

TABLE OF CONTENTS

Mitigated Negative Declaration.....	MND-1
Initial Study Environmental Checklist Form	IS-1
List of Acronyms	LOA-1
1 Introduction	1-1
1.1 Proposed Project Overview	1-1
1.2 Environmental Analysis	1-1
2 Project Description	2-1
2.1 Project Overview	2-1
2.2 Purpose and Need.....	2-1
2.3 Project Location and Regional Context	2-4
2.4 Project Components	2-12
2.5 Construction Activities	2-18
2.6 Construction Schedule.....	2-30
2.7 Operation and Maintenance	2-31
2.8 Required Approvals.....	2-31
2.9 Right-of-Way Acquisition	2-31
2.10 Applicant Proposed Measures	2-32
2.11 Avoidance and Minimization Measures	2-38
2.12 Electric and Magnetic Fields	2-41
2.13 Alternatives	2-41
3 Environmental Setting and Environmental Impacts	3.1-1
3.1 Aesthetics.....	3.1-1
3.2 Agriculture and Forestry Resources	3.2-1
3.3 Air Quality.....	3.3-1
3.4 Greenhouse Gases	3.4-1
3.5 Biological Resources.....	3.5-1
3.6 Cultural Resources	3.6-1
3.7 Geology and Soils.....	3.7-1
3.8 Hazards and Hazardous Materials.....	3.8-1
3.9 Hydrology and Water Quality	3.9-1
3.10 Land Use and Planning	3.10-1

3.11 Mineral Resources	3.11-1
3.12 Noise.....	3.12-1
3.13 Population and Housing	3.13-1
3.14 Public Services	3.14-1
3.15 Recreation	3.15-1
3.16 Transportation and Traffic	3.16-1
3.17 Utilities and Service Systems	3.17-1
3.18 Mandatory Findings of Significance	3.18-1
4 Mitigation Monitoring Plan.....	4.1-1
4.1 Mitigation Monitoring Implementation	4.1-1
5 References	5.1
6 Report Preparation.....	6-1
6.1 List of Preparers.....	6-1

APPENDICES

Appendix A: USFWS and CDFG Correspondence

Appendix B: Correspondence with Native Americans

Appendix C: Geotechnical Investigation Report

LIST OF FIGURES

Figure 1.1-1: Proposed Project Location	1-2
Figure 2.1-1: Project Layout	2-2
Figure 2.3-1: Project Location, Section, Township, and Range	2-5
Figure 2.3-2: Substation Location.....	2-6
Figure 2.3-3: Proposed Power Line and Distribution Line Alignments	2-7
Figure 2.3-4: Proposed Power Line and Distribution Line Alignments Map 1.....	2-8
Figure 2.3-5: Proposed Power Line and Distribution Line Alignments Map 2.....	2-9
Figure 2.3-6: Proposed Power Line and Distribution Line Alignments Map 3.....	2-10
Figure 2.4-1: Preliminary Layout of Shepherd Substation	2-13
Figure 2.4-2: Typical Tubular Steel Pole (TSP) and Dropdown Structure	2-17
Figure 2.5-1: Typical Tubular Steel Pole (TSP) Installation.....	2-21
Figure 3.1-1: Representative Views Location Map.....	3.1-2

Figure 3.1-2: Representative Views	3.1-3
Figure 3.1-3: Representative Views	3.1-4
Figure 3.1-4: Representative Views	3.1-5
Figure 3.1-5: Representative Views	3.1-6
Figure 3.1-6: Sensitive Receptors Map 1	3.1-9
Figure 3.1-7: Sensitive Receptors Map 2	3.1-10
Figure 3.1-8: Sensitive Receptors Map 3	3.1-11
Figure 3.1-9: Sensitive Receptors Map 4	3.1-12
Figure 3.1-10: Sensitive Receptors Map 5	3.1-13
Figure 3.1-11: Sensitive Receptors Map 6	3.1-14
Figure 3.1-12: Sensitive Receptors Map 7	3.1-15
Figure 3.1-13: Sensitive Receptors Map 8	3.1-16
Figure 3.1-14: KOP Locations	3.1-18
Figure 3.1-15: KOP #1 Existing and Simulated View	3.1-33
Figure 3.1-16: KOP #2 Existing and Simulated View	3.1-34
Figure 3.1-17: KOP #3 Existing and Simulated View	3.1-35
Figure 3.1-18: KOP #4 Existing and Simulated View	3.1-36
Figure 3.1-19: KOP #5 Existing and Simulated View	3.1-37
Figure 3.1-20: KOP #6 Existing and Simulated View	3.1-38
Figure 3.1-21: KOP #7 Existing and Simulated View	3.1-39
Figure 3.1-22: KOP #8 Existing and Simulated View	3.1-40
Figure 3.2-1: Farmland Designations and Williamson Act Contracts	3.2-2
Figure 3.2-2: Zoning Designations	3.2-3
Figure 3.5-1: Vegetation Habitat Types in the Project Corridor	3.5-2
Figure 3.5-2: Wetland Delineation	3.5-4
Figure 3.5-3: Wetland Delineation	3.5-5
Figure 3.5-4: Wetland Delineation	3.5-6
Figure 3.5-5: Wetland Delineation	3.5-7
Figure 3.5-6: Wetland Delineation	3.5-8
Figure 3.5-7: Wetland Delineation	3.5-9
Figure 3.5-8: Special Status Species within 5 Miles of the Project	3.5-11
Figure 3.7-1: Geologic Units in the Project Area	3.7-2

Figure 3.7-2: Soils in the Project Area..... 3.7-3

Figure 3.7-3: Regional Faults 3.7-8

Figure 3.9-1: FEMA Flood Zones in the Project Area..... 3.9-3

Figure 3.10-1: City and County Jurisdictions in the Project Vicinity 3.10-2

Figure 3.10-2: Fresno County General Plan Designations..... 3.10-3

Figure 3.10-3: Fresno County Zoning Designations..... 3.10-4

Figure 3.14-1: Existing and Planned Recreation Facilities in the Project Area 3.14-3

Figure 3.18-1: Cumulative Projects in the Project Vicinity 3.18-7

LIST OF TABLES

Table 2.2-1: Current and Projected Loads of the Woodward DPA 2-3

Table 2.2-2: Existing Substations in the Woodward DPA 2-3

Table 2.3-1: Project Component Legal Description 2-4

Table 2.4-1: Power Line Design Characteristics (Approximate and Preliminary)..... 2-16

Table 2.5-1: Estimated Ground Disturbance 2-25

Table 2.5-2: Substation Personnel and Equipment..... 2-27

Table 2.5-3: Power Line Personnel and Equipment 2-29

Table 2.5-4: Distribution Line Personnel and Equipment 2-30

Table 2.6-1: Proposed Construction Schedule..... 2-31

Table 2.8-1: Summary of Potential Permits/Approvals 2-30

Table 3.1-1: Project Features 3.1-21

Table 3.1-2: Description of KOPs 3.1-25

Table 3.2-1: Definitions of Farmland Designations 3.2-4

Table 3.2-2: Estimated Temporary and Permanent Impacts to Farmland 3.2-8

Table 3.3-1: Air Quality for Criteria Pollutants, Clovis-North Villa
Monitoring Station..... 3.3-2

Table 3.3-2: Estimated Construction Emissions..... 3.3-6

Table 3.3-3: Estimated Operation Emissions 3.3-8

Table 3.4-1: Estimated Construction-Related Greenhouse Gas Emissions 3.4-3

Table 3.4-2: Estimated Operational-Related Greenhouse Gas Emissions 3.4-4

Table 3.5-1: Habitat Suitability Assessment for Special-Status Plant Species (within the Clovis, Friant, Academy, Round Mountain, Sanger, Malaga, Fresno South, Fresno North, Lanes Bridge, Little Table Mountain, Millerton Lake West, and Millerton Lake East quadrangle maps).....	3.5-12
Table 3.5-2: Habitat Suitability for Special-Status Wildlife Species (within the Clovis, Friant, Academy, Round Mountain, Sanger, Malaga, Fresno South, Fresno North, Lanes Bridge, Little Table Mountain, Millerton Lake West, and Millerton Lake East quadrangle maps).....	3.5-15
Table 3.6-1: Resource Investigations Within 1 Mile of the Substation and Power Line.....	3.6-4
Table 3.6-2: Previously Recorded Resources Within 1 Mile of the Project Area.....	3.6-4
Table 3.7-1: Soils by Project Element.....	3.7-4
Table 3.7-2: Characteristics of Major Soil Units in the Project Area	3.7-4
Table 3.7-3: Estimated Ground Motion Parameters at the Project Site	3.7-9
Table 3.12-1: Definitions of Acoustical Terms	3.12-2
Table 3.12-2: Fresno County Noise Element Standards	3.12-3
Table 3.12-3: Construction Equipment Types and Typical Noise Emission Levels	3.12-6
Table 3.13-1: Total Population.....	3.13-1
Table 3.13-2: Project Region Housing Units and Vacancy Rates (2000)	3.13-1
Table 3.16-1: Level of Service Criteria for Roadways	3.16-1
Table 3.16-2: Roadway Characteristics for Local Access Roads in the Project Area	3.16-2
Table 3.18-1: Cumulative Projects in the Project Vicinity.....	3.18-3
Table 4.1-1: Mitigation Monitoring Plan.....	4.1-3

This page is intentionally left blank