
H	30	900	1000	Unpaved Access Road	3	No	16	0	0	0.0367373	1.5074	741.8005	742.3014	No	N/A	N/A	NI
H	30	1000	1100	Unpaved Access Road	3	No	16	0	0	0.0367481	3.0656	745.1448	746.6776	No	N/A	N/A	NI
H	30	1100	1200	Unpaved Access Road	3	No	16	0	0	0.0367488	3.1223	748.5959	750.1291	No	N/A	N/A	NI
H	30	1200	1300	Unpaved Access Road	3	No	16	0	0	0.036791299	5.4037	752.0314	754.2545	No	N/A	N/A	NI
H	30	1300	1400	Unpaved Access Road	3	No	16	0	0	0.036812998	6.1175	758.1915	761.9235	No	N/A	N/A	NI
H	30	1400	1500	Unpaved Access Road	3	No	16	0	0	0.036744598	2.7319	764.6598	766.0322	No	N/A	N/A	NI
H	30	1500	1600	Unpaved Access Road	3	No	16	0	0	0.0367417	2.4225	764.8399	766.0575	No	N/A	N/A	NI
H	30	1600	1700	Unpaved Access Road	3	No	16	0	0	0.036750399	3.1536	767.7298	769.0995	No	N/A	N/A	NI
H	30	1700	1800	Unpaved Access Road	3	No	16	0	0	0.036733199	0.9409	771.0574	771.3008	No	N/A	N/A	NI
H	30	1800	1883.56	Unpaved Access Road	3	No	16	0	0	0.030695001	0.662	772.2426	772.443	No	N/A	N/A	NI
H	31	0	100	New Spur	5	No	16	0	0	0.037147399	14.8686	816.1273	822.9305	No	N/A	N/A	NI
H	31	100	133.7	New Spur	5	No	16	0	0	0.0124577	10.6004	816.8027	818.8838	No	N/A	N/A	NI
H	32	0	94.4	New Spur	5	No	16	0	0	0.034689698	2.8456	702.271	703.5231	No	N/A	N/A	NI
H	33	0	100	Jeep Trail	4	No	16	0	0	0.037113499	11.6986	830.6411	838.4586	No	N/A	N/A	NI
H	33	100	200	Jeep Trail	4	No	16	0	0	0.036832601	7.3533	837.0361	840.8313	No	N/A	N/A	NI
H	33	200	300	Jeep Trail	4	No	16	0	0	0.036851499	8.1015	851.7009	855.7109	No	N/A	N/A	NI
H	33	300	400	Jeep Trail	4	No	16	0	0	0.036789101	4.863	854.064	857.2573	No	N/A	N/A	NI
H	33	400	500	Jeep Trail	4	No	16	0	0	0.037063099	13.3899	840.7939	847.2229	No	N/A	N/A	NI
H	33	500	600	Jeep Trail	4	No	16	0	0	0.036864098	8.3466	839.4243	843.184	No	N/A	N/A	NI
H	33	600	700	Jeep Trail	4	No	16	0	0	0.036877599	8.9471	837.0504	841.5502	No	N/A	N/A	NI
H	33	700	800	Jeep Trail	4	No	16	0	0	0.036761001	2.8059	815.8875	816.6675	No	N/A	N/A	NI
H	33	800	900	Jeep Trail	4	No	16	0	0	0.036740098	1.9736	816.45	817.5194	No	N/A	N/A	NI
H	33	900	1000	Jeep Trail	4	No	16	0	0	0.036758099	3.8434	814.6095	816.4725	No	N/A	N/A	NI
H	33	1000	1100	Jeep Trail	4	No	16	0	0	0.036815401	6.0849	803.8852	807.6663	No	N/A	N/A	NI
H	33	1100	1200	Jeep Trail	4	No	16	0	0	0.036782101	3.9251	802.9899	804.2705	No	N/A	N/A	NI
H	33	1200	1234.4	Jeep Trail	4	No	16	0	0	0.01264	2.7172	802.9899	803.4907	No	N/A	N/A	NI
I	34	0	100	New Spur	5	No	16	0	0	0.0367782	4.7865	699.6494	702.3501	No	N/A	N/A	NI
I	34	100	182.01	New Spur	5	No	16	0	0	0.030370301	12.1714	689.8754	695.6622	No	N/A	N/A	NI
I	35	0	100	Unimproved Two-Track Road	3	No	16	0	0	0.036844902	6.8739	699.2616	703.5613	No	N/A	N/A	NI
I	35	100	200	Unimproved Two-Track Road	3	No	16	0	0	0.03678	4.965	696.0466	698.4157	No	N/A	N/A	NI
I	35	200	300	Unimproved Two-Track Road	3	No	16	0	0	0.0367602	3.8551	689.3314	691.1334	No	N/A	N/A	NI
I	35	300	400	Unimproved Two-Track Road	3	No	16	0	0	0.036745802	1.9801	681.5876	681.9225	No	N/A	N/A	NI
I	35	400	500	Unimproved Two-Track Road	3	No	16	0	0	0.0367346	0.7117	686.5721	686.652	No	N/A	N/A	NI
I	35	500	600	Unimproved Two-Track Road	3	No	16	0	0	0.036735699	1.4402	682.3185	683.2232	No	N/A	N/A	NI
I	35	600	700	Unimproved Two-Track Road	3	No	16	0	0	0.036731999	0.5736	682.9048	683.0843	No	N/A	N/A	NI
I	35	700	782.07	Unimproved Two-Track Road	3	No	16	0	0	0.030146999	0.4468	682.4604	682.5831	Canal	N/A	4, 7-9, 11-13, 15, 17	L
Jb, Jc, Jd	36	0	100	New Access Road	5	No	16	0	0	0.0367379	1.9585	635.7278	636.7341	No	N/A	N/A	NI
Jb, Jc, Jd	36	100	200	New Access Road	5	No	16	0	0	0.036735799	1.631	637.7031	638.5152	No	N/A	N/A	NI
Jb, Jc, Jd	36	200	300	New Access Road	5	No	16	0	0	0.036732499	0.9205	640.1532	640.6496	No	N/A	N/A	NI
Jb, Jc, Jd	36	300	400	New Access Road	5	No	16	0	0	0.036734901	1.4689	639.7025	640.4143	No	N/A	N/A	NI
Jb, Jc, Jd	36	400	500	New Access Road	5	No	16	0	0	0.036775	4.3183	638.6187	641.0065	No	N/A	N/A	NI
Jb, Jc, Jd	36	500	600	New Access Road	5	No	16	0	0	0.036780201	4.9207	633.259	636.1411	No	N/A	N/A	NI
Jb, Jc, Jd	36	600	700	New Access Road	5	No	16	0	0	0.0368427	7.7046	623.6268	627.6617	No	N/A	N/A	NI
Jb, Jc, Jd	36	700	715.4	New Access Road	5	No	16	0	0	0.00567646	8.1409	624.8522	625.4791	No	N/A	N/A	NI
Jd	37	0	91.37	New Spur	5	No	16	0	0	0.033575799	2.4952	641.4196	642.9833	No	N/A	N/A	NI

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
Jd	38	0	100	New Access Road	5	No	16	0	0	0.036732301	0.8815	706.0406	706.4533	No	N/A	N/A	NI
Jd	38	100	200	New Access Road	5	No	16	0	0	0.0367314	0.5336	706.3906	706.6509	No	N/A	N/A	NI
Jd	38	200	300	New Access Road	5	No	16	0	0	0.036731999	0.7826	707.7913	708.1827	No	N/A	N/A	NI
Jd	38	300	400	New Access Road	5	No	16	0	0	0.0367315	0.5831	708.3851	708.6375	No	N/A	N/A	NI
Jd	38	400	500	New Access Road	5	No	16	0	0	0.036731198	0.4146	709.1946	709.3965	No	N/A	N/A	NI
Jd	38	500	600	New Access Road	5	No	16	0	0	0.036731198	0.4333	709.2315	709.4482	No	N/A	N/A	NI
Jd	38	600	700	New Access Road	5	No	16	0	0	0.036731198	0.4413	709.7353	709.956	No	N/A	N/A	NI
Jd	38	700	800	New Access Road	5	No	16	0	0	0.036731198	0.393	710.3643	710.5608	No	N/A	N/A	NI
Jd	38	800	900	New Access Road	5	No	16	0	0	0.036731102	0.3657	710.7905	710.9734	No	N/A	N/A	NI
Jd	38	900	1000	New Access Road	5	No	16	0	0	0.036731299	0.4796	711.09	711.3298	No	N/A	N/A	NI
Jd	38	1000	1100	New Access Road	5	No	16	0	0	0.036731198	0.4266	711.6781	711.8914	No	N/A	N/A	NI
Jd	38	1100	1200	New Access Road	5	No	16	0	0	0.036733199	1.0871	712.1882	712.6735	No	N/A	N/A	NI
Jd	38	1200	1300	New Access Road	5	No	16	0	0	0.036740899	2.2944	713.0338	714.2263	No	N/A	N/A	NI
Jd	38	1300	1400	New Access Road	5	No	16	0	0	0.036732901	1.0615	714.2405	714.7717	No	N/A	N/A	NI
Jd	38	1400	1500	New Access Road	5	No	16	0	0	0.036733501	1.1928	715.4362	716.0326	No	N/A	N/A	NI
Jd	38	1500	1600	New Access Road	5	No	16	0	0	0.036733001	1.0719	716.4213	716.928	No	N/A	N/A	NI
Jd	38	1600	1700	New Access Road	5	No	16	0	0	0.036733001	1.0829	716.1162	716.6575	No	N/A	N/A	NI
Jd	38	1700	1800	New Access Road	5	No	16	0	0	0.036734499	1.3888	717.8981	718.5547	No	N/A	N/A	NI
Jd	38	1800	1900	New Access Road	5	No	16	0	0	0.036732901	0.9542	719.4685	720.0461	No	N/A	N/A	NI
Jd	38	1900	2000	New Access Road	5	No	16	0	0	0.0367353	1.5427	720.7168	721.4881	No	N/A	N/A	NI
Jd	38	2000	2100	New Access Road	5	No	16	0	0	0.036731701	0.5383	722.0301	722.3763	No	N/A	N/A	NI
Jd	38	2100	2200	New Access Road	5	No	16	0	0	0.036731198	0.4099	723.3376	723.5845	No	N/A	N/A	NI
Jd	38	2200	2300	New Access Road	5	No	16	0	0	0.036731102	0.3423	723.8588	724.03	No	N/A	N/A	NI
Jd	38	2300	2400	New Access Road	5	No	16	0	0	0.036731198	0.3752	723.8532	724.0909	No	N/A	N/A	NI
Jd	38	2400	2500	New Access Road	5	No	16	0	0	0.036731798	0.688	723.2698	723.6134	No	N/A	N/A	NI
Jd	38	2500	2600	New Access Road	5	No	16	0	0	0.036732499	0.9449	722.3289	722.8013	No	N/A	N/A	NI
Jd	38	2600	2700	New Access Road	5	No	16	0	0	0.036731001	0.2272	721.971	722.0318	No	N/A	N/A	NI
Jd	38	2700	2800	New Access Road	5	No	16	0	0	0.036731999	0.7468	721.9603	722.2943	No	N/A	N/A	NI
Jd	38	2800	2900	New Access Road	5	No	16	0	0	0.0367309	0.1204	722.1744	722.2048	No	N/A	N/A	NI
Jd	38	2900	3000	New Access Road	5	No	16	0	0	0.036731001	0.1882	722.058	722.1521	No	N/A	N/A	NI
Jd	38	3000	3100	New Access Road	5	No	16	0	0	0.0367309	0.1586	722.2546	722.3339	No	N/A	N/A	NI
Jd	38	3100	3200	New Access Road	5	No	16	0	0	0.036731102	0.3843	722.1964	722.3888	No	N/A	N/A	NI
Jd	38	3200	3300	New Access Road	5	No	16	0	0	0.036731701	0.6581	722.5444	722.8735	No	N/A	N/A	NI
Jd	38	3300	3400	New Access Road	5	No	16	0	0	0.036731299	0.4272	723.2061	723.3806	No	N/A	N/A	NI
Jd	38	3400	3500	New Access Road	5	No	16	0	0	0.036731798	0.6531	723.4799	723.7897	No	N/A	N/A	NI
Jd	38	3500	3600	New Access Road	5	No	16	0	0	0.036734	1.2972	722.0396	722.6882	No	N/A	N/A	NI
Jd	38	3600	3700	New Access Road	5	No	16	0	0	0.036737401	1.8483	719.3323	720.1925	No	N/A	N/A	NI
Jd	38	3700	3800	New Access Road	5	No	16	0	0	0.036733199	1.0474	718.6084	718.8486	No	N/A	N/A	NI
Jd	38	3800	3900	New Access Road	5	No	16	0	0	0.0367309	0.0082	719.1614	719.1655	No	N/A	N/A	NI
Jd	38	3900	4000	New Access Road	5	No	16	0	0	0.0367314	0.5088	718.792	719.0132	No	N/A	N/A	NI
Jd	38	4000	4100	New Access Road	5	No	16	0	0	0.0367314	0.4822	719.1569	719.3858	No	N/A	N/A	NI
Jd	38	4100	4200	New Access Road	5	No	16	0	0	0.036731001	0.2255	719.9489	720.0616	No	N/A	N/A	NI
Jd	38	4200	4300	New Access Road	5	No	16	0	0	0.036731102	0.325	719.3527	719.5111	No	N/A	N/A	NI
Jd	38	4300	4400	New Access Road	5	No	16	0	0	0.036731601	0.6095	719.2156	719.511	No	N/A	N/A	NI
Jd	38	4400	4500	New Access Road	5	No	16	0	0	0.0367353	1.1866	719.4071	719.6808	No	N/A	N/A	NI
Jd	38	4500	4600	New Access Road	5	No	16	0	0	0.036734201	1.2355	720.6049	721.3443	No	N/A	N/A	NI
Jd	38	4600	4697.06	New Access Road	5	No	16	0	0	0.035652898	0.812	722.256	722.6814	No	N/A	N/A	NI
Jd	39	0	100	Unimproved Two-Track Road	3	No	16	0	0	0.0367315	0.5824	701.7906	702.098	No	N/A	N/A	NI
Jd	39	100	200	Unimproved Two-Track Road	3	No	16	0	0	0.036731299	0.4808	702.2112	702.4484	No	N/A	N/A	NI
Jd	39	200	300	Unimproved Two-Track Road	3	No	16	0	0	0.036731198	0.4282	703.0918	703.3059	No	N/A	N/A	NI
Jd	39	300	400	Unimproved Two-Track Road	3	No	16	0	0	0.036731299	0.4642	703.1027	703.3288	No	N/A	N/A	NI
Jd	39	400	500	Unimproved Two-Track Road	3	No	16	0	0	0.036731102	0.3865	703.8035	703.9994	No	N/A	N/A	NI
Jd	39	500	600	Unimproved Two-Track Road	3	No	16	0	0	0.0367314	0.516	704.6465	704.9045	No	N/A	N/A	NI
Jd	39	600	700	Unimproved Two-Track Road	3	No	16	0	0	0.036731601	0.6349	705.2854	705.6028	No	N/A	N/A	NI
Jd	39	700	800	Unimproved Two-Track Road	3	No	16	0	0	0.0367315	0.6018	704.9142	705.2161	No	N/A	N/A	NI
Jd	39	800	900	Unimproved Two-Track Road	3	No	16	0	0	0.036731601	0.614	706.1375	706.4666	No	N/A	N/A	NI
Jd	39	900	1000	Unimproved Two-Track Road	3	No	16	0	0	0.036731299	0.4286	706.9255	707.1967	No	N/A	N/A	NI
Jd	39	1000	1100	Unimproved Two-Track Road	3	No	16	0	0	0.036731102	0.3489	707.0261	707.2242	No	N/A	N/A	NI
Jd	39	1100	1200	Unimproved Two-Track Road	3	No	16	0	0	0.036731001	0.2256	707.6034	707.6771	No	N/A	N/A	NI
Jd	39	1200	1300	Unimproved Two-Track Road	3	No	16	0	0	0.036731001	0.2471	707.3353	707.4477	No	N/A	N/A	NI
Jd	39	1300	1400	Unimproved Two-Track Road	3	No	16	0	0	0.036731299	0.4044	707.5911	707.7354	No	N/A	N/A	NI
Jd	39	1400	1427.54	Unimproved Two-Track Road	3	No	16	0	0	0.0101151	0.6569	707.9416	708.032	No	N/A	N/A	NI
Ja, Jb, Jc	40	0	100	New Spur	5	Floodway	65	617	12.24580002	0.149222001	0.5921	606.7542	606.8904	No	N/A	13	H
Ja, Jb, Jc	40	100	142.72	New Spur	5	Floodway	61	617	11.21490002	0.059832498	0.7997	607.7851	607.9439	No	N/A	13	H
Ja, Jb, Jc	41	0	100	Golf Cart Trail	4	Floodway	62	617	11.40470028	0.142333001	0.2904	607.5953	607.7013	No	N/A	13	H
Ja, Jb, Jc	41	100	200	Golf Cart Trail	4	Floodway	59	617	10.62989998	0.135447994	0.5994	608.3701	608.6626	No	N/A	13	H
Ja, Jb, Jc	41	200	300	Golf Cart Trail	4	Floodway	55	617	9.738499641	0.126262993	0.2942	609.2615	609.3953	No	N/A	13	H
Ja, Jb, Jc	41	300	400	Golf Cart Trail	4	Floodway	56	617	9.953900337	0.128560007	0.4843	609.0461	609.2953	No	N/A	13	H
Ja, Jb, Jc	41	400	500	Golf Cart Trail	4	Floodway	52	617	8.988900185	0.119375996	0.259	610.0111	610.0947	No	N/A	13	H
Ja, Jb, Jc	41	500	600	Golf Cart Trail	4	Floodway	50	617	8.407699585	0.114785999	0.5668	610.5923	610.8765	No	N/A	13	H
Ja, Jb, Jc	41	600	700	Golf Cart Trail	4	Floodway	51	617	8.703000069	0.117081001	0.3807	610.297	610.4719	No	N/A	13	H
Ja, Jb, Jc	41	700	800	Golf Cart Trail	4	Yes	48	617	7.881999969	0.110195003	0.63	611.118	611.5053	No	N/A	13	H
Ja, Jb, Jc	41	800	814.62	Golf Cart Trail	4	Yes	43	617	6.860199928	0.0144348	0.0634	612.1398	612.1445	No	N/A	13	H
Jd	42	0	100	New Access Road	5	Yes	35	635	4.789899826	0.080400899	3.5112	632.2101	634.155	No	N/A	13	H

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
Jd	42	100	200	New Access Road	5	No	16	635	0.990700006	0.036766101	4.379	636.0093	638.1988	No	N/A	N/A	NI
Jd	42	200	300	New Access Road	5	No	16	0	0	0.036738399	1.5902	640.8433	641.9235	No	N/A	N/A	NI
Jd	42	300	400	New Access Road	5	No	16	0	0	0.0367314	0.5165	642.899	643.1938	No	N/A	N/A	NI
Jd	42	400	500	New Access Road	5	No	16	0	0	0.036733199	1.1091	642.7805	643.3831	No	N/A	N/A	NI
Jd	42	500	600	New Access Road	5	No	16	0	0	0.036732499	0.9175	643.9639	644.2982	No	N/A	N/A	NI
Jd	42	600	700	New Access Road	5	No	16	0	0	0.036731001	0.1723	643.4112	643.4625	No	N/A	N/A	NI
Jd	42	700	800	New Access Road	5	No	16	0	0	0.036731999	0.7831	643.079	643.505	No	N/A	N/A	NI
Jd	42	800	900	New Access Road	5	No	16	0	0	0.036731899	0.5775	643.3232	643.6092	No	N/A	N/A	NI
Jd	42	900	1000	New Access Road	5	No	16	0	0	0.036736	1.3364	642.9694	643.2796	No	N/A	N/A	NI
Jd	42	1000	1100	New Access Road	5	No	16	0	0	0.036745202	2.7886	644.9965	646.3861	No	N/A	N/A	NI
Jd	42	1100	1200	New Access Road	5	No	16	0	0	0.036744799	2.7507	647.7346	649.1102	No	N/A	N/A	NI
Jd	42	1200	1300	New Access Road	5	No	16	0	0	0.036735501	1.5333	651.3752	652.2189	No	N/A	N/A	NI
Jd	42	1300	1400	New Access Road	5	No	16	0	0	0.0367309	0.0556	652.6432	652.6703	No	N/A	N/A	NI
Jd	42	1400	1500	New Access Road	5	No	16	0	0	0.0367315	0.5353	653.121	653.3798	No	N/A	N/A	NI
Jd	42	1500	1600	New Access Road	5	No	16	0	0	0.0367314	0.5266	653.0554	653.3186	No	N/A	N/A	NI
Jd	42	1600	1700	New Access Road	5	No	16	0	0	0.036826201	5.9285	648.2531	652.1342	No	N/A	N/A	NI
Jd	42	1700	1786.15	New Access Road	5	No	16	0	0	0.031747598	8.1346	636.4276	640.0614	No	N/A	N/A	NI
Jd	43	0	100	Unimproved Two-Track Road	3	No	16	0	0	0.036731999	0.7871	751.2225	751.6245	No	N/A	N/A	NI
Jd	43	100	200	Unimproved Two-Track Road	3	No	16	0	0	0.0367314	0.4587	751.1692	751.3359	No	N/A	N/A	NI
Jd	43	200	300	Unimproved Two-Track Road	3	No	16	0	0	0.036731001	0.2694	751.2114	751.3518	No	N/A	N/A	NI
Jd	43	300	347.4	Unimproved Two-Track Road	3	No	16	0	0	0.017419299	2.9486	747.7372	748.5484	No	N/A	N/A	NI
Jd	44	0	100	Unimproved Two-Track Road	4	Yes	24	643	1.91989994	0.119479999	3.926	643.0801	644.6576	No	N/A	13	H
Jd	44	100	183.15	Unimproved Two-Track Road	4	Yes	27	650	2.728399992	0.051614799	5.2056	649.2716	651.6296	No	N/A	13	H
Jb	45	0	100	New Access Road	5	Yes	45	616	7.328100204	0.103564002	6.1023	610.6719	612.8317	No	N/A	13	H
Jb	45	100	200	New Access Road	5	Yes	24	616	2.077300072	0.0552544	6.9279	615.9227	619.696	No	N/A	13	H
Jb	45	200	300	New Access Road	5	Yes	18	616	0.531300008	0.041371498	4.8848	617.4687	619.9111	No	N/A	13	H
Jb	45	300	400	New Access Road	5	Yes	20	616	1	0.0459534	4.1652	623.5648	625.6473	No	N/A	13	H
Jb	45	400	412.04	New Access Road	5	Yes	16	616	0	0.00442816	4.415	628.2437	628.5095	No	N/A	13	H
Jb	46	0	100	New Access Road	5	Yes	16	615	0	0.036764901	4.2429	640.3242	642.6001	No	N/A	13	H
Jb	46	100	165.15	New Access Road	5	Yes	16	615	0	0.0239354	2.1475	644.3621	644.9952	No	N/A	13	H
Jb	47	0	100	New Access Road	5	No	16	0	0	0.036806501	4.9715	632.0139	633.6634	No	N/A	N/A	NI
Jb	47	100	200	New Access Road	5	No	16	0	0	0.036750399	3.2576	638.2438	639.8882	No	N/A	N/A	NI
Jb	47	200	215.99	New Access Road	5	No	16	0	0	0.00587709	2.9695	638.0668	638.3042	No	N/A	N/A	NI
Jb	48	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.0367314	0.5533	633.3267	633.5229	No	N/A	N/A	NI
Jb	48	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036732301	0.8622	633.0882	633.503	No	N/A	N/A	NI
Jb	48	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036738899	1.538	635.2007	635.7029	No	N/A	N/A	NI
Jb	48	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.036751699	3.0958	634.968	636.1948	No	N/A	N/A	NI
Jb	48	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.036758799	3.5393	639.3262	641.4942	No	N/A	N/A	NI
Jb	48	500	525.55	Unimproved Two-Track Road	4	No	16	0	0	0.00938529	1.8047	642.0114	642.2419	No	N/A	N/A	NI
Jb	49	0	100	New Access Road	5	No	16	0	0	0.0367315	0.5252	634.2029	634.3409	No	N/A	N/A	NI
Jb	49	100	200	New Access Road	5	No	16	0	0	0.036731102	0.3354	634.9161	635.0424	No	N/A	N/A	NI
Jb	49	200	300	New Access Road	5	No	16	0	0	0.036731102	0.3754	635.2359	635.4352	No	N/A	N/A	NI
Jb	49	300	400	New Access Road	5	No	16	0	0	0.036735799	1.5029	633.3751	634.3064	No	N/A	N/A	NI
Jb	49	400	443.67	New Access Road	5	No	16	0	0	0.016043101	2.3893	633.1187	633.6415	No	N/A	N/A	NI
Ja, H, I	50	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.037608601	18.3429	672.8146	684.8741	No	N/A	N/A	NI
Ja, H, I	50	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036848001	7.16	700.1315	704.2833	No	N/A	N/A	NI
Ja, H, I	50	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036839999	5.54	694.7856	698.4443	Canal	N/A	4, 7-9, 11-13, 15, 17	L
Ja, H, I	50	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.036869399	7.3015	689.7538	692.8501	No	N/A	N/A	NI
Ja, H, I	50	400	437.81	Unimproved Two-Track Road	4	No	16	0	0	0.0139095	5.2933	698.0848	699.2198	No	N/A	N/A	NI
K	51	0	100	Jeep Trail	4	No	16	0	0	0.036871001	8.2741	697.8841	702.4969	No	N/A	N/A	NI
K	51	100	200	Jeep Trail	4	No	16	0	0	0.036823601	5.9709	702.6969	706.5611	No	N/A	N/A	NI
K	51	200	300	Jeep Trail	4	No	16	0	0	0.0368517	7.8633	702.4002	706.757	No	N/A	N/A	NI
K	51	300	400	Jeep Trail	4	No	16	0	0	0.036786199	4.5459	697.7328	698.7205	No	N/A	N/A	NI
K	51	400	500	Jeep Trail	4	No	16	0	0	0.0368273	5.8281	697.1998	699.0261	No	N/A	N/A	NI
K	51	500	600	Jeep Trail	4	No	16	0	0	0.036788002	5.1716	710.3721	713.199	No	N/A	N/A	NI
K	51	600	700	Jeep Trail	4	No	16	0	0	0.0367315	0.5865	713.9422	714.2355	No	N/A	N/A	NI
K	51	700	800	Jeep Trail	4	No	16	0	0	0.036731899	0.6753	712.5824	712.9677	No	N/A	N/A	NI
K	51	800	900	Jeep Trail	4	No	16	0	0	0.0367365	1.6382	709.0135	709.8996	No	N/A	N/A	NI
K	51	900	1000	Jeep Trail	4	No	16	0	0	0.036734998	1.2521	709.3243	710.1533	No	N/A	N/A	NI
K	51	1000	1100	Jeep Trail	4	No	16	0	0	0.036744199	2.0835	710.0306	710.7377	No	N/A	N/A	NI
K	51	1100	1200	Jeep Trail	4	No	16	0	0	0.036738899	1.8796	707.0686	707.7179	No	N/A	N/A	NI
K	51	1200	1300	Jeep Trail	4	No	16	0	0	0.0367475	2.8033	704.3302	705.12	No	N/A	N/A	NI
K	51	1300	1400	Jeep Trail	4	No	16	0	0	0.036731001	0.2775	708.3348	708.4081	No	N/A	N/A	NI
K	51	1400	1500	Jeep Trail	4	No	16	0	0	0.036731198	0.4058	708.2085	708.388	No	N/A	N/A	NI
K	51	1500	1600	Jeep Trail	4	No	16	0	0	0.036731001	0.1144	709.548	709.6338	No	N/A	N/A	NI
K	51	1600	1700	Jeep Trail	4	No	16	0	0	0.036731102	0.3551	708.9474	709.1249	No	N/A	N/A	NI
K	51	1700	1800	Jeep Trail	4	No	16	0	0	0.036731102	0.3699	707.827	708.0199	No	N/A	N/A	NI
K	51	1800	1900	Jeep Trail	4	No	16	0	0	0.036731102	0.3539	709.3855	709.5625	No	N/A	N/A	NI
K	51	1900	2000	Jeep Trail	4	No	16	0	0	0.036731001	0.1897	708.0594	708.1903	No	N/A	N/A	NI
K	51	2000	2100	Jeep Trail	4	No	16	0	0	0.036731102	0.3843	706.8754	707.0609	No	N/A	N/A	NI
K	51	2100	2200	Jeep Trail	4	No	16	0	0	0.036731001	0.202	708.4211	708.5159	No	N/A	N/A	NI
K	51	2200	2300	Jeep Trail	4	No	16	0	0	0.0367321	0.7368	707.3138	707.7595	No	N/A	N/A	NI
K	51	2300	2400	Jeep Trail	4	No	16	0	0	0.036731798	0.6044	706.5266	706.9159	No	N/A	N/A	NI
K	51	2400	2500	Jeep Trail	4	No	16	0	0	0.036732301	0.884	705.0751	705.5184	No	N/A	N/A	NI

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100		Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
						Year Floodplain	Road											
K	51	2500	2600	Jeep Trail	4	No	16	0	0	0.036731899	0.7507	705.0104	705.1668	No	N/A	N/A	NI	
K	51	2600	2700	Jeep Trail	4	No	16	0	0	0.036731999	0.6993	704.1907	704.5494	No	N/A	N/A	NI	
K	51	2700	2800	Jeep Trail	4	No	16	0	0	0.036731102	0.3276	704.4268	704.5641	No	N/A	N/A	NI	
K	51	2800	2900	Jeep Trail	4	No	16	0	0	0.0367315	0.3481	704.1331	704.3126	No	N/A	N/A	NI	
K	51	2900	3000	Jeep Trail	4	No	16	0	0	0.0367321	0.5697	704.1196	704.4687	No	N/A	N/A	NI	
K	51	3000	3100	Jeep Trail	4	No	16	0	0	0.0367327	0.952	703.73	704.252	No	N/A	N/A	NI	
K	51	3100	3200	Jeep Trail	4	No	16	0	0	0.036764	3.3441	699.2911	701.6442	No	N/A	N/A	NI	
K	51	3200	3300	Jeep Trail	4	No	16	0	0	0.036910001	9.2988	687.8509	693.2686	No	N/A	N/A	NI	
K	51	3300	3400	Jeep Trail	4	No	16	0	0	0.036868099	7.1273	676.0978	678.3473	No	N/A	N/A	NI	
K	51	3400	3500	Jeep Trail	4	No	16	0	0	0.036734302	1.2338	678.4416	678.7668	No	N/A	N/A	NI	
K	51	3500	3600	Jeep Trail	4	No	16	0	0	0.036740199	1.8427	674.0777	674.4229	No	N/A	N/A	NI	
K	51	3600	3700	Jeep Trail	4	No	16	0	0	0.0367315	0.5995	679.0286	679.3283	No	N/A	N/A	NI	
K	51	3700	3800	Jeep Trail	4	No	16	0	0	0.0367314	0.5325	683.5917	683.8579	No	N/A	N/A	NI	
K	51	3800	3900	Jeep Trail	4	No	16	0	0	0.036732499	0.8479	678.6348	679.0767	No	N/A	N/A	NI	
K	51	3900	4000	Jeep Trail	4	No	16	0	0	0.0367417	2.1673	681.0096	682.3715	No	N/A	N/A	NI	
K	51	4000	4100	Jeep Trail	4	No	16	0	0	0.036734	1.1008	675.2933	675.5247	No	N/A	N/A	NI	
K	51	4100	4200	Jeep Trail	4	No	16	0	0	0.036736201	1.2465	674.932	675.2755	No	N/A	N/A	NI	
K	51	4200	4261.7	Jeep Trail	4	No	16	0	0	0.0226718	2.8685	677.6223	678.5072	No	N/A	N/A	NI	
K	52	0	56.62	New Spur	5	No	16	0	0	0.020796301	0.0323	704.6904	704.6996	No	N/A	N/A	NI	
K	53	0	100	New Access Road	5	Yes	28	651	3.10999895	0.064279199	0.2423	649.89	650.0135	No	PSS/FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	100	200	New Access Road	5	Yes	29	651	3.148400068	0.066574998	0.2917	649.8516	649.9857	No	PSS/FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	200	300	New Access Road	5	Yes	28	651	2.916399956	0.064279601	0.423	650.0836	650.3016	No	PSS/FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	300	400	New Access Road	5	Yes	27	652	2.773499966	0.061983701	0.3106	651.2285	651.3788	No	PSS/FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	400	500	New Access Road	5	Yes	26	652	2.503900051	0.059689499	0.7811	651.4961	651.8832	No	PSS/FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	500	600	New Access Road	5	Yes	27	653	2.829999924	0.061984699	0.4951	652.17	652.5122	No	PSS/FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	600	700	New Access Road	5	Yes	25	653	2.368499994	0.057406299	2.1578	652.6315	653.5633	No	PSS/FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	700	800	New Access Road	5	Yes	21	654	1.175699949	0.048217699	1.7756	654.8243	655.8227	No	PSS/FLW, R2FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	800	900	New Access Road	5	Yes	16	654	0	0.036732402	0.8223	656.9513	657.1654	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	900	1000	New Access Road	5	Yes	22	657	1.610900044	0.0505055	0.4308	657.3891	657.5857	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	1000	1100	New Access Road	5	Yes	27	657	2.865499973	0.061983801	0.3266	656.1345	656.2542	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	1100	1200	New Access Road	5	Yes	31	658	3.652800083	0.071167402	0.5933	656.3472	656.6623	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	1200	1300	New Access Road	5	Yes	31	658	3.773699999	0.071166903	0.4943	656.2263	656.4734	No	N/A	13	H	
K	53	1300	1400	New Access Road	5	Yes	32	659	4.101699829	0.073462099	0.1913	656.8983	656.95	No	N/A	13	H	
K	53	1400	1500	New Access Road	5	Yes	30	659	3.512599945	0.068870701	0.1985	657.4874	657.6092	No	N/A	13	H	
K	53	1500	1600	New Access Road	5	Yes	35	660	4.858799934	0.080349401	0.375	657.1412	657.2875	No	N/A	13	H	
K	53	1600	1700	New Access Road	5	Yes	34	660	4.578400135	0.078059196	1.1901	657.4216	658.0541	No	N/A	13	H	
K	53	1700	1800	New Access Road	5	Yes	30	661	3.426300049	0.068871498	0.5482	659.5737	659.8107	No	N/A	13	H	
K	53	1800	1900	New Access Road	5	Yes	39	661	5.861400127	0.089538202	1.2257	657.1386	657.7515	No	N/A	13	H	
K	53	1900	2000	New Access Road	5	Yes	29	660	3.361900091	0.0665778	0.7957	658.6381	659.146	No	N/A	13	H	
K	53	2000	2100	New Access Road	5	Yes	32	662	4.064499855	0.073462099	0.2627	659.9355	660.0226	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	2100	2200	New Access Road	5	Yes	34	662	4.404900074	0.078053102	0.046	659.5951	659.6181	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	2200	2300	New Access Road	5	Yes	32	662	4.045300007	0.073461801	0.0748	659.9547	659.9906	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	2300	2400	New Access Road	5	Yes	31	662	3.696500063	0.071166098	0.0731	660.3035	660.3364	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	2400	2500	New Access Road	5	Yes	34	662	4.425799847	0.078053199	0.1094	659.5742	659.6289	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	53	2500	2579.18	New Access Road	5	Yes	34	662	4.43930006	0.0618046	0.6787	659.5607	659.8391	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	54	0	82.67	New Spur	5	No	16	0	0	0.030375	2.5955	651.5933	652.525	No	N/A	N/A	NI	
K	55	0	100	Unpaved Facility Access Road	3	No	16	0	0	0.036765002	3.7793	681.8521	684.064	No	N/A	N/A	NI	
K	55	100	200	Unpaved Facility Access Road	3	No	16	0	0	0.036735401	1.5655	688.2525	689.0352	No	N/A	N/A	NI	
K	55	200	239.3	Unpaved Facility Access Road	3	No	16	0	0	0.0144413	2.838	686.5757	687.1334	No	N/A	N/A	NI	
K	56	0	64	New Spur	5	No	16	0	0	0.0235072	0.6834	732.0079	732.2527	No	N/A	N/A	NI	
K	57	0	100	New Spur	5	No	16	0	0	0.036732599	0.78	739.5139	739.7576	No	N/A	N/A	NI	
K	57	100	141.44	New Spur	5	No	16	0	0	0.0152208	1.2753	740.0665	740.2708	No	N/A	N/A	NI	
K	58	0	100	New Spur	5	No	16	0	0	0.036759101	3.4945	677.9642	679.8942	No	N/A	N/A	NI	
K	58	100	177.3	New Spur	5	No	16	0	0	0.028405	2.5031	683.4276	684.5836	No	N/A	N/A	NI	
K	59	0	64.47	New Access Road	5	Yes	37	648	5.144499779	0.054763801	0.4788	644.8555	645.0098	No	N/A	13	H	
K	60	0	100	Unpaved Access Road	3	Yes	35	648	4.744699955	0.080349401	0.2916	645.2553	645.3407	No	N/A	13	H	
K	60	100	200	Unpaved Access Road	3	Yes	32	648	3.974699974	0.073466197	1.0932	646.0253	646.568	No	N/A	13	H	
K	60	200	300	Unpaved Access Road	3	Yes	27	648	2.73939991	0.061985899	0.9108	647.2606	647.7159	No	N/A	13	H	
K	60	300	400	Unpaved Access Road	3	Yes	28	648	3.078200102	0.064282902	1.0906	646.9218	647.496	No	N/A	13	H	
K	60	400	500	Unpaved Access Road	3	Yes	24	648	1.986199975	0.055099402	1.0573	648.0138	648.5417	No	N/A	13	H	
K	60	500	575.1	Unpaved Access Road	3	Yes	19	648	0.795099974	0.032761101	1.286	649.2049	649.6494	No	N/A	13	H	
K	61	0	100	Jeep Trail	4	Yes	41	663	6.164899826	0.094125099	0.5493	658.8351	659.003	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	61	100	200	Jeep Trail	4	Yes	40	663	5.967100143	0.0918286	0.4741	659.0329	659.2013	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	61	200	300	Jeep Trail	4	Yes	50	664	8.453100204	0.114789002	0.9203	657.5469	657.9796	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	61	300	400	Jeep Trail	4	Yes	43	664	6.851900101	0.098715998	0.5029	659.1481	659.3142	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	61	400	500	Jeep Trail	4	Yes	44	665	7.124700069	0.101016998	1.1898	659.8753	660.4775	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	61	500	600	Jeep Trail	4	Yes	39	665	5.684899807	0.089537203	0.8754	661.3151	661.7328	No	R2 FLW	3-5, 7-9, 11-13, 15, 17	H	
K	61	600	700	Jeep Trail	4	Yes	39	666	5.666100025	0.089573897	3.0378	662.3339	663.726	No	N/A	13	H	
K	61	700	800	Jeep Trail	4	Yes	17	666	0.216199994	0.039048702	3.3455	667.7838	669.5371	No	N/A	13	H	
K	61	800	900	Jeep Trail	4	No	16	0	0	0.036749799	3.2081	670.978	672.5822	No	N/A	N/A	NI	
K	61	900	1000	Jeep Trail	4	No	16	0	0	0.036749199	3.1557	670.0787	671.6566	No	N/A	N/A	NI	
K	61	1000	1100	Jeep Trail	4	No	16	0	0	0.0367468	2.8018	674.343	675.5258	No	N/A	N/A	NI	
K	61	1100	1131.72	Jeep Trail	4	No	16	0	0	0.0116636	4.3892	677.4465	678.1427	No	N/A	N/A	NI	
K, R, S	62	0	100	New Spur	5	No	16	0	0	0.036732301	0.7607	751.0447	751.3107	No	N/A	N/A	NI	

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
K, R, S	62	100	145.47	New Spur	5	No	16	0	0	0.016702401	0.8716	751.8809	752.079	No	N/A	N/A	NI
K, U, T	63	0	57.79	New Spur	5	No	16	0	0	0.0212368	0.7504	705.7434	705.9726	No	N/A	N/A	NI
K, U, T	64	0	100	Jeep Trail	4	No	16	0	0	0.036777999	4.8924	702.5053	703.7726	No	N/A	N/A	NI
K, U, T	64	100	200	Jeep Trail	4	No	16	0	0	0.0367564	3.2531	707.4707	709.5743	No	N/A	N/A	NI
K, U, T	64	200	300	Jeep Trail	4	No	16	0	0	0.036734302	0.9308	710.7138	710.8684	No	N/A	N/A	NI
K, U, T	64	300	400	Jeep Trail	4	No	16	0	0	0.036763199	4.0862	711.4702	713.3232	No	N/A	N/A	NI
K, U, T	64	400	500	Jeep Trail	4	No	16	0	0	0.036745898	2.6384	712.0161	713.6283	No	N/A	N/A	NI
K, U, T	64	500	600	Jeep Trail	4	No	16	0	0	0.036759902	3.2602	712.5963	713.6518	No	N/A	N/A	NI
K, U, T	64	600	700	Jeep Trail	4	No	16	0	0	0.0367819	4.9955	719.3248	722.106	No	N/A	N/A	NI
K, U, T	64	700	800	Jeep Trail	4	No	16	0	0	0.036731001	0.1293	724.8976	724.9331	No	N/A	N/A	NI
K, U, T	64	800	900	Jeep Trail	4	No	16	0	0	0.0367462	2.4719	723.3169	724.4629	No	N/A	N/A	NI
K, U, T	64	900	933.82	Jeep Trail	4	No	16	0	0	0.0124311	3.9643	721.2214	721.8321	No	N/A	N/A	NI
L	65	0	93.49	New Access Road	5	Yes	35	716	4.800600052	0.075736202	11.1147	713.1994	718.3464	No	N/A	13	H
L, M, N	66	0	100	New Access Road	5	No	16	0	0	0.0367557	2.9898	712.1241	713.8163	No	N/A	N/A	NI
L, M, N	66	100	200	New Access Road	5	No	16	0	0	0.0367411	2.1906	710.5871	711.5073	No	N/A	N/A	NI
L, M, N	66	200	300	New Access Road	5	No	16	0	0	0.0367513	2.5007	714.0488	714.8263	No	N/A	N/A	NI
L, M, N	66	300	400	New Access Road	5	No	16	0	0	0.036735199	1.0876	712.329	712.5871	No	N/A	N/A	NI
L, M, N	66	400	500	New Access Road	5	No	16	0	0	0.0367334	1.0236	713.3533	713.8953	No	N/A	N/A	NI
L, M, N	66	500	600	New Access Road	5	No	16	0	0	0.036732499	0.7203	717.0298	717.3946	No	N/A	N/A	NI
L, M, N	66	600	700	New Access Road	5	No	16	0	0	0.0367839	4.5391	716.6927	719.7053	No	N/A	N/A	NI
L, M, N	66	700	800	New Access Road	5	No	16	0	0	0.036736101	1.1979	722.2167	722.5397	No	N/A	N/A	NI
L, M, N	66	800	900	New Access Road	5	No	16	0	0	0.036808401	4.1811	720.6599	722.0243	No	N/A	N/A	NI
L, M, N	66	900	1000	New Access Road	5	No	16	0	0	0.0370377	11.0014	721.7811	724.367	No	N/A	N/A	NI
L, M, N	66	1000	1100	New Access Road	5	No	16	0	0	0.037117999	13.0268	732.1644	740.2745	No	N/A	N/A	NI
L, M, N	66	1100	1200	New Access Road	5	No	16	0	0	0.036813699	6.6948	746.3343	749.5371	No	N/A	N/A	NI
L, M, N	66	1200	1300	New Access Road	5	No	16	0	0	0.0368319	7.3851	753.3284	756.843	No	N/A	N/A	NI
L, M, N	66	1300	1400	New Access Road	5	No	16	0	0	0.036771901	3.8409	760.6675	763.2726	No	N/A	N/A	NI
L, M, N	66	1400	1500	New Access Road	5	No	16	0	0	0.0367314	0.5303	764.4592	764.7243	No	N/A	N/A	NI
L, M, N	66	1500	1600	New Access Road	5	No	16	0	0	0.036731899	0.7292	766.2101	766.6205	No	N/A	N/A	NI
L, M, N	66	1600	1700	New Access Road	5	No	16	0	0	0.036731102	0.2963	767.085	767.1709	No	N/A	N/A	NI
L, M, N	66	1700	1800	New Access Road	5	No	16	0	0	0.036731001	0.2252	766.9349	767.0792	No	N/A	N/A	NI
L, M, N	66	1800	1900	New Access Road	5	No	16	0	0	0.036731102	0.3531	767.3535	767.53	No	N/A	N/A	NI
L, M, N	66	1900	2000	New Access Road	5	No	16	0	0	0.0367309	0.0436	767.5698	767.5916	Canal	N/A	4, 7-9, 11-13, 15, 17	L
L, M, N	66	2000	2100	New Access Road	5	No	16	0	0	0.036731102	0.2926	768.0167	768.144	No	N/A	N/A	NI
L, M, N	66	2100	2200	New Access Road	5	No	16	0	0	0.036731001	0.2228	768.199	768.3104	No	N/A	N/A	NI
L, M, N	66	2200	2278.76	New Access Road	5	No	16	0	0	0.0289292	0.2716	768.3994	768.5064	No	N/A	N/A	NI
M, N, P, Q	67	0	100	New Access Road	5	No	16	0	0	0.036752202	3.2414	754.9968	756.8126	No	N/A	N/A	NI
M, N, P, Q	67	100	200	New Access Road	5	No	16	0	0	0.036742002	2.4609	758.5901	759.7798	No	N/A	N/A	NI
M, N, P, Q	67	200	300	New Access Road	5	No	16	0	0	0.036863498	8.3104	761.5648	765.2707	No	N/A	N/A	NI
M, N, P, Q	67	300	400	New Access Road	5	No	16	0	0	0.03678	5.0951	771.3627	774.1308	No	N/A	N/A	NI
M, N, P, Q	67	400	500	New Access Road	5	No	16	0	0	0.036759999	3.7471	777.0102	779.2243	No	N/A	N/A	NI
M, N, P, Q	67	500	600	New Access Road	5	No	16	0	0	0.036735799	1.6271	780.7137	781.5112	No	N/A	N/A	NI
M, N, P, Q	67	600	700	New Access Road	5	No	16	0	0	0.0367397	2.0427	783.0911	784.291	No	N/A	N/A	NI
M, N, P, Q	67	700	800	New Access Road	5	No	16	0	0	0.036738001	1.6724	784.2223	784.6726	No	N/A	N/A	NI
M, N, P, Q	67	800	900	New Access Road	5	No	16	0	0	0.036741201	2.1243	784.1625	784.6718	No	N/A	N/A	NI
M, N, P, Q	67	900	1000	New Access Road	5	No	16	0	0	0.036748901	2.6605	784.1625	784.7919	No	N/A	N/A	NI
M, N, P, Q	67	1000	1100	New Access Road	5	No	16	0	0	0.0368012	5.9606	786.3122	788.8784	No	N/A	N/A	NI
M, N, P, Q	67	1100	1128.58	New Access Road	5	No	16	0	0	0.0106229	15.4272	793.2362	795.441	No	N/A	N/A	NI
N	68	0	100	New Access Road	5	Yes	31	735	3.812900066	0.071394503	7.5832	733.1871	735.1685	No	N/A	13	H
N	68	100	200	New Access Road	5	No	16	0	0	0.036769301	4.5695	727.3155	729.5642	No	N/A	N/A	NI
N	68	200	300	New Access Road	5	No	16	0	0	0.0367551	3.5624	722.8369	723.7197	No	N/A	N/A	NI
N	68	300	319.71	New Access Road	5	No	16	0	0	0.00724223	2.5534	721.2901	721.5417	No	N/A	N/A	NI
P	69	0	70.83	New Spur	4	No	16	0	0	0.0260249	2.4831	725.1259	725.9562	No	N/A	N/A	NI
P	70	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.036850199	8.0471	750.628	754.7813	No	N/A	N/A	NI
P	70	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036803901	6.1773	743.5944	746.3681	No	N/A	N/A	NI
P	70	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036754899	3.3972	740.1969	741.6238	No	N/A	N/A	NI
P	70	300	307.33	Unimproved Two-Track Road	4	No	16	0	0	0.00269219	2.1673	740.1489	740.2283	No	N/A	N/A	NI
P, Q, R	71	0	100	New Access Road	5	No	16	0	0	0.036731198	0.3472	712.5887	712.6817	No	N/A	N/A	NI
P, Q, R	71	100	200	New Access Road	5	No	16	0	0	0.036731198	0.3892	713.3221	713.5168	No	N/A	N/A	NI
P, Q, R	71	200	300	New Access Road	5	No	16	0	0	0.036736201	1.2814	714.5345	714.9379	No	N/A	N/A	NI
P, Q, R	71	300	400	New Access Road	5	No	16	0	0	0.036737401	1.8804	715.3019	716.2457	No	N/A	N/A	NI
P, Q, R	71	400	500	New Access Road	5	No	16	0	0	0.036735401	1.45	717.1352	718.0139	No	N/A	N/A	NI
P, Q, R	71	500	600	New Access Road	5	No	16	0	0	0.036732301	0.748	717.6353	718.1094	No	N/A	N/A	NI
P, Q, R	71	600	700	New Access Road	5	No	16	0	0	0.0367372	1.7706	720.6627	721.6313	No	N/A	N/A	NI
P, Q, R	71	700	800	New Access Road	5	No	16	0	0	0.0367373	1.7797	720.6752	721.6554	No	N/A	N/A	NI
P, Q, R	71	800	900	New Access Road	5	No	16	0	0	0.036731102	0.3176	721.2867	721.4264	No	N/A	N/A	NI
P, Q, R	71	900	1000	New Access Road	5	No	16	0	0	0.0367309	0.1596	720.3535	720.4333	No	N/A	N/A	NI
P, Q, R	71	1000	1100	New Access Road	5	No	16	0	0	0.036734801	1.0211	719.1349	719.6226	No	N/A	N/A	NI
P, Q, R	71	1100	1200	New Access Road	5	No	16	0	0	0.036731102	0.3344	721.0996	721.3063	No	N/A	N/A	NI
P, Q, R	71	1200	1300	New Access Road	5	No	16	0	0	0.036731102	0.3702	720.1928	720.289	No	N/A	N/A	NI
P, Q, R	71	1300	1400	New Access Road	5	No	16	0	0	0.036731198	0.4312	718.9223	719.1379	No	N/A	N/A	NI
P, Q, R	71	1400	1500	New Access Road	5	No	16	0	0	0.036750101	2.4318	718.4542	719.2463	No	N/A	N/A	NI
P, Q, R	71	1500	1586.48	New Access Road	5	No	16	0	0	0.031770598	1.9283	721.8474	722.6956	No	N/A	N/A	NI
P, Q, R	72	0	100	Unimproved Two-Track Road	3	No	16	0	0	0.036742602	2.3514	723.035	723.9789	No	N/A	N/A	NI

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
P, Q, R	72	100	200	Unimproved Two-Track Road	3	No	16	0	0	0.0367442	2.5191	725.7609	727.2588	No	N/A	N/A	NI
P, Q, R	72	200	229.37	Unimproved Two-Track Road	3	No	16	0	0	0.0107893	1.3925	728.4715	728.676	No	N/A	N/A	NI
Q	73	0	100	New Spur	5	No	16	0	0	0.036731001	0.1993	800.0049	800.1449	No	N/A	N/A	NI
Q	73	100	117.43	New Spur	5	No	16	0	0	0.00640363	0.856	799.4306	799.5051	No	N/A	N/A	NI
Q	74	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.036786601	5.2672	761.6109	763.8417	No	N/A	N/A	NI
Q	74	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036943801	9.4484	750.6378	756.6085	No	N/A	N/A	NI
Q	74	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036855601	7.53	741.8198	744.7543	No	N/A	N/A	NI
Q	74	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.0368586	7.6259	741.794	744.7655	No	N/A	N/A	NI
Q	74	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.0367512	3.3026	738.5377	740.116	No	N/A	N/A	NI
Q	74	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.036748301	2.8871	735.1857	736.2252	No	N/A	N/A	NI
Q	74	600	700	Unimproved Two-Track Road	4	No	16	0	0	0.036736201	1.6654	731.6793	732.5899	No	N/A	N/A	NI
Q	74	700	800	Unimproved Two-Track Road	4	No	16	0	0	0.036735401	1.5571	730.3016	731.1055	No	N/A	N/A	NI
Q	74	800	817.46	Unimproved Two-Track Road	4	No	16	0	0	0.00641575	1.5817	730.2615	730.3996	No	N/A	N/A	NI
Q	75	0	100	New Access Road	5	No	16	0	0	0.037479501	19.5586	828.149	839.3395	No	N/A	N/A	NI
Q	75	100	200	New Access Road	5	No	16	0	0	0.037610501	21.6529	809.0994	818.9557	No	N/A	N/A	NI
Q	75	200	300	New Access Road	5	No	16	0	0	0.037716601	22.4	806.2901	815.8862	No	N/A	N/A	NI
Q	75	300	400	New Access Road	5	No	16	0	0	0.0369137	9.9891	795.7156	800.7101	Canal	N/A	4, 7-9, 11-13, 15, 17	L
Q	75	400	500	New Access Road	5	No	16	0	0	0.037171699	15.1754	779.777	788.1458	No	N/A	N/A	NI
Q	75	500	556.75	New Access Road	5	No	16	0	0	0.020902401	7.3498	767.9966	770.0271	No	N/A	N/A	NI
Q	76	0	73.49	New Access Road	5	No	16	0	0	0.026996801	1.4652	728.3709	728.8772	No	N/A	N/A	NI
R	77	0	100	New Access Road	5	Yes	29	714	3.357000113	0.066575997	0.6326	712.643	712.9501	No	N/A	13	H
R	77	100	200	New Access Road	5	Yes	29	715	3.28489995	0.066577002	0.8208	713.7151	714.1239	No	N/A	13	H
R	77	200	300	New Access Road	5	Yes	31	716	3.779700041	0.071168803	0.8758	714.2203	714.6681	No	N/A	13	H
R	77	300	400	New Access Road	5	Yes	30	717	3.620100021	0.068872601	0.7948	715.3799	715.7773	No	N/A	13	H
R	77	400	500	New Access Road	5	Yes	31	718	3.765700102	0.07116889	0.8832	716.2343	716.6746	No	N/A	13	H
R	77	500	502.05	New Access Road	5	Yes	24	718	2.029999971	0.00112782	0.99	717.97	717.9801	No	N/A	13	H
R	78	0	100	New Spur	5	Yes	29	705	3.175400019	0.066575803	0.5041	703.8246	703.9678	No	N/A	13	H
R	78	100	120.1	New Spur	5	No	16	0	0	0.0073836	0.5221	704.0688	704.1213	No	N/A	N/A	NI
R	79	0	100	New Access Road	5	No	16	0	0	0.0367309	0.0739	734.2518	734.272	No	N/A	N/A	NI
R	79	100	147.88	New Access Road	5	No	16	0	0	0.017585799	0.1878	734.5063	734.5523	No	N/A	N/A	NI
R	80	0	81.67	New Spur	5	No	16	0	0	0.029996799	0.1238	731.2457	731.3199	No	N/A	N/A	NI
R	81	0	63.21	New Spur	5	No	16	0	0	0.023217799	0.4088	729.7317	729.8715	No	N/A	N/A	NI
R	82	0	100	New Access Road	5	No	16	0	0	0.036731299	0.4668	727.5327	727.7661	No	N/A	N/A	NI
R	82	100	200	New Access Road	5	No	16	0	0	0.036731701	0.5942	727.8331	728.1934	No	N/A	N/A	NI
R	82	200	300	New Access Road	5	No	16	0	0	0.036733199	1.0855	728.8211	729.1162	No	N/A	N/A	NI
R	82	300	400	New Access Road	5	No	16	0	0	0.036734398	1.3828	726.7427	727.4556	No	N/A	N/A	NI
R	82	400	500	New Access Road	5	No	16	0	0	0.036734499	1.1974	726.8637	727.6478	No	N/A	N/A	NI
R	82	500	600	New Access Road	5	No	16	0	0	0.0367346	1.4216	724.7368	725.4375	No	N/A	N/A	NI
R	82	600	659.77	New Access Road	5	No	16	0	0	0.0219537	1.0493	724.131	724.4371	No	N/A	N/A	NI
R	83	0	100	New Access Road	5	No	16	0	0	0.036731999	0.7744	720.9276	721.3309	No	N/A	N/A	NI
R	83	100	120.17	New Access Road	5	No	16	0	0	0.00740862	0.4212	720.5677	720.6102	No	N/A	N/A	NI
R	84	0	100	Unpaved Facility Access Road	3	Floodway	26	718	2.393899918	0.059687998	0.2851	717.6061	717.7392	No	N/A	13	H
R	84	100	135.96	Unpaved Facility Access Road	3	Floodway	28	718	2.956799984	0.023116199	0.4107	717.0432	717.1171	No	N/A	13	H
R	85	0	100	New Access Road	5	No	16	0	0	0.0367309	0.1193	714.4432	714.5029	No	N/A	N/A	NI
R	85	100	200	New Access Road	5	Yes	24	714	1.882500052	0.055096999	0.4672	714.1175	714.3945	No	N/A	13	H
R	85	200	300	New Access Road	5	Yes	28	714	2.929100037	0.064279199	0.1879	713.0709	713.1648	No	N/A	13	H
R	85	300	400	New Access Road	5	Floodway	31	714	3.794300079	0.071168497	0.8228	712.2057	712.6198	No	N/A	13	H
R	85	400	500	New Access Road	5	Floodway	32	714	3.916399956	0.073468603	1.0025	712.0836	712.2501	No	N/A	13	H
R	85	500	600	New Access Road	5	Floodway	32	714	3.887900114	0.073462799	0.446	712.1121	712.3293	No	N/A	13	H
R	85	600	700	New Access Road	5	Floodway	32	714	4.065100193	0.0734661	0.8286	711.9349	712.182	No	N/A	13	H
R	85	700	800	New Access Road	5	Floodway	25	714	2.210500002	0.057397299	0.8972	713.7895	714.1821	No	N/A	13	H
R	85	800	804.63	New Access Road	5	Floodway	28	715	3.119299889	0.00297419	1.1015	713.8807	713.9062	No	N/A	13	H
R	86	0	100	New Spur	5	Yes	26	713	2.592200041	0.059688199	0.3888	712.4078	712.6098	No	N/A	13	H
R	86	100	200	New Spur	5	Yes	23	712	1.676499963	0.0528014	0.4291	712.3235	712.506	No	N/A	13	H
R	86	200	248.5	New Spur	5	No	16	0	0	0.0178148	0.265	713.4799	713.5389	No	N/A	N/A	NI
R	87	0	100	Jeep Trail	4	Yes	34	705	4.480199814	0.078060798	1.3943	702.5198	703.1967	No	N/A	13	H
R	87	100	200	Jeep Trail	4	Yes	31	705	3.687599897	0.071177498	1.7826	703.3124	704.1941	No	N/A	13	H
R	87	200	300	Jeep Trail	4	Yes	26	706	2.610599995	0.059693001	1.3309	705.3894	706.0579	No	N/A	13	H
R	87	300	400	Jeep Trail	4	Yes	26	708	2.480700016	0.059698701	1.9002	707.5193	708.5153	No	N/A	13	H
R	87	400	500	Jeep Trail	4	Yes	27	710	2.684299946	0.0619881	1.2172	709.3157	709.9817	No	N/A	13	H
R	87	500	600	Jeep Trail	4	Yes	24	711	2.039799929	0.055098601	0.9005	710.9602	711.4118	No	N/A	13	H
R	87	600	700	Jeep Trail	4	No	16	0	0	0.036731798	0.6982	712.0019	712.351	No	N/A	N/A	NI
R	87	700	800	Jeep Trail	4	No	16	0	0	0.0367321	0.717	712.9233	713.3091	No	N/A	N/A	NI
R	87	800	900	Jeep Trail	4	No	16	0	0	0.036731001	0.1582	713.5996	713.6977	No	N/A	N/A	NI
R	87	900	1000	Jeep Trail	4	No	16	0	0	0.0367309	0.1346	713.4626	713.5334	No	N/A	N/A	NI
R	87	1000	1100	Jeep Trail	4	No	16	0	0	0.036731001	0.2	713.8501	713.9501	No	N/A	N/A	NI
R	87	1100	1127.27	Jeep Trail	4	No	16	0	0	0.0100181	0.3433	714.0245	714.0714	No	N/A	N/A	NI
R	88	0	100	Unimproved Two-Track Road	3	No	16	0	0	0.036731899	0.7612	704.2332	704.6137	No	N/A	N/A	NI
R	88	100	200	Unimproved Two-Track Road	3	No	16	0	0	0.036731299	0.469	704.555	704.7775	No	N/A	N/A	NI
R	88	200	300	Unimproved Two-Track Road	3	No	16	0	0	0.036735501	1.1819	704.9957	705.5564	No	N/A	N/A	NI
R	88	300	400	Unimproved Two-Track Road	3	No	16	0	0	0.036745101	2.4218	706.499	707.3725	No	N/A	N/A	NI
R	88	400	500	Unimproved Two-Track Road	3	No	16	0	0	0.036742698	2.4315	709.0201	710.413	No	N/A	N/A	NI
R	88	500	600	Unimproved Two-Track Road	3	Yes	29	711	3.127899885	0.066588998	1.8884	709.8721	711.0067	No	N/A	13	H
R	88	600	690.64	Unimproved Two-Track Road	3	Yes	27	711	2.773900032	0.0561844	1.1333	710.2261	710.5355	No	N/A	13	H

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
R	89	0	100	Unpaved Facility Access Road	3	Floodway	33	716	4.206399918	0.075758003	0.2551	713.7936	713.84	No	N/A	13	H
R	89	100	148.57	Unpaved Facility Access Road	3	Floodway	29	716	3.336899996	0.0323333	0.213	714.6631	714.7161	No	N/A	13	H
S	90	0	100	Jeep Trail	3	No	16	0	0	0.036734	1.2899	754.3036	754.9025	No	N/A	N/A	NI
S	90	100	200	Jeep Trail	3	No	16	0	0	0.036732901	1.0413	756.2479	756.7642	No	N/A	N/A	NI
S	90	200	300	Jeep Trail	3	No	16	0	0	0.036731899	0.757	757.8474	758.2259	No	N/A	N/A	NI
S	90	300	400	Jeep Trail	3	No	16	0	0	0.036732301	0.8043	759.0544	759.5393	No	N/A	N/A	NI
S	90	400	500	Jeep Trail	3	No	16	0	0	0.036732402	0.9133	759.171	759.633	No	N/A	N/A	NI
S	90	500	600	Jeep Trail	3	No	16	0	0	0.036731701	0.6551	760.0802	760.4075	No	N/A	N/A	NI
S	90	600	700	Jeep Trail	3	No	16	0	0	0.036731798	0.6893	760.0455	760.3901	No	N/A	N/A	NI
S	90	700	800	Jeep Trail	3	No	16	0	0	0.036731701	0.6797	761.0314	761.3713	No	N/A	N/A	NI
S	90	800	900	Jeep Trail	3	No	16	0	0	0.036731701	0.67	761.784	762.1186	No	N/A	N/A	NI
S	90	900	1000	Jeep Trail	3	No	16	0	0	0.036734398	1.2944	762.6818	763.2955	No	N/A	N/A	NI
S	90	1000	1100	Jeep Trail	3	No	16	0	0	0.036734398	1.3832	764.3918	765.0476	No	N/A	N/A	NI
S	90	1100	1200	Jeep Trail	3	No	16	0	0	0.036732499	0.9446	764.6028	765.0751	No	N/A	N/A	NI
S	90	1200	1246.51	Jeep Trail	3	No	16	0	0	0.0170842	0.8446	766.2415	766.4465	No	N/A	N/A	NI
S	91	0	99.78	New Spur	5	No	16	0	0	0.0366496	0.6679	786.3034	786.6366	No	N/A	N/A	NI
S	92	0	100	Unpaved Access Road	3	No	16	0	0	0.036731899	0.7361	791.0662	791.3896	No	N/A	N/A	NI
S	92	100	200	Unpaved Access Road	3	No	16	0	0	0.036734398	1.2686	791.7037	792.1953	No	N/A	N/A	NI
S	92	200	300	Unpaved Access Road	3	No	16	0	0	0.036732499	0.9213	793.1665	793.6137	No	N/A	N/A	NI
S	92	300	400	Unpaved Access Road	3	No	16	0	0	0.036731601	0.4019	794.2847	794.5905	No	N/A	N/A	NI
S	92	400	500	Unpaved Access Road	3	No	16	0	0	0.036731701	0.47	794.5114	794.6301	No	N/A	N/A	NI
S	92	500	600	Unpaved Access Road	3	No	16	0	0	0.036733601	1.056	794.5618	794.9484	No	N/A	N/A	NI
S	92	600	700	Unpaved Access Road	3	No	16	0	0	0.0367314	0.4006	796.5078	796.7131	No	N/A	N/A	NI
S	92	700	800	Unpaved Access Road	3	No	16	0	0	0.036735099	1.5263	797.7115	798.4747	No	N/A	N/A	NI
S	92	800	900	Unpaved Access Road	3	No	16	0	0	0.036731899	0.7093	796.7837	797.1367	No	N/A	N/A	NI
S	92	900	1000	Unpaved Access Road	3	No	16	0	0	0.0367328	0.7332	800.1306	800.644	No	N/A	N/A	NI
S	92	1000	1100	Unpaved Access Road	3	No	16	0	0	0.036732599	0.7614	798.8348	799.3257	No	N/A	N/A	NI
S	92	1100	1200	Unpaved Access Road	3	No	16	0	0	0.036731001	0.1777	799.9952	800.1348	No	N/A	N/A	NI
S	92	1200	1300	Unpaved Access Road	3	No	16	0	0	0.036731198	0.4097	801.86	802.0648	No	N/A	N/A	NI
S	92	1300	1400	Unpaved Access Road	3	No	16	0	0	0.036731001	0.116	800.6252	800.6982	No	N/A	N/A	NI
S	92	1400	1500	Unpaved Access Road	3	No	16	0	0	0.036733299	1.1483	799.2688	799.8382	No	N/A	N/A	NI
S	92	1500	1600	Unpaved Access Road	3	No	16	0	0	0.036732301	0.8849	799.6792	800.1536	No	N/A	N/A	NI
S	92	1600	1700	Unpaved Access Road	3	No	16	0	0	0.0367328	0.9915	797.8342	798.3742	No	N/A	N/A	NI
S	92	1700	1748.37	Unpaved Access Road	3	No	16	0	0	0.017766699	0.9532	798.1087	798.3392	No	N/A	N/A	NI
S	93	0	100	New Spur	5	No	16	0	0	0.036731601	0.5546	755.512	755.7757	No	N/A	N/A	NI
S	93	100	133.81	New Spur	5	No	16	0	0	0.012419	1.3105	754.725	754.9465	No	N/A	N/A	NI
U	94	0	100	New Spur	5	No	16	0	0	0.036948901	8.7737	694.6889	697.8189	No	N/A	N/A	NI
U	94	100	147.83	New Spur	5	No	16	0	0	0.0178075	15.6281	694.2595	698.2291	No	N/A	N/A	NI
U	95	0	69.91	New Spur	5	No	16	0	0	0.025691999	2.0544	722.4376	722.8176	No	N/A	N/A	NI
U	96	0	100	Unpaved Access Road	3	No	16	0	0	0.036887702	9.2172	701.9769	706.7522	No	N/A	N/A	NI
U	96	100	200	Unpaved Access Road	3	No	16	0	0	0.036864899	7.6192	706.4184	709.2953	No	N/A	N/A	NI
U	96	200	300	Unpaved Access Road	3	No	16	0	0	0.0368274	6.717	716.2943	720.3475	No	N/A	N/A	NI
U	96	300	400	Unpaved Access Road	3	No	16	0	0	0.036735401	1.0463	725.0381	725.3862	No	N/A	N/A	NI
U	96	400	500	Unpaved Access Road	3	No	16	0	0	0.036734901	0.8415	724.8052	725.2218	No	N/A	N/A	NI
U	96	500	600	Unpaved Access Road	3	No	16	0	0	0.0367341	1.0731	723.6394	724.3615	No	N/A	N/A	NI
U	96	600	700	Unpaved Access Road	3	No	16	0	0	0.0367488	2.854	719.8069	721.5486	No	N/A	N/A	NI
U	96	700	752.41	Unpaved Access Road	3	No	16	0	0	0.0192724	4.8253	717.6705	718.8741	No	N/A	N/A	NI
Ax	97	0	100	Unimproved Two-Track Road	3	No	16	0	0	0.036731001	5.8022	695.4547	697.8241	No	N/A	N/A	NI
Ax	97	100	151.78	Unimproved Two-Track Road	3	No	16	0	0	0.0190209	8.8848	699.2312	701.6912	No	N/A	N/A	NI
Ax	98	0	82.23	New Access Road	5	No	16	0	0	0.0302028	0.7037	700.6503	700.768	No	N/A	N/A	NI
Ax	99	0	100	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	2.4392	701.1798	701.8308	No	N/A	N/A	NI
Ax	99	100	200	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	3.0805	700.7857	701.8311	No	N/A	N/A	NI
Ax	99	200	300	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	5.3187	702.0027	704.079	No	N/A	N/A	NI
Ax	99	300	400	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	8.0474	711.7014	716.4951	No	N/A	N/A	NI
Ax	99	400	500	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	9.5857	713.1979	719.139	Int Stream	POWKZ	3-5, 7-9, 11-13, 15, 17	H
Ax	99	500	600	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	6.1754	711.2198	712.6654	No	POWKZ	3, 4, 5, 11, 12	H
Ax	99	600	700	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	9.439	710.8504	712.9219	No	N/A	N/A	NI
Ax	99	700	800	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	14.7193	725.03	732.5859	Int Stream	N/A	4, 7-9, 11-13, 15, 17	M
Ax	99	800	900	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	3.5336	740.8859	743.8979	No	N/A	N/A	NI
Ax	99	900	1000	Unimproved Two-Track Road	4	No	16	0	0	0.036731001	0.3557	744.3322	744.4391	No	N/A	N/A	NI
Ax	99	1000	1010.9	Unimproved Two-Track Road	4	No	16	0	0	0.00400351	0.0493	744.2784	744.2811	No	N/A	N/A	NI
Bx	100	0	100	New Access Road	5	No	16	0	0	0.036731001	1.4755	764.9453	765.743	No	N/A	N/A	NI
Bx	100	100	200	New Access Road	5	No	16	0	0	0.036731001	6.9071	763.6113	766.5923	No	N/A	N/A	NI
Bx	100	200	300	New Access Road	5	No	16	0	0	0.036731001	11.8714	746.2604	752.6426	No	N/A	N/A	NI
Bx	100	300	400	New Access Road	5	No	16	0	0	0.036731001	11.8526	746.2604	752.6871	No	N/A	N/A	NI
Bx	100	400	500	New Access Road	5	No	16	0	0	0.036731001	10.1168	735.6351	738.2888	No	N/A	N/A	NI
Bx	100	500	591.01	New Access Road	5	No	16	0	0	0.033429202	1.2288	743.3629	743.6677	No	N/A	N/A	NI
Jc	101	0	100	New Access Road	4	No	16	0	0	0.036731001	0.723	613.0072	613.3188	No	N/A	N/A	NI
Jc	101	100	200	New Access Road	4	No	16	0	0	0.036731001	0.5193	612.5535	612.801	No	N/A	N/A	NI
Jc	101	200	223.82	New Access Road	4	No	16	0	0	0.00874765	0.2437	611.9457	611.9747	No	N/A	N/A	NI
Jc	102	0	100	New Access Road	4	No	16	0	0	0.036731001	0.8527	623.4149	623.8413	No	N/A	N/A	NI
Jc	102	100	197.6	New Access Road	4	No	16	0	0	0.035851199	0.4492	623.2579	623.4771	No	N/A	N/A	NI
Jc	103	0	100	Unimproved Two-track Road	3	Floodway	58	608	10.60910034	0.133149996	2.1836	599.3909	600.6569	No	N/A	13	H
Jc	103	100	200	Unimproved Two-track Road	3	Yes	50	608	8.402600288	0.114784002	0.314	601.5974	601.7552	No	PEMY	3, 4, 5, 11, 12, 13	H

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
Jc	103	200	300	Unimproved Two-track Road	3	Yes	46	608	7.474400043	0.105600998	3.4607	602.5256	603.9639	No	PEMY	3, 4, 5, 11, 12, 13	H
Jc	103	300	400	Unimproved Two-track Road	3	Yes	26	608	2.584199905	0.059687801	3.8704	607.4158	609.2961	No	PEMY	3, 4, 5, 11, 12, 13	H
Jc	103	400	500	Unimproved Two-track Road	3	Yes	26	608	2.584199905	0.059687801	4.6672	607.4158	609.5409	No	N/A	13	H
Jc	103	500	600	Unimproved Two-track Road	3	Yes	18	609	0.492599994	0.041322298	3.6218	610.5074	612.5389	No	N/A	13	H
Jc	103	600	661.53	Unimproved Two-track Road	3	Yes	16	609	0	0.022601699	4.3988	616.0903	617.4436	No	N/A	13	H
Jc	104	0	100	New Access Road	5	Floodway	71	615	13.86970043	0.162993997	0.515	603.1303	603.3878	No	N/A	13	H
Jc	104	100	200	New Access Road	5	Floodway	71	615	13.81200027	0.162993997	0.6191	603.188	603.4973	No	N/A	13	H
Jc	104	200	237.42	New Access Road	5	Floodway	68	615	12.89159966	0.058409099	0.3842	604.1084	604.1808	No	N/A	13	H
Jc	105	0	100	Golf Cart Trail	4	Floodway	68	615	12.96959972	0.156106994	0.1724	604.0304	604.1115	No	N/A	13	H
Jc	105	100	200	Golf Cart Trail	4	Floodway	69	615	13.27019978	0.158401996	0.2878	603.7298	603.8763	No	N/A	13	H
Jc	105	200	300	Golf Cart Trail	4	Floodway	73	616	14.26119995	0.167585	0.2355	603.7388	603.8404	No	N/A	13	H
Jc	105	300	400	Golf Cart Trail	4	Floodway	75	616	14.7816	0.172176003	0.3901	603.2184	603.4159	No	N/A	13	H
Jc	105	400	500	Golf Cart Trail	4	Floodway	74	616	14.54850006	0.169881001	0.0919	603.4515	603.4899	No	N/A	13	H
Jc	105	500	600	Golf Cart Trail	4	Floodway	78	616	15.55179977	0.179063007	0.1874	602.4482	602.5135	No	N/A	13	H
Jc	105	600	700	Golf Cart Trail	4	Floodway	78	616	15.54629993	0.179063007	0.0408	602.4537	602.4678	No	N/A	13	H
Jc	105	700	800	Golf Cart Trail	4	Floodway	78	616	15.50279999	0.179063007	0.2043	602.4972	602.6161	No	N/A	13	H
Jc	105	800	900	Golf Cart Trail	4	Floodway	78	616	15.5600996	0.179063007	0.6217	602.4399	602.584	No	N/A	13	H
Jc	105	900	1000	Golf Cart Trail	4	Floodway	75	616	14.83399963	0.172176003	0.6823	603.166	603.5979	No	N/A	13	H
Jc	105	1000	1100	Golf Cart Trail	4	Floodway	70	616	13.43379974	0.160697997	0.3538	604.5662	604.6639	No	N/A	13	H
Jc	105	1100	1200	Golf Cart Trail	4	Floodway	70	616	13.5802002	0.160697997	1.0468	604.4198	605.0863	No	N/A	13	H
Jc	105	1200	1300	Golf Cart Trail	4	Floodway	68	616	12.95320034	0.156106994	0.3398	605.0468	605.1125	No	N/A	13	H
Jc	105	1300	1400	Golf Cart Trail	4	Floodway	69	616	13.19540024	0.158401996	1.0596	604.8046	605.2602	No	N/A	13	H
Jc	105	1400	1500	Golf Cart Trail	4	Yes	62	616	11.52630043	0.142332003	2.1632	606.4737	607.5062	No	N/A	13	H
Jc	105	1500	1565.32	Golf Cart Trail	4	Yes	53	616	9.258000374	0.0794807	2.646	608.742	609.6324	No	N/A	13	H
Jc	106	0	100	New Access Road	5	Floodway	75	614	14.79409981	0.172176003	0.3505	601.2059	601.3887	No	N/A	13	H
Jc	106	100	200	New Access Road	5	Floodway	77	614	15.16469955	0.176768005	0.3007	600.8353	600.9856	No	N/A	13	H
Jc	106	200	300	New Access Road	5	Floodway	73	613	14.35700035	0.167585	0.2471	600.643	600.7671	No	N/A	13	H
Jc	106	300	400	New Access Road	5	Floodway	75	613	14.64459991	0.172176003	0.209	600.3554	600.4599	No	N/A	13	H
Jc	106	400	500	New Access Road	5	Floodway	75	613	14.74820042	0.172176003	0.305	600.2518	600.3997	No	N/A	13	H
Jc	106	500	600	New Access Road	5	Floodway	70	612	13.37940025	0.160697997	0.101	600.6206	600.6712	No	N/A	13	H
Jc	106	600	700	New Access Road	5	Floodway	72	612	13.90340042	0.165289	0.1239	600.0966	600.1534	No	N/A	13	H
Jc	106	700	800	New Access Road	5	Floodway	68	611	12.96490002	0.156106994	0.1562	600.0351	600.1142	No	N/A	13	H
Jc	106	800	851.07	New Access Road	5	Floodway	69	611	13.23569965	0.080895796	0.0293	599.7643	599.7718	No	N/A	13	H
Jc	107	0	100	Unimproved Access Road	3	Floodway	67	611	12.83720016	0.153810993	0.0938	600.1628	600.2104	No	N/A	13	H
Jc	107	100	200	Unimproved Access Road	3	Floodway	67	611	12.6427002	0.153810993	0.0498	600.3573	600.3831	No	N/A	13	H
Jc	107	200	300	Unimproved Access Road	3	Floodway	67	611	12.74380016	0.153810993	0.383	600.2562	600.4352	No	N/A	13	H
Jc	107	300	400	Unimproved Access Road	3	Floodway	61	610	11.20429993	0.140037	0.2572	600.7957	600.9198	No	N/A	13	H
Jc	107	400	500	Unimproved Access Road	3	Floodway	61	610	11.30140018	0.140037	0.2489	600.6986	600.8161	No	N/A	13	H
Jc	107	500	600	Unimproved Access Road	3	Yes	59	610	10.85330009	0.135444999	0.3322	601.1467	601.3119	No	N/A	13	H
Jc	107	600	700	Unimproved Access Road	3	Yes	54	609	9.570599556	0.123966999	1.897	601.4294	601.9099	No	PEMY	3, 4, 5, 11, 12, 13	H
Jc	107	700	800	Unimproved Access Road	3	Yes	34	609	4.451399803	0.078053303	6.4183	606.5486	610.5291	No	PEMY	3, 4, 5, 11, 12, 13	H
Jc	107	800	863.84	Unimproved Access Road	3	Yes	16	609	0	0.023449199	3.4301	614.2485	615.3434	No	N/A	13	H
Jc	108	0	100	New Access Road	4	Floodway	61	609	11.16069984	0.140037	0.1356	599.8393	599.9077	No	N/A	13	H
Jc	108	100	200	New Access Road	4	Floodway	60	609	10.95189953	0.137740999	0.1867	600.0481	600.1255	No	N/A	13	H

Appendix A: Table 2. 230 kV Access Road Impacts

Associated Link new	Road Name	From foot	To foot	Road Type	Build Level	FEMA 100 Year Floodplain	Road Width	Base Flood Elevation	Berm Height (ft)	Permanent Disturbance	% Slope (avg)	Low Elevation (ft)	Average Elevation (ft)	Water Crossing	NWI Wetland Type	MMs	Impact
Jc	108	200	270.86	New Access Road	4	Floodway	62	610	11.6196003	0.100850999	0.7198	600.3804	600.6354	No	N/A	13	H
Jc	109	0	100	New Access Road	5	No	16	0	0	0.036731001	3.2238	605.0856	606.7371	No	N/A	N/A	NI
Jc	109	100	200	New Access Road	5	No	16	0	0	0.036731001	1.7762	610.0443	610.9324	No	N/A	N/A	NI
Jc	109	200	300	New Access Road	5	No	16	0	0	0.036731001	1.2792	612.8417	613.4814	No	N/A	N/A	NI
Jc	109	300	304.33	New Access Road	5	No	16	0	0	0.00158902	1.1301	613.0135	613.038	No	N/A	N/A	NI
Jc	110	0	100	Unpaved Access Road	3	No	16	0	0	0.036731001	0.6932	613.0572	613.4038	No	N/A	N/A	NI
Jc	110	100	200	Unpaved Access Road	3	No	16	0	0	0.036731001	0.3579	613.4351	613.4946	No	N/A	N/A	NI
Jc	110	200	300	Unpaved Access Road	3	No	16	0	0	0.036731001	0.9937	613.5043	614.0526	No	N/A	N/A	NI
Jc	110	300	400	Unpaved Access Road	3	No	16	0	0	0.036731001	1.1511	615.1675	615.7683	No	N/A	N/A	NI
Jc	110	400	500	Unpaved Access Road	3	No	16	0	0	0.036731001	0.608	614.7276	614.9149	No	N/A	N/A	NI
Jc	110	500	600	Unpaved Access Road	3	No	16	0	0	0.036731001	0.3566	616.9174	617.0752	No	N/A	N/A	NI
Jc	110	600	700	Unpaved Access Road	3	No	16	0	0	0.036731001	1.1252	616.5466	617.1422	No	N/A	N/A	NI
Jc	110	700	800	Unpaved Access Road	3	No	16	0	0	0.036731001	0.9368	616.3518	616.7283	No	N/A	N/A	NI
Jc	110	800	900	Unpaved Access Road	3	Yes	16	607	0	0.036731001	0.6488	617.79	618.086	No	N/A	13	H
Jc	110	900	978.91	Unpaved Access Road	3	Yes	16	608	0	0.0289841	0.4441	616.5814	616.7567	No	N/A	13	H
Jc	111	0	100	New Access Road	5	Yes	55	607	9.627400398	0.126262993	0.2859	599.3726	599.5155	No	PEMY	3, 4, 5, 11, 12	H
Jc	111	100	198.62	New Access Road	5	Floodway	60	608	10.9090004	0.135835007	0.608	599.091	599.2845	No	N/A	13	H

Appendix A: Table 3. 69 kV Disturbance Area Impacts

Link	Mile From	Mile To	Build Level	Water Crossing	NWI Wetland Type	Build Level	FEMA 100-Year Floodplain	Initial Impact	Site-specific APMs	Residual Impact
HL-01	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-02	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-02	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-02	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-02	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-02	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-02	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-02	0.6	0.6	1	None	None	1	No	NI	N/A	NI
HL-03	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-03	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-03	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-03	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-03	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-03	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-03	0.6	0.6	1	None	None	1	No	NI	N/A	NI
HL-04	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-04	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-04	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-04	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-04	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-04	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-04	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-04	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-04	0.8	0.8	1	None	None	1	No	NI	N/A	NI
HL-05	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-05	0.1	0.2	1	Intermittent Stream	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-05	0.2	0.2	1	None	None	1	No	NI	N/A	NI
HL-06	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-06	0.1	0.2	1	Intermittent Stream	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-06	0.2	0.3	1	Intermittent Stream	PEMY	1	No	L	3-5, 7-9, 11-15, 17	NI
HL-06	0.3	0.4	1	None	POWKY	1	No	L	3-5, 11-12	NI
HL-06	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-06	0.5	0.5	1	None	None	1	No	NI	N/A	NI
HL-07	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-07	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-07	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-07	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-07	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-07	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-07	0.6	0.7	1	Intermittent Stream	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-07	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-07	0.8	0.8	1	None	None	1	No	NI	N/A	NI
HL-08	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-08	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-08	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-08	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-08	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-08	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-08	0.6	0.7	1	None	None	1	No	NI	N/A	NI

Appendix A: Table 3. 69 kV Disturbance Area Impacts

Link	Mile From	Mile To	Build Level	Water Crossing	NWI Wetland Type	Build Level	FEMA 100-Year Floodplain	Initial Impact	Site-specific APMs	Residual Impact
HL-08	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-08	0.8	0.8	1	None	None	1	No	NI	N/A	NI
HL-09	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-09	0.1	0.2	1	Canal	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-09	0.2	0.2	1	None	None	1	No	NI	N/A	NI
HL-10	0.0	0.1	1	None	PFOY	1	No	L	3-5, 11-12	NI
HL-10	0.1	0.2	1	Canal	PFOY	1	No	L	3-5, 7-9, 11-15, 17	NI
HL-10	0.2	0.2	1	None	None	1	No	NI	N/A	NI
HL-11	0.0	0.1	1	Canal	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-11	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-11	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-11	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-11	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-11	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-11	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-11	0.7	0.7	1	None	None	1	No	NI	N/A	NI
HL-12	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-12	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-12	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-12	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-12	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-13	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-13	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-13	0.2	0.2	1	None	None	1	No	NI	N/A	NI
HL-14	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-14	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-14	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-15	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-15	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-15	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-15	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-15	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-15	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-15	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-15	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-15	0.8	0.9	1	None	None	1	No	NI	N/A	NI
HL-15	0.9	1.0	1	None	None	1	No	NI	N/A	NI
HL-15a	1.0	1.0	1	None	None	1	No	NI	N/A	NI
HL-15b	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-15b	1.2	1.2	1	None	None	1	No	NI	N/A	NI
HL-16	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-16	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-16	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-16	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-16	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-16	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-16	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-16	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-16	0.8	0.9	1	None	None	1	No	NI	N/A	NI

Appendix A: Table 3. 69 kV Disturbance Area Impacts

Link	Mile From	Mile To	Build Level	Water Crossing	NWI Wetland Type	Build Level	FEMA 100-Year Floodplain	Initial Impact	Site-specific APMs	Residual Impact
HL-16	0.9	1.0	1	None	None	1	No	NI	N/A	NI
HL-16	1.0	1.1	1	None	None	1	No	NI	N/A	NI
HL-16	1.1	1.2	1	None	None	1	No	NI	N/A	NI
HL-16	1.2	1.3	1	None	None	1	No	NI	N/A	NI
HL-16	1.3	1.4	1	None	None	1	No	NI	N/A	NI
HL-16	1.4	1.4	1	None	None	1	No	NI	N/A	NI
HL-17a	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-17a	0.1	0.1	1	None	None	1	No	NI	N/A	NI
HL-17b	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-17b	0.1	0.1	1	None	None	1	No	NI	N/A	NI
HL-18	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-18	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-18	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-18	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-18	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-18	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-18	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-18	0.7	0.8	1	Canal (Arlington Valley Channel)	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-18	0.8	0.9	1	None	None	1	No	NI	N/A	NI
HL-19	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-19	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-19	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-19	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-19	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-19	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-19	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-19	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-20a	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-20a	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-20a	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-20a	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-20a	0.4	0.4	1	None	None	1	No	NI	N/A	NI
HL-20b	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-20b	0.1	0.1	1	None	None	1	No	NI	N/A	NI
HL-21	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-22	0.0	0.0	1	None	None	1	No	NI	N/A	NI
HL-23	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-23	0.1	0.1	1	None	None	1	No	NI	N/A	NI
HL-24	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-24	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-24	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-24	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-25	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-25	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-25	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-25	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-25	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-25	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-25	0.6	0.7	1	None	None	1	No	NI	N/A	NI

Appendix A: Table 3. 69 kV Disturbance Area Impacts

Link	Mile From	Mile To	Build Level	Water Crossing	NWI Wetland Type	Build Level	FEMA 100-Year Floodplain	Initial Impact	Site-specific APMs	Residual Impact
HL-25	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-25	0.8	0.8	1	None	None	1	No	NI	N/A	NI
HL-26	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-26	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-26	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-26	0.3	0.3	1	Intermittent stream	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-27	0.0	0.1	1	Canal (Arlington Valley Channel)	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-28	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-28	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-28	0.2	0.2	1	None	None	1	No	NI	N/A	NI
HL-29	0.0	0.0	1	None	None	1	No	NI	N/A	NI
HL-30	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-30	0.1	0.1	1	None	None	1	No	NI	N/A	NI
HL-31	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-31	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-31	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-31	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-31	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-31	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-31	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-31	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-31	0.8	0.8	1	None	None	1	No	NI	N/A	NI
HL-32	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-32	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-32	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-33	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-33	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-33	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-33	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-33	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-33	0.5	0.6	1	Canal (Arlington Valley Channel)	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-33	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-33	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-34	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-34	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-34	0.2	0.3	1	Canal (Arlington Valley Channel)	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-34	0.3	0.3	1	None	None	1	No	NI	N/A	NI
HL-35	0.0	0.1	1	Canal (Arlington Valley Channel)	None	1	No	L	4, 7-9, 12-15, 17	NI
HL-36	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-36	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-36	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-37	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-37	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-37	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-37	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-38	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-38	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-38	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-38	0.3	0.4	1	None	None	1	No	NI	N/A	NI

Appendix A: Table 3. 69 kV Disturbance Area Impacts

Link	Mile From	Mile To	Build Level	Water Crossing	NWI Wetland Type	Build Level	FEMA 100-Year Floodplain	Initial Impact	Site-specific APMs	Residual Impact
HL-38	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-38	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-38	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-38	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-39	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-39	0.1	0.1	1	None	None	1	No	NI	N/A	NI
HL-40	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-40	0.1	0.2	1	None	None	1	No	NI	N/A	NI
HL-40	0.2	0.3	1	None	None	1	No	NI	N/A	NI
HL-40	0.3	0.4	1	None	None	1	No	NI	N/A	NI
HL-40	0.4	0.5	1	None	None	1	No	NI	N/A	NI
HL-40	0.5	0.6	1	None	None	1	No	NI	N/A	NI
HL-40	0.6	0.7	1	None	None	1	No	NI	N/A	NI
HL-40	0.7	0.8	1	None	None	1	No	NI	N/A	NI
HL-40	0.8	0.8	1	None	None	1	No	NI	N/A	NI
HL-41	0.0	0.1	1	None	None	1	No	NI	N/A	NI
HL-42	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-01	0.0	0.1	1	Canal (MWD Upper Feeder)	None	1	No	NI	N/A	NI
MV-01	0.1	0.2	1	Canal (West Riverside Canal Lateral #2)	None	1	No	NI	N/A	NI
MV-01	0.2	0.3	1	None	None	1	No	NI	N/A	NI
MV-01	0.3	0.3	1	None	None	1	No	NI	N/A	NI
MV-02	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-03	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-03	0.1	0.2	1	None	None	1	No	NI	N/A	NI
MV-03	0.2	0.3	2	None	None	2	No	NI	N/A	NI
MV-03	0.3	0.4	2	None	None	2	No	NI	N/A	NI
MV-03	0.4	0.5	2	None	None	2	Yes	L	7, 10	NI
MV-03	0.5	0.6	2	None	None	2	Yes	L	7, 10	NI
MV-03	0.6	0.7	2	None	None	2	Yes	L	7, 10	NI
MV-03	0.7	0.8	1	None	None	1	No	NI	N/A	NI
MV-03	0.8	0.9	1	None	None	1	No	NI	N/A	NI
MV-03	0.9	1.0	1	None	None	1	No	NI	N/A	NI
MV-03	1.0	1.1	1	None	None	1	No	NI	N/A	NI
MV-03	1.1	1.2	1	None	None	1	No	NI	N/A	NI
MV-04	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-04	0.1	0.2	1	None	None	1	No	NI	N/A	NI
MV-04	0.2	0.3	1	None	None	1	No	NI	N/A	NI
MV-04	0.3	0.4	1	None	None	1	No	NI	N/A	NI
MV-04	0.4	0.5	1	None	None	1	No	NI	N/A	NI
MV-04	0.5	0.6	1	None	None	1	No	NI	N/A	NI
MV-05	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-05	0.1	0.2	1	None	None	1	No	NI	N/A	NI
MV-05	0.2	0.3	1	None	None	1	No	NI	N/A	NI
MV-06	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-06	0.1	0.2	1	None	None	1	No	NI	N/A	NI
MV-07	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-07	0.1	0.2	1	None	None	1	No	NI	N/A	NI
MV-08	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-08	0.1	0.1	1	None	None	1	No	NI	N/A	NI

Appendix A: Table 3. 69 kV Disturbance Area Impacts

Link	Mile From	Mile To	Build Level	Water Crossing	NWI Wetland Type	Build Level	FEMA 100-Year Floodplain	Initial Impact	Site-specific APMs	Residual Impact
MV-09	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-09	0.1	0.1	1	None	None	1	No	NI	N/A	NI
MV-10	0.0	0.0	1	None	None	1	No	NI	N/A	NI
MV-11	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-11	0.1	0.2	1	None	None	1	No	NI	N/A	NI
MV-12	0.0	0.1	1	None	None	1	No	NI	N/A	NI
MV-12	0.1	0.2	0	None	None	0	No	NI	N/A	NI
MV-13	0.0	0.1	0	None	None	0	No	NI	N/A	NI
N-1	0.0	0.1	1	None	None	1	No	NI	N/A	NI
N-1	0.1	0.1	1	None	None	1	No	NI	N/A	NI
N-2	0.0	0.1	1	None	None	1	No	NI	N/A	NI
N-2	0.1	0.2	1	None	None	1	No	NI	N/A	NI
N-2	0.2	0.2	1	None	None	1	No	NI	N/A	NI
N-3	0.0	0.1	1	None	None	1	No	NI	N/A	NI
N-3	0.1	0.2	1	None	None	1	No	NI	N/A	NI
N-3	0.2	0.3	1	None	None	1	No	NI	N/A	NI
N-3	0.3	0.4	1	None	None	1	No	NI	N/A	NI
N-3	0.4	0.5	1	None	None	1	No	NI	N/A	NI
N-3	0.5	0.5	1	None	None	1	No	NI	N/A	NI
N-4	0.0	0.1	1	None	None	1	No	NI	N/A	NI
N-4	0.1	0.2	1	None	None	1	No	NI	N/A	NI
N-4	0.2	0.2	1	None	None	1	No	NI	N/A	NI
N-5	0.0	0.1	1	None	None	1	No	NI	N/A	NI
N-5	0.1	0.1	1	None	None	1	No	NI	N/A	NI
RERC-1	0.0	0.1	1	Canal (MWD Upper Feeder)	None	1	No	NI	N/A	NI
RERC-1	0.1	0.2	1	Canal (West Riverside Canal Lateral #2)	None	1	No	NI	N/A	NI
RERC-1	0.2	0.3	1	None	None	1	No	NI	N/A	NI
RERC-1	0.3	0.3	1	None	None	1	No	NI	N/A	NI