Contents

3.13 Recreation Resources 3.13-1
3.13.1 Regulatory Background 3.13-1
3.13.2 Data Sources 3.13-3
3.13.3 Analysis Area 3.13-3
3.13.4 Baseline Description 3.13-3
3.13.5 Regional Summary of Recreation Sites/Areas 3.13-15
3.13.6 Impacts to Recreation 3.13-29

3.14 Land Use 3.14-1
3.14.1 Regulatory Background 3.14-1
3.14.2 Data Sources 3.14-6
3.14.3 Analysis Area 3.14-6
3.14.4 Baseline Description 3.14-6
3.14.5 Regional Summary 3.14-14
3.14.6 Impacts to Land Use 3.14-16

3.15 Special Designation Areas 3.15-1
3.15.1 Data Sources 3.15-1
3.15.2 Analysis Area 3.15-1
3.15.3 Baseline Description 3.15-1
3.15.4 Impacts to Special Designations 3.15-38

3.16 Transportation and Access 3.16-1
3.16.1 Regulatory Background 3.16-1
3.16.2 Data Sources 3.16-4
3.16.3 Analysis Area 3.16-4
3.16.4 Baseline Description 3.16-11
3.16.5 Regional Summary 3.16-14
3.16.6 Impacts to Transportation and Access 3.16-16

3.17 Social and Economic Resources 3.17-1
3.17.1 Regulatory Framework 3.17-1
3.17.2 Data Sources 3.17-1
3.17.3 Analysis Area 3.17-1
3.17.4 Baseline Description 3.17-3
3.17.5 Impacts to Socioeconomic Conditions 3.17-11

3.18 Public Health and Safety 3.18-1
3.18.1 Regulatory Background 3.18-1
3.18.2 Analysis Area 3.18-2
3.18.3 Occupational Safety 3.18-2
3.18.4 Electric and Magnetic Fields, Corona, and Stray Voltage 3.18-3
3.18.5 Noise 3.18-4
3.18.6 Hazardous Materials and Waste 3.18-6
3.18.7 Impacts to Public Health and Safety, Hazardous Materials 3.18-7

3.19 Wild Horse Management Areas 3.19-1
3.19.1 Regulatory Background 3.19-1

3.19.2 Data Sources 3.19-1
3.19.3 Analysis Area 3.19-1
3.19.4 Baseline Description 3.19-1
3.19.5 Impacts to Wild Horse HMAs and HAs 3.19-3

3.20 Lands with Wilderness Characteristics 3.20-1
3.20.1 Regulatory Background 3.20-1
3.20.2 Data Sources 3.20-1
3.20.3 Analysis Area 3.20-1
3.20.4 Baseline Description 3.20-1
3.20.5 Regional Summary 3.20-2
3.20.6 Impacts to LWC 3.20-2

4.0 Federal Agency Land Use Plan Amendments 4-1

4.1 Land Use Plan Amendment Process 4-2
4.1.1 Bureau of Land Management Planning 4-2
4.1.2 U.S. Forest Service Planning 4-2

4.2 Planning Area Boundaries 4-2

4.3 Planning Issues and Criteria 4-2
4.3.1 Planning Issues 4-2
4.3.2 Planning Criteria 4-4

4.4 Proposed Land Use Plan Amendments 4-5
4.4.1 BLM Rawlins Field Office 4-33
4.4.2 BLM Little Snake Field Office 4-36
4.4.3 BLM White River Field Office 4-37
4.4.4 BLM Grand Junction Field Office 4-38
4.4.5 BLM Vernal Field Office 4-38
4.4.6 BLM Moab Field Office 4-40
4.4.7 BLM Price Field Office 4-40
4.4.8 BLM Salt Lake Field Office 4-41
4.4.9 BLM Richfield Field Office 4-42
4.4.10 BLM Fillmore Field Office 4-42
4.4.11 BLM Cedar City Field Office 4-43
4.4.12 BLM St. George Field Office 4-43
4.4.13 BLM Caliente Field Office 4-43
4.4.14 BLM Las Vegas Field Office 4-44
4.4.15 USFS Ashley National Forest 4-45
4.4.16 USFS Uinta National Forest 4-45
4.4.17 USFS Manti-La Sal National Forest 4-46
4.4.18 USFS Fishlake National Forest 4-46
4.4.19 USFS Dixie National Forest 4-47

4.5 Analysis of Environmental Impacts and Planning Implications 4-47
4.5.1 Climate and Air Quality 4-47
4.5.2 Geological, Paleontological, and Mineral Resources 4-49
4.5.3 Soil Resources 4-57

4.5.4 Water Resources 4-61
4.5.5 Vegetation 4-65
4.5.6 Special Status Plant Species 4-77
4.5.7 Wildlife 4-83
4.5.8 Special Status Wildlife Species 4-88
4.5.9 Aquatic Biological Resources 4-96
4.5.10 Special Status Aquatic Species 4-98
4.5.11 Cultural Resources and Native American Concerns 4-104
4.5.12 Visual Resources 4-108
4.5.13 Recreation Resources 4-114
4.5.14 Land Use 4-120
4.5.15 Special Designation and Management Areas 4-129
4.5.16 Transportation and Access 4-132
4.5.17 Social and Economic Conditions 4-133
4.5.18 Public Health & Safety 4-134
4.5.19 Wild Horses Management Areas 4-136
4.5.20 Lands with Wilderness Characteristics 4-139

5.0 Cumulative Impacts 5-1

5.1 Physical and Temporal Boundaries of Cumulative Impacts 5-1
5.1.1 Overview of Related Actions 5-1

5.2 Past and Present, and Reasonably Foreseeable Future Actions 5-2
5.2.1 Region I 5-2
5.2.2 Region II 5-7
5.2.3 Region III 5-11
5.2.4 Region IV 5-16
5.2.5 Cumulative Impacts to Project Corridors 5-20

5.3 Cumulative Impacts 5-20
5.3.1 Air Quality 5-22
5.3.2 Geologic Hazards, Paleontology, and Mineral Resources 5-23
5.3.3 Soils 5-26
5.3.4 Water Resources 5-26
5.3.5 Vegetation 5-28
5.3.6 Special Status Plants 5-28
5.3.7 Wildlife 5-29
5.3.8 Special Status Wildlife Species 5-30
5.3.9 Aquatic Biological Resources 5-34
5.3.10 Special Status Aquatic Species 5-35
5.3.11 Cultural Resources and Native American Concerns 5-37
5.3.12 Visual Resources 5-38
5.3.13 Recreation Resources 5-42
5.3.14 Land Use 5-43
5.3.15 Special Designation Areas 5-45
5.3.16 Transportation and Access 5-50
5.3.17 Social and Economic Resources 5-51

5.3.18 Public Health and Safety 5-52
5.3.19 Wild Horses 5-54
5.3.20 Lands with Wilderness Characteristics 5-54

6.0 Consultation and Coordination 6-1

6.1 Public Involvement and Scoping 6-1
6.1.1 Public Involvement 6-1
6.1.2 Scoping Period 6-1
6.1.3 Scoping Announcements 6-2

6.2 Agency Participation and Coordination 6-3
6.2.1 Federal and State Agencies 6-4
6.2.2 Local Agencies 6-5
6.2.3 Tribal Government-to-Government Consultation 6-5

6.3 EIS Distribution List 6-7
6.3.1 Federal Agencies and Representatives 6-8
6.3.2 State and Local Agencies and Representatives 6-9
6.3.3 Indian Tribes 6-9
6.3.4 Organizations and Individuals 6-10

6.4 Preparers and Reviewers 6-10
6.4.1 Bureau of Land Management 6-11
6.4.2 Western Area Power Administration 6-12
6.4.3 AECOM 6-13

Glossary

References

Index

List of Appendices

Appendix A Major Federal, State, and Local Permits or Approvals

Appendix B TransWest Express Transmission Project Corridor Screening Report (on CD)

Appendix C Best Management Practices, Design Features, and State and BLM FO-specific Stipulations, and Forest Standards and Guidelines

Appendix D Project Description Technical Report (TWE 2012) (on CD)

Appendix E Air Quality Calculations (on CD)

Appendix F Physical Resources (on CD)

Appendix G Biological Resources (on CD)

Appendix H Inventoried Roadless Area and Unroaded/Undeveloped Area Attributes (on CD)

Appendix I Visual Resources (on CD)

List of Tables

Table 3.13-1 Federal and State Recreation Planning Documents for Managing Recreation 3.13-2
Table 3.13-2 Estimated Recreation Use on BLM Lands by State, 2000 – 2010 ..... 3.13-4
Table 3.13-3 Estimated Recreation Use on National Forests Crossed by Analysis Area, 2002 to 2011 ..... 3.13-5
Table 3.13-4 Recreational Opportunity Spectrum (ROS) Classifications..... 3.13-6
Table 3.13-5 Federally Managed Dispersed Recreation Opportunities within Region I Analysis Area 3.13-16
Table 3.13-6 Federally Managed Special Recreation Management Areas within Region I Analysis Area 3.13-16
Table 3.13-7 State and Locally Managed Recreation Areas within Region I Analysis Area 3.13-17
Table 3.13-8 BLM-Managed Recreation Opportunities within Region II Analysis Area 3.13-19
Table 3.13-9 Forest Service-Managed Recreation Opportunities within Region II Analysis Area 3.13-20
Table 3.13-10 Scenic Byways and BLM Backways within Region II Analysis Area 3.13-21
Table 3.13-11 Federally Managed Special Recreation Management Areas within Region II Analysis Area 3.13-22
Table 3.13-12 State Managed and Locally Managed Recreation Areas within Region II Analysis Area 3.13-23
Table 3.13-13 Forest Service-Managed Recreation Opportunities within Region III Analysis Area 3.13-25
Table 3.13-14 Scenic Byways and BLM Backways within Region III Analysis Area 3.13-26
Table 3.13-15 Federally Managed Special Recreation Management Areas within Region III Analysis Area 3.13-26
Table 3.13-16 State and Locally Managed Recreation Areas within Region III Analysis Area 3.13-27
Table 3.13-17 Federally Managed Recreation Opportunities within Region IV Analysis Area 3.13-28
Table 3.13-18 Federally Managed Special Recreation Management Areas within Region IV Analysis Area 3.13-28
Table 3.13-19 State- and Locally Managed Recreation Areas within Region IV Analysis Area 3.13-29
Table 3.13-20 Region I Recreation Areas within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.13-35
Table 3.13-21 Summary of Region I Alternative Connector Impacts to Recreation 3.13-46
Table 3.13-22 Summary of Region I Alternative Ground Electrode System Location Impacts to Recreation..... 3.13-47
Table 3.13-23 Region II BLM Recreation Areas within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor..... 3.13-48
Table 3.13-24 Region II USFS and Other Federal Recreation Areas within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor..... 3.13-49
Table 3.13-25 Region II State-managed Recreation Areas within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor..... 3.13-53

Table 3.13-26 Region II Local Recreation Areas within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.13-55
Table 3.13-27 Region II Scenic Byways and Backway Crossings within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.13-55
Table 3.13-28 Summary of Region II Alternative Variation Impacts to Recreation 3.13-81
Table 3.13-29 Summary of Region II Alternative Connector Impacts to Recreation 3.13-81
Table 3.13-30 Region III Recreation Areas within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.13-82
Table 3.13-31 Summary of Region III Alternative Variation Impacts to Recreation 3.13-91
Table 3.13-32 Summary of Region III Alternative Connector Impacts to Recreation 3.13-91
Table 3.13-33 Summary of Region III Alternative Ground Electrode System Location Impacts to Recreation 3.13-92
Table 3.13-34 Region IV Recreation Areas within the 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.13-93
Table 3.13-35 Summary of Region IV Alternative Variation Impacts to Recreation 3.13-99
Table 3.13-36 Summary of Region IV Alternative Connector Impacts to Recreation 3.13-99
Table 3.14-1 BLM Field Offices, National Forests, and Counties Crossed by State 3.14-1
Table 3.14-2 County Planning Documents 3.14-2
Table 3.14-3 General Land Ownership Within the Analysis Area 3.14-6
Table 3.14-4 Acreage of Affected Grazing Allotments 3.14-12
Table 3.14-5 Distribution of Jurisdiction and Land Use by Project Region within the Analysis Area 3.14-14
Table 3.14-6 Grazing Allotment Acreage by Region in Analysis Areas 3.14-16
Table 3.14-7 Relevant Analysis Considerations for Land Use 3.14-17
Table 3.14-8 Region I Alternative Route Land Use Impact Parameters 3.14-31
Table 3.14-9 WWEC Designated Utility Corridors Potentially Used by the Project Alternatives and Variations in Region I 3.14-33
Table 3.14-10 Consistency with Applicable County Land Use Plans and Policies in Region I 3.14-33
Table 3.14-11 Designated Avoidance Areas Within Region I 3.14-34
Table 3.14-12 Impact Parameters of Lands Crossed by Alternative Connector Reference Lines in Region I (miles) 3.14-40
Table 3.14-13 Region II National Forest Management Area Impacts by Alternative 3.14-43
Table 3.14-14 Region II Alternative Route Land Use Impact Parameters 3.14-46
Table 3.14-15 Consistency in Region II with Applicable County or Municipal Land Use Plans and Policies 3.14-49
Table 3.14-16 Avoidance and Exclusion Areas Crossed by Alternatives in Region II 3.14-58
Table 3.14-17 Impact Parameters of Alternative Variation Alternatives in Region II 3.14-67
Table 3.14-18 Impact Parameters of Region II Alternative Connectors 3.14-69
Table 3.14-19 Region III Alternative Route Land Use Impact Parameters 3.14-72

Table 3.14-20 Consistency with Applicable Land Use Plans and Policies in Region III 3.14-73
Table 3.14-21 Region III Avoidance and Exclusion Areas by Alternative 3.14-74
Table 3.14-22 Impact Parameters of Alternative Variations and Comparative Portions of Alternatives in Region III 3.14-79
Table 3.14-23 Region IV Alternative Route Land Use Impact Parameters 3.14-82
Table 3.14-24 Consistency in Region IV with Applicable Land Use Plans and Policies 3.14-82
Table 3.14-25 Avoidance and Exclusion Areas in Region IV Corridors 3.14-83
Table 3.14-26 Impact Parameters of Marketplace Alternative Variation and Comparative Portions of Alternative IV-B in Region IV 3.14-86
Table 3.14-27 Impact Parameters of Alternative Connectors in Region IV 3.14-87
Table 3.15-1 Designated Wilderness, Wilderness Study Areas, and Proposed Wilderness within Special Designations Analysis Area 3.15-11
Table 3.15-2 Classification Criteria for WSR “Scenic” and “Recreational” Areas 3.15-13
Table 3.15-3 BLM National Conservation Areas 3.15-14
Table 3.15-4 IRA/Unroaded-Undeveloped Areas in Analysis Area 3.15-30
Table 3.15-5 Areas of Critical Environmental Concern within the Analysis Area 3.15-36
Table 3.15-6 Region I: SDAs Within 250-foot-wide Transmission Line ROW and 2-Mile Transmission Line Corridor 3.15-40
Table 3.15-7 Region II: BLM SDAs within 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.15-49
Table 3.15-8 Region II: USFS IRAs within 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.15-50
Table 3.15-9 Region II: USFS URUD Areas Within 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.15-52
Table 3.15-10 Region II: Other Federally Managed Special Designation Areas Within 250-foot-wide Transmission Line ROW and 2-mile Transmission Line Corridor 3.15-54
Table 3.15-11 Alternative II-B Viewshed Impacts by Old Spanish NHT Analysis Unit 3.15-61
Table 3.15-12 Alternative II-C Viewshed Impacts by Old Spanish NHT Analysis Unit 3.15-65
Table 3.15-13 Region III: BLM Special Designation Areas within 250-foot-wide Transmission Line ROW and 2-Mile Transmission Line Corridor 3.15-74
Table 3.15-14 Region III: USFS IRAs within 250-foot-wide Transmission Line ROW and 2-Mile Transmission Line Corridor 3.15-74
Table 3.15-15 Region III: USFS URUD Areas Within 250-foot-wide Transmission Line ROW and 2-Mile Transmission Line Corridor 3.15-75
Table 3.15-16 Region III: Other Federally Managed Special Designation Areas Within 250-foot-wide Transmission Line ROW and 2-Mile Transmission Line Corridor 3.15-75
Table 3.15-17 Alternative III-A Visibility Impacts by Old Spanish NHT Analysis Unit 3.15-80
Table 3.15-18 Alternative III-B Visibility Impacts by Old Spanish NHT Analysis Unit 3.15-83

Table 3.15-19 Impact Parameters of Alternative Variations and Comparative Portions of Alternatives in Region III 3.15-85
Table 3.15-20 Region IV: SDAs within 250-foot-wide Transmission Line ROW and 2-Mile Transmission Line Corridor 3.15-87
Table 3.15-21 Impact Parameters of Alternative Connectors in Region IV 3.15-90
Table 3.16-1 Major Transportation Network Infrastructure by Project Regions 3.16-14
Table 3.16-2 Relevant Analysis Considerations for Transportation and Access 3.16-18
Table 3.16-3 Estimated Trip Generation Relative to Roadway Capacity within the Existing Backbone Roadway Network 3.16-20
Table 3.16-4 Summary of Region I Alternative Route Impact Parameters 3.16-29
Table 3.16-5 Summary of Region I Alternative Ground Electrode System Location Impacts for Transportation and Access 3.16-31
Table 3.16-6 Transportation and Access Evaluation Factors for the Alternatives in Region II 3.16-32
Table 3.16-7 Transportation and Access Evaluation factors for the Alternatives in Region III 3.16-37
Table 3.16-8 Summary of Region III Alternative Ground Electrode System Location Impacts for Transportation and Access 3.16-42
Table 3.16-9 Transportation and Access Evaluation factors for the Alternatives in Region IV 3.16-42
Table 3.17-1 Counties and County Seats in the Analysis Area 3.17-2
Table 3.17-2 Population in the Social and Economic Analysis Area, 2000 and 2010 ..... 3.17-3
Table 3.17-3 Selected Social Characteristics in the Social and Economic Analysis Area, As Reported in the 2010 Census 3.17-5
Table 3.17-4 Counties in the Social and Economic Analysis Area, by Region[1] 3.17-6
Table 3.17-5 Population in the Social and Economic Analysis Area 2000 and 2010, by Region 3.17-6
Table 3.17-6 Selected Economic Characteristics in the Social and Economic Analysis Area, by Region 3.17-8
Table 3.17-7 Retail Trade and Hospitality Oriented Establishments and Employment in the Social and Economic Analysis Area, County Business Patterns 2009 ..... 3.17-8
Table 3.17-8 Temporary Overnight Housing Capacity (Motel/Hotel Rooms and RV/Campground Spaces) in the Social and Economic Analysis Area 3.17-8
Table 3.17-9 Analysis Considerations Relevant to Socioeconomics 3.17-12
Table 3.17-10 Approximate Length of the Transmission Line Corridor by Alternative Route and Region 3.17-14
Table 3.17-11 Approximate Project Construction Cost, By Alternative Route 3.17-15
Table 3.17-12 State and Local Sales and Use Tax Rates Associated with New Industrial Construction in the Analysis Area, by State 3.17-16
Table 3.17-13 Short-Term Employment Effects Associated with Construction of the Terminals 3.17-19
Table 3.17-14 Potentially Affected Counties, by Alternative and Region 3.17-24
Table 3.17-15 2010 Census Population, by Region and Alternative 3.17-27

Table 3.17-16 Communities with Population of 2,000 or More, by County 3.17-27
Table 3.17-17 Temporary Housing (Motel Rooms and RV/Campground Spaces), by County 3.17-28
Table 3.17-18 Summary of Region I Alternative Route Impacts for Socioeconomics 3.17-36
Table 3.17-19 Summary of Region I Alternative Connector Impacts for Socioeconomics 3.17-38
Table 3.17-20 Summary of Region I Alternative Ground Electrode System Location Impacts for Socioeconomics 3.17-38
Table 3.17-21 Summary of Region II Alternative Route Impacts for Socioeconomics 3.17-41
Table 3.17-22 Summary of Region II Alternative Connector Impacts for Socioeconomics 3.17-45
Table 3.17-23 Summary of Region II Alternative Variation Impacts for Socioeconomics 3.17-45
Table 3.17-24 Summary of Region III Alternative Route Impacts for Socioeconomics 3.17-47
Table 3.17-25 Summary of Region III Alternative Variation Impacts for Socioeconomics 3.17-49
Table 3.17-26 Summary of Region III Alternative Connector Impacts for Socioeconomics 3.17-49
Table 3.17-27 Summary of Region III Alternative Ground Electrode System Location Impacts for Socioeconomics 3.17-49
Table 3.17-28 Summary of Region IV Alternative Route Impacts for Socioeconomics 3.17-51
Table 3.17-29 Summary of Region IV Alternative Variation Impacts for Socioeconomics 3.17-52
Table 3.17-30 Summary of Region IV Alternative Connector Impacts for Socioeconomics 3.17-52
Table 3.18-1 2010 National Statistics for Workplace Hazards 3.18-2
Table 3.18-2 Human Perception of Noise Level Changes 3.18-6
Table 3.18-3 Hazardous Materials Typically Used for Transmission Line Construction 3.18-6
Table 3.18-4 Relevant Analysis Considerations for Public Health and Safety, Hazardous Materials 3.18-8
Table 3.18-5 Noise Levels at Various Distances from Typical Construction Equipment 3.18-9
Table 3.18-6 Summary of Region I Alternative Route Impacts for Public Health and Safety, Hazardous Materials 3.18-17
Table 3.18-7 Summary of Region I Alternative Connector Impacts for Public Health and Safety, Hazardous Materials 3.18-19
Table 3.18-8 Summary of Region I Alternative Ground Electrode System Location Impacts for Public Health and Safety, Hazardous Materials 3.18-19
Table 3.18-9 Summary of Region II Alternative Route Impacts for Public Health and Safety, Hazardous Materials 3.18-20
Table 3.18-10 Human Resources by Alternative within Region II 3.18-21
Table 3.18-11 Summary of Region II Alternative Connector Impacts for Public Health and Safety, Hazardous Materials 3.18-24
Table 3.18-12 Summary of Region III Alternative Route Impacts for Public Health and Safety, Hazardous Materials 3.18-25
Table 3.18-13 Human Resources by Alternative within Region III 3.18-25
Table 3.18-14 Summary of Region III Alternative Variation Impacts for Public Health and Safety, Hazardous Materials 3.18-26

Table 3.18-15 Summary of Region III Alternative Connector Impacts for Public Health and Safety, Hazardous Materials 3.18-27

Table 3.18-16 Summary of Region III Alternative Ground Electrode System Location Impacts for Public Health and Safety, Hazardous Materials 3.18-28

Table 3.18-17 Summary of Region IV Alternative Route Impacts for Public Health and Safety, Hazardous Materials 3.18-28

Table 3.18-18 Summary of Region IV Alternative Variation Impacts for Public Health and Safety, Hazardous Materials 3.18-29

Table 3.18-19 Summary of Region IV Alternative Connector Impacts for Public Health and Safety, Hazardous Materials 3.18-30

Table 3.19-1 Wild Horse Herd Management Areas and Herd Areas within the Analysis Area 3.19-2

Table 3.19-2 Impacts to Region I HMAs/HAs by Alternative 3.19-3

Table 3.19-3 Impacts to Region II HMAs/HAs by Alternative 3.19-6

Table 3.19-4 Impacts to Region III HMAs/HAs by Alternative 3.19-9

Table 3.20-1 Lands with Wilderness Characteristics Inventory Units in the Analysis Area 3.20-6

Table 3.20-2 Impacts to Lands with Wilderness Characteristics in Region I 3.20-8

Table 3.20-3 Impacts to Lands with Wilderness Characteristics in Region II 3.20-10

Table 3.20-4 Impacts to Lands with Wilderness Characteristics in Region III 3.20-13

Table 4-1 Federal Agency Land Use Plan Amendment Considerations and Recommendations 4-7

Table 4-2 Federally Listed and Candidate Plant Species Potentially Occurring in the BLM Rawlins Field Office 4-77

Table 4-3 Federally Listed and Candidate Plant Species Potentially Occurring in the BLM Little Snake Field Office 4-77

Table 4-4 Federally Listed and Candidate Plant Species Potentially Occurring in the BLM Vernal Field Office 4-78

Table 4-5 Federally Listed and Candidate Plant Species Potentially Occurring in the BLM Las Vegas Field Office 4-78

Table 4-6 Federally Listed and Candidate Plant Species Potentially Occurring in the BLM White River Field Office 4-79

Table 4-7 Federally Listed and Candidate Plant Species Potentially Occurring in the BLM Price Field Office 4-79

Table 4-8 Federally Listed and Candidate Plant Species Potentially Occurring in the BLM Caliente Field Office 4-80

Table 4-9 Federally Listed and Candidate Plant Species Potentially Occurring in the USFS Fishlake National Forest 4-81

Table 4-10 Federally Listed and Candidate Species Potentially Occurring in the BLM Salt Lake Field Office 4-82

Table 4-11 Federally Listed and Candidate Wildlife Species Potentially Occurring in the BLM Rawlins Field Office 4-89

Table 4-12 Federally Listed and Candidate Wildlife Species Potentially Occurring in the BLM Little Snake Field Office 4-90
Table 4-13 Federally Listed and Candidate Wildlife Species Potentially Occurring in the BLM Vernal Field Office 4-90
Table 4-14 Federally Listed and Candidate Wildlife Species Potentially Occurring in the BLM Las Vegas Field Office 4-91
Table 4-15 Federally Listed and Candidate Wildlife Species Potentially Occurring in the BLM White River Field Office 4-92
Table 4-16 Federally Listed and Candidate Wildlife Species Potentially Occurring in the BLM Price Field Office 4-92
Table 4-17 Federally Listed and Candidate Wildlife Species Potentially Occurring in the BLM Caliente Field Office 4-93
Table 4-18 Federally Listed and Candidate Species Potentially Occurring in the BLM Salt Lake Field Office 4-95
Table 4-19 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM Rawlins Field Office 4-98
Table 4-20 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM Little Snake Field Office 4-99
Table 4-21 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM Vernal Field Office 4-99
Table 4-22 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM Las Vegas Field Office 4-100
Table 4-23 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM White River Field Office 4-101
Table 4-24 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM Price Field Office 4-101
Table 4-25 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM Caliente Field Office 4-102
Table 4-26 Federally Listed and Candidate Aquatic Species Potentially Occurring in the BLM Salt Lake Field Office 4-103
Table 5-1 Estimated Cumulative Impacts from Past and Present Actions in the Region I Analysis Area 5-3
Table 5-2 Reasonably Foreseeable Future Actions in Region I 5-4
Table 5-3 Estimated Cumulative Impacts from RFFAs in the Region I Analysis Area 5-7
Table 5-4 Estimated Cumulative Impacts from Past and Present Actions in the Region II Analysis Area 5-8
Table 5-5 Reasonably Foreseeable Future Actions in Region II 5-10
Table 5-6 Estimated Cumulative Impacts from RFFAs in the Region II Analysis Area 5-10
Table 5-7 Estimated Cumulative Impacts from Past and Present Actions in the Region III Analysis Area 5-13
Table 5-8 Reasonably Foreseeable Future Actions in Region III 5-15
Table 5-9 Estimated Cumulative Impacts from RFFAs in the Region III Analysis Area 5-15

Table 5-10 Estimated Cumulative Impacts from Past and Present Actions in the Region IV Analysis Area 5-19
Table 5-11 Reasonably Foreseeable Future Actions in Region IV 5-19
Table 5-12 Estimated Cumulative Impacts from RFFAs in the Region IV Analysis Area 5-20
Table 5-13 Cumulative Impacts of Oil and Gas Development to Air Quality in the Uintah Basin (Region I) 5-22
Table 5-14 Estimated Cumulative Disturbance to Soils in Analysis Area 5-26
Table 5-15 Estimated Cumulative Impacts from RFFA on Impaired Watersheds 5-27
Table 5-16 Estimated Cumulative Impacts from RFFA on Big Game Habitat 5-29
Table 5-17 Estimated Cumulative Impacts from RFFA on Small Game and Waterfowl Habitat 5-30
Table 5-18 Estimated Cumulative Impacts from RFFA on Special Status Species Habitat 5-31
Table 5-19 Estimated Cumulative Impacts from RFFA on Desert Tortoise Habitat 5-31
Table 5-20 Estimated Cumulative Impacts from RFFA on Sage Grouse Habitat in Colorado and Utah 5-32
Table 5-21 Estimated Cumulative Aquatic Habitat Alteration or Loss from the Project and Other Foreseeable Transmission Lines 5-34
Table 5-22 Cumulative Habitat Alteration or Loss to Special Status Aquatic Species in Region I 5-36
Table 5-23 Cumulative Direct Loss of Habitat for Special Status Aquatic Species in Region II 5-36
Table 5-24 Cumulative Direct Impacts to Special Status Aquatic Species in Region III 5-37
Table 5-25 Areas of Concern for Cumulative Visual Impacts 5-42
Table 5-26 Cumulative Loss of Natural Habitat and Associated Recreational Opportunity 5-43
Table 5-27 Region I: SDAs Within Shared 2-Mile Transmission Line Corridor 5-45
Table 5-28 Region II: SDAs Within Shared 2-mile Transmission Line Corridor 5-45
Table 5-29 Region II: USFS Unroaded/Undeveloped Areas Within Shared 2-mile Transmission Line Corridor 5-46
Table 5-30 Region III: SDAs Within Shared 2-mile Transmission Line Corridor 5-47
Table 5-31 Region III: URUD Areas Within Shared 2-mile Transmission Line Corridor 5-48
Table 5-32 Region IV: SDAs Within Shared 2-mile Transmission Line Corridor 5-48
Table 5-33 Residences within 500 feet of Reference Line for TWE in Shared Corridors 5-53
Table 5-34 Estimated Cumulative Impacts from RFFA on Wild Horse HMAs 5-54
Table 5-35 Estimated Cumulative Impacts to Lands with Wilderness Characteristics 5-55
Table 6-1 Public Scoping Meeting Dates and Locations 6-2
Table 6-2 Bureau of Land Management EIS Team 6-11
Table 6-3 Western Area Power Administration EIS Team 6-12
Table 6-4 AECOM EIS Team (Third-Party Consultant) List 6-13

List of Figures

Figure 3.13-1 Region I Recreation Areas 3.13-10
Figure 3.13-2 Region II Federal Recreation Areas 3.13-11
Figure 3.13-3 Region II State and Local Recreation Areas 3.13-12
Figure 3.13-4 Region III Recreation Areas 3.13-13
Figure 3.13-5 Region IV Recreation Areas 3.13-14
Figure 3.14-1 Region I Lands with Grazing Allotments 3.14-8
Figure 3.14-2 Region II Lands with Grazing Allotments 3.14-9
Figure 3.14-3 Region III Lands with Grazing Allotments 3.14-10
Figure 3.14-4 Region IV Lands with Grazing Allotments 3.14-11
Figure 3.14-5 Region IV – Southern Terminal Boulder City, Nevada Existing Land Use 3.14-23
Figure 3.14-6 Region IV – Southern Terminal Boulder City, Nevada Utilities and Zoning 3.14-24
Figure 3.14-7 Region II Design Option 2 Southern Terminal Siting Area and Ground Electrode Area 3.14-26
Figure 3.14-8 Region I Designated Exclusion/Avoidance Areas, Conservation Easements, and WMAs with Transmission Line Stipulations/Prohibitions 3.14-35
Figure 3.14-9 Region I Residential, Agricultural, and Other Land Uses Craig, Colorado 3.14-39
Figure 3.14-10 Region II Zoning Huntington to Castle Dale 3.14-52
Figure 3.14-11 Region II Zoning Nephi, Utah 3.14-53
Figure 3.14-12 Region II Zoning Helper, Utah 3.14-54
Figure 3.14-13 Region II Zoning Mount Pleasant, Utah 3.14-55
Figure 3.14-14 Region II Zoning Roosevelt City, Utah 3.14-56
Figure 3.14-15 Region II Designated Exclusion/Avoidance Areas, Conservation Easements, and WMAs with Transmission Line Stipulations/Prohibitions 3.14-57
Figure 3.14-16 Region II Gooseberry Narrows Project 3.14-64
Figure 3.14-17 Region III Designated Exclusion/Avoidance Areas, Conservation Easements, and WMAs with Transmission Line Stipulations/Prohibitions 3.14-75
Figure 3.14-18 Region IV Designated Exclusion/Avoidance Areas, Conservation Easements, and WMAs with Transmission Line Stipulations/Prohibitions 3.14-84
Figure 3.15-1 Region I Special Designation Areas ACEC, NCA, National Monument, NWR, SMA 3.15-2
Figure 3.15-2 Region II Special Designation Areas ACEC, NCA, National Monument, NWR, SMA 3.15-3
Figure 3.15-3 Region III Special Designation Areas ACEC, NCA, National Monument, NWR, SMA 3.15-4
Figure 3.15-4 Region IV Special Designation Areas ACEC, NCA, National Monument, NWR, SMA 3.15-5
Figure 3.15-5 Region I Special Designation Areas Wilderness Areas and WSRs 3.15-6

Figure 3.15-6 Region II Special Designation Areas Wilderness Areas and WSRs 3.15-7
Figure 3.15-7 Region III Special Designation Areas Wilderness Areas and WSRs 3.15-8
Figure 3.15-8 Region IV Special Designation Areas Wilderness Areas and WSRs 3.15-9
Figure 3.15-9 Region I Continental Divide National Scenic Trail 3.15-18
Figure 3.15-10 Region I Overland and Cherokee Trails 3.15-20
Figure 3.15-11 Region II Old Spanish Trail 3.15-24
Figure 3.15-12 Regions III and IV Old Spanish Trail 3.15-27
Figure 3.15-13 Region II Roadless Areas Ashley National Forest 3.15-31
Figure 3.15-14 Region II Roadless Areas Uinta-Wasatch-Cache and Manti-La Sal National Forests 3.15-32
Figure 3.15-15 Region II Roadless Areas Fishlake National Forest 3.15-33
Figure 3.15-16 Region II Roadless Areas Dixie National Forest 3.15-34
Figure 3.16-1 Region I Major Transportation Network 3.16-5
Figure 3.16-2 Region II Major Transportation Network 3.16-6
Figure 3.16-3 Region III Major Transportation Network 3.16-7
Figure 3.16-4 Region IV Major Transportation Network 3.16-8
Figure 3.16-5 Examples of Local Roadway Network (Backbone Roads) within the Analysis Area 3.16-9
Figure 3.16-6 Examples of the Local Roadway Network (Backbone Roads) within the Analysis Area 3.16-10
Figure 3.17-1 2010 Population of Counties in the Social and Economic Analysis Area 3.17-4
Figure 3.17-2 Projected Direct Construction Employment During Development 3.17-13
Figure 3.17-3 Approximate Geographic Distribution of $2.47 Billion Capital Investment for the Project – Alternative A 3.17-16
Figure 3.17-4 Geographic Distribution of Project-related Capital Investment for the Alternatives 3.17-17
Figure 3.17-5 Direct Construction Employment for the Northern and Southern Terminals Assuming Concurrent Development Schedules 3.17-18
Figure 3.17-6 Projected Direct Construction Jobs for the Transmission Line Components of Alternative A 3.17-26
Figure 3.17-7 Direct Construction Jobs for the Ground Electrode Components 3.17-33
Figure 3.18-1 Typical A-weighted Sound Levels 3.18-5
Figure 3.20-1 Region I Lands with Wilderness Characteristics 3.20-3
Figure 3.20-2 Region II Lands with Wilderness Characteristics 3.20-4
Figure 3.20-3 Regions III and IV Lands with Wilderness Characteristics 3.20-5
Figure 4-1 Plan Compliance Rawlins Field Office 4-14
Figure 4-2 Plan Compliance Little Snake Field Office 4-15
Figure 4-3 Plan Compliance White River Field Office 4-16

Figure 4-4 Plan Compliance Grand Junction Field Office 4-17
Figure 4-5 Plan Compliance Vernal Field Office 4-18
Figure 4-6 Plan Compliance Moab Field Office 4-19
Figure 4-7 Plan Compliance Price Field Office 4-20
Figure 4-8 Plan Compliance Salt Lake Field Office 4-21
Figure 4-9 Plan Compliance Richfield Field Office 4-22
Figure 4-10 Plan Compliance Fillmore Field Office 4-23
Figure 4-11 Plan Compliance Cedar City Field Office 4-24
Figure 4-12 Plan Compliance St. George Field Office 4-25
Figure 4-13 Plan Compliance Caliente Field Office 4-26
Figure 4-14 Plan Compliance Las Vegas Field Office 4-27
Figure 4-15 Plan Compliance Ashley National Forest 4-28
Figure 4-16 Plan Compliance Uinta-Wasatch-Cache National Forest 4-29
Figure 4-17 Plan Compliance Manti-La Sal National Forest 4-30
Figure 4-18 Plan Compliance Fishlake National Forest 4-31
Figure 4-19 Plan Compliance Dixie National Forest 4-32
Figure 5-1 Region I Cumulative Impacts 5-5
Figure 5-2 Region I Cumulative Impacts (Detail) 5-6
Figure 5-3 Region II Cumulative Impacts 5-9
Figure 5-4 Region II Cumulative Impacts (Detail) 5-12
Figure 5-5 Region III Cumulative Impacts 5-14
Figure 5-6 Region III Cumulative Impacts (Detail) 5-17
Figure 5-7 Region IV Cumulative Impacts 5-18
Figure 5-8 Region IV Cumulative Impacts (Detail) 5-21
Figure 5-9 Region I Designated Transmission Corridors Through Greater Sage-grouse Core Areas 5-33
Figure 5-10 Simulated Cumulative Condition as Seen from the Outlaw Trail Scenic Highway/WY SH 789 5-39
Figure 5-11 Simulated Cumulative Condition as seen from Residences in the Town of Pinto across the Valley 5-40
Figure 5-12 Simulated Cumulative Condition as Seen from the Town of Thompson toward Sego Canyon 5-40
Figure 5-13 Simulated Cumulative Condition as Seen from the Recreational Road in the Rainbow Gardens ACEC 5-41
Figure 5-14 Simulated Cumulative Condition as Seen from Recreational County Road 23 Toward the Yampa River and Cross Mountain 5-41