

Final Environmental Impact Statement for the Mona to Oquirrh Transmission Corridor Project and Proposed Pony Express Resource Management Plan Amendment

FES 10-11

UT-020-2008-009



April 2010

Volume II of II -
Appendices, Maps, and Simulations

West Desert District



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U.S. Department of the Interior Bureau of Land Management

Final Environmental Impact Statement for the Mona to Oquirrh Transmission Corridor Project and Proposed Pony Express Resource Management Plan Amendment

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Volume II of II

West Desert District

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VOLUME II – APPENDICES, MAPS, AND SIMULATIONS

Volume II accompanies the Final Environmental Impact Statement (FEIS) for the Mona to Oquirrh Transmission Corridor Project and Proposed Pony Express Resource Management Plan Amendment.

This volume contains appendices and maps in order to facilitate the review of the FEIS. The appendices include the following:

- Appendix A – Proponent’s Purpose and Need
- Appendix B – Agency and Stakeholder Meetings
- Appendix C – Resource Inventory Maps
- Appendix D – Interdisciplinary Team Review Matrix
- Appendix E – Biological Resources Supporting Data
- Appendix F – Visual Resources Supporting Data
- Appendix G – Visual Simulations
- Appendix H – Public Comments on the Draft EIS and Draft Plan Amendment

Substantive changes made between the draft EIS and Final EIS are demarcated in the left margin of the pages by a vertical black line.

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LIST OF ACRONYMS

ACEC	Area of Critical Environmental Concern
ACSR	Aluminum conductor steel reinforced
AGRC	Utah Automated Geographic Reference Center
amsl	Above mean sea level
APE	Area of potential effect
BLM	Bureau of Land Management
BMP	Best Management Practice
CWG	Community Working Group
DCD	Deseret Chemical Depot
DEQ	Department of Environmental Quality
DOD	Department of Defense
DOE	Department of Energy
DPG	Dugway Proving Grounds
EJ	Environmental justice
EMF	Electric and magnetic fields
EPG	Environmental Planning Group
ESA	Endangered Species Act
FEIS	Final Environmental Impact Statement
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Regulatory Commission
FFO	Fillmore Field Office
GAP	Gap Analysis Project
GIS	Geographic Information Systems
HVTL	High voltage transmission line
I-	Interstate-
IMACS	Intermountain Antiquities Computer System
IRP	Integrated Resource Plan
ISSR	Inland Sea Shorebird Reserve
kV	Kilovolt
MBTA	Migratory Bird Treaty Act
MIS	Management Indicator Species
msl	Mean sea level
MW	Megawatt
NAIP	National Agriculture Imagery Program
NEPA	National Environmental Policy Act
NERC	National Electric Reliability Council
NESC	National Electric Safety Code
NHPA	National Historic Preservation Act

NOMA	North Oquirrh Management Area
NWI	National Wetlands Inventory
OHV	Off-highway vehicle
PA	Programmatic Agreement
PLPCO	Utah Governor’s Public Lands Policy Coordination Office
PEIS	Programmatic Environmental Impact Statement
Project	Mona to Oquirrh Transmission Corridor Project
Proponent	Rocky Mountain Power
RDCC	Resource Development Coordinating Committee
RINS	Raptor Inventory Nest Survey
RMP	Resource management plan
SAMP	Special Area Management Plan
SHPO	State Historic Preservation Office
SIO	Scenic Integrity Objectives
SITLA	School and Institutional Trust Lands Administration
SLFO	Salt Lake Field Office
SQO	Scenic quality objectives
SQRU	Scenic quality rating units
SSURGO	Soil Survey Geographic Database
SR	State route
SWRGAP	Southwest Regional Gap Analysis Project
TCP	Traditional Cultural Properties
UCDC	Utah Conservation Data Center
UDOT	Utah Department of Transportation
UDWR	Utah Division of Wildlife Resources
UNHP	Utah Natural Heritage Program
UNPS	Utah Native Plant Study
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USDI	U.S. Department of the Interior
USFS	U.S. Forest Service
USFWS	U.S. Fish and Wildlife Service
VQO	Visual Quality Objective
VRM	Visual Resource Management
WIA	Wilderness Inventory Area
WMA	Wildlife Management Area
WECC	Western Electricity Coordinating Council

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Appendix A – Proponent’s Purpose and Need

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APPENDIX A – PROPONENT’S PURPOSE AND NEED

A.1 Introduction

Rocky Mountain Power’s (the Proponent) purpose and need for the Mona to Oquirrh Transmission Corridor Project (herein referred to as the Project) is based on its obligations as a publicly regulated electric utility to provide safe, reliable, and adequate electric transmission service to its retail customers and other users of the transmission system. In order to meet this need, the Proponent is obligated per the Federal Energy and Regulatory Commission (FERC) requirements (Orders 888 and 889) to expand or upgrade its transmission system pursuant to the Open Access Transmission Tariff to accommodate requests (internal and external) for transmission services.

Through the course of meeting its business and regulatory obligations, the Proponent has substantiated the need for the Project based on (1) population growth and current and projected electrical demands in northern Utah, (2) existing generation resources and the capacity of existing transmission infrastructure to meet these demands, (3) projected generation and the capacity of the existing transmission system to accommodate the increased capacity for facilities planned or under construction, and (4) reliability issues associated with the operation and maintenance of the existing transmission system.

Since the Draft EIS was published in May 2009, the Proponent’s purpose and need for the Project has been modified. The Proponent is an essential service provider and develops its long-range plans to meet customer demands and service requirements. As part of their long range planning process, large scale backbone transmission projects are developed in 1,500 MW increments to achieve maximum system capacity, to provide reasonable economy of scale and to reduce the overall number of right-of-way corridors required in the future. As originally proposed, the Project included an ultimate transfer capacity of 3,000 MW. Of the 3,000 MW, a portion (1,500 MW) is required to meet the forecasted demand of the Proponent’s customers, with the additional 1,500 MW of capacity to be made available to meet requests for third-party transmission service. Over the course of the EIS process, numerous third-party requests were withdrawn, which negated the need for an additional 1,500 MW of transmission capacity.

The Proponent now proposes a 1,500 MW design configuration to meet the needs of their customers. The revised design configuration includes a single-circuit 500kV transmission line (initially operated at 345kV) from the existing Mona Substation to the future Limber Substation within a 250-foot right-of-way. The double-circuit 345kV transmission lines proposed between the future Limber Substation and the existing Oquirrh Substation and between the future Limber Substation and the existing Terminal Substation are still necessary to meet the Proponent’s transmission service obligations, and remain as originally proposed.

A.1.1 Population Growth, Current and Projected Electrical Demand

Northern Utah represents one of the fastest growing areas within the state of Utah and constitutes one of the major growth areas within the region. The population in this area, served by the Proponent, is currently estimated at 2,207,257 in Utah, Salt Lake, Summit, Tooele, Wasatch, Davis, Morgan, and Weber Counties. By the year 2010, this population is estimated to increase to approximately 2,337,609; and by 2020 it is estimated to reach 2,855,894 (Utah Governor’s Office of Planning and Budget 2008). The historical average annual growth rate for electrical load in Utah was 3.0 percent from 1995 to 2005, and the forecasted average annual growth rate for load, illustrated in Figure A-1, is expected to be 2.7 percent for the years 2007 to 2016 (PacifiCorp’s Integrated Resource Plan [IRP] 2007).

Approximately 75 to 80 percent of all of the electricity use in the state of Utah, referred to as the Wasatch Front load, is within a ten-county area of northern Utah. This area includes portions of Juab and Sanpete Counties and all of Utah, Salt Lake, Summit, Tooele, Wasatch, Davis, Morgan, and Weber Counties.

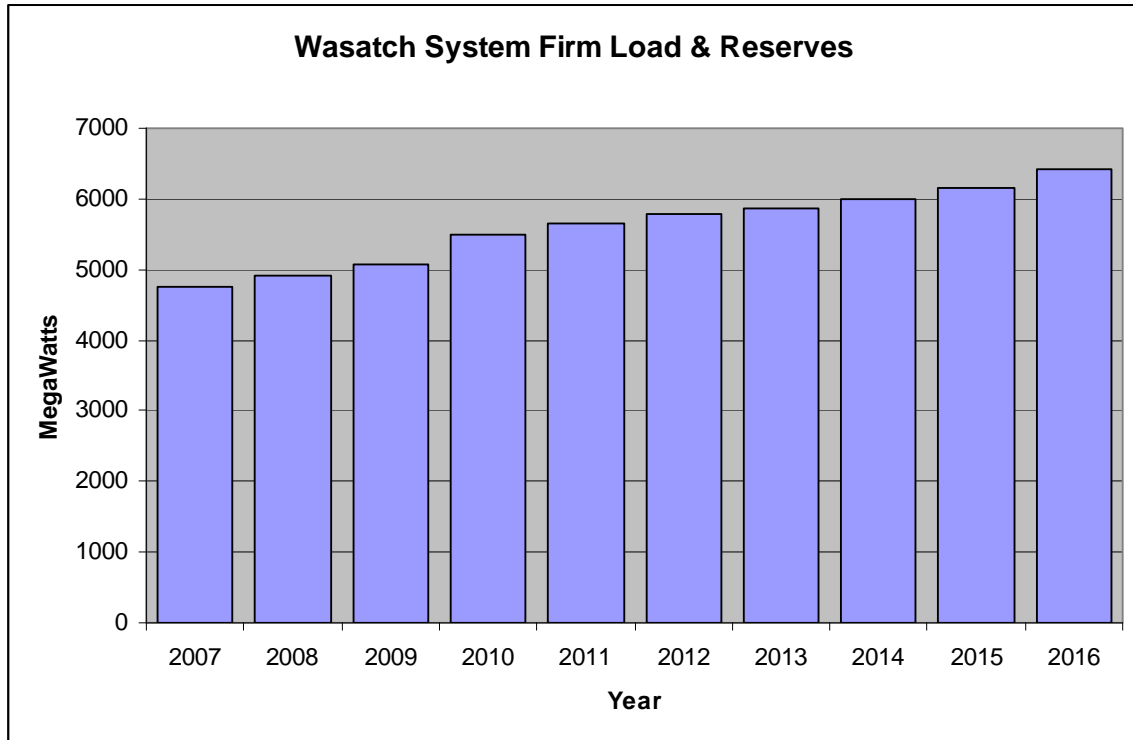


Figure A-1. Forecasted Growth for the Wasatch Load

A.1.2 Existing Generation Resources and Transmission Capacity

Currently, a majority of the electricity serving the northern Utah area is generated at the Proponent facilities in Carbon, Juab, and Emery Counties, or is imported from interconnections between Utah and other states, and is delivered on existing transmission lines from the south to load centers in the central and northern Utah. These southern Utah generating facilities include the Carbon, Hunter, Huntington, and Currant Creek power plants. The Rocky Mountain Power transmission system that provides electrical service to this area from southern Utah presently consists of (1) two 345 kilovolt (kV) lines from the Huntington and Castle Dale (Emery Substation) areas to the Spanish Fork and Camp Williams substations, (2) four 345kV lines from the Mona area to the Camp Williams Substation, and (3) two smaller 138kV lines from the Helper area (Carbon Substation) to the Spanish Fork Substation. These transmission lines are also used to meet other Rocky Mountain Power transmission commitments required between Arizona or Nevada and northern Utah. As northern Utah’s electrical usage continues to grow, existing transmission lines will not have sufficient capacity to serve this projected load and ensure an adequate and reliable electric supply to load centers in northern Utah.

A.1.3 Projected Generation Resources and Transmission Capacity

As currently projected, the load for this area is expected to grow at a rate that may require approximately 200 to 250 megawatts (MW) of additional power each year to support growth throughout northern Utah (IRP 2007). This substantial increase will require additional resources equivalent to adding a new 500 MW generation plant every 2 years.

For the long term, it is critical that additional transmission lines be built, in order to prepare for new generation resources or market purchases of energy from the desert Southwest that will need to be delivered to northern Utah. It is currently anticipated that a new 500 and 345kV transmission line interconnection between the existing Mona, Oquirrh, and Terminal substations will be required by 2013 to meet the expected shortfall at that time. The transmission line would be constructed as a 500kV line and initially energized at 345kV, with the capability to be converted to 500kV in the future. When energized at 345kV, this line would provide 750 MW capacity to meet the projected need by 2013, and would support an additional 750 MW for a total of 1,500 MW when converted to 500kV. Additional capacity provided by a second 500kV transmission line may also be necessary at some point in the future.

Present plans show that a substantial portion of the new resources needed to serve this new load would have to be delivered from new transmission lines constructed from either the north or south. According to the PacifiCorp IRP 2007, a new power plant may be needed in 2012. This is in addition to marketplace imports (resources delivered from non-PacifiCorp facilities), such as renewable energy projects throughout the Rocky Mountain region, into existing or new substations, which will continue to remain an important future resource. While a specific generation proposal is not currently in place, alternative generation sources to the south may include a new Currant Creek II Plant, Lake Side Plant Expansion, or additional power imports into Utah. Northern generation resources or marketplace import sources could include wind or thermal resources in Wyoming. With the abundance of Wyoming wind resources, analysis efforts are currently underway to determine the most effective method of integrating this variable energy source with more predictable resources.

A.1.4 Reliability

Reliability and operational flexibility is obtained through alternative transmission paths. These alternative paths allow for the shifting of load sources during planned or unplanned outages (generation or transmission). During times when one transmission line must be taken out-of-service for maintenance needs, the loss of an additional line would create a double-line outage condition. Over the next few years as power imports into northern Utah increase and the capacities of the existing lines are limited, such issues will pose greater risk to the transmission system and increase the dependency on the transmission system located south of Salt Lake City, Utah.

The northern Utah load (serving areas north of Mona) continues to increase, and additional resources are required. The loss of two or more lines could result in the loss of electrical service to the load. This could create a severe outage with substantial impacts on northern Utah and throughout the state. In particular, electrical power flow studies have shown that under high electrical demand situations, loss of multiple 345kV transmission lines that are located within the same corridor between Mona and Camp Williams would likely cause the loss of service to large portions of the Wasatch Front.

The Western Electricity Coordinating Council (WECC), in conjunction with the National Electric Reliability Council (NERC), has established System Planning and Operating Criteria that all Transmission Providers with the Western Interconnection must follow when planning and operating their

transmission systems (NERC/WECC 2005, WECC 2008). These standards and criteria require that Transmission Providers evaluate expected normal and potential abnormal operating conditions and plan adequate redundancy in the system to meet expected system reliability performance. These standards and criteria define both the expected level of event severity (single and multiple lines out) and acceptable transmission system performance. In part, the standards require transmission providers to evaluate multiple adjacent line outages (N-2) and when applicable, the outage of all lines in a corridor to assure that the outage does not result in a cascading and uncontrolled loss of generation stations and outages of customer loads.

A.1.5 Improve and Enhance Reliability and Operational Flexibility

In evaluating the siting of new transmission lines, the Proponent must comply with the WECC reliability standards and criteria that require transmission grids to withstand the loss of two lines adjacent lines located in the same corridor. These standards and criteria include the identification of numerous risk factors such as fire, lightning, vegetation management, natural risk factors (e.g., ice, high winds, snow, and landslides), potential conflicts with aircraft, and other considerations that are weighed when developing transmission ratings. The NERC and WECC reliability standards and criteria also requires consideration of the loss of all lines on the same right-of-way, although no performance criteria are specified. Therefore, utilities need to be aware of consequences from severe outages and consider limiting the number of critical transmission lines in the same corridor.

In order to meet the Project objectives and the WECC Reliability Criteria, the Proponent has requested a minimum separation of 1 mile between the new single-circuit 500/345kV line and existing high voltage transmission lines. The minimum separation that meets the Project planning objectives and reliability criteria would only be 1,500 feet.

A.1.6 Allow Economical Power Sales, Transfers, and Purchases

The development of new transmission lines from the existing Mona Substation to the existing Oquirrh and Terminal Substations includes two new 500/345kV substation sites (approximately 370 acres each); one site in the Tooele Valley and one site in the vicinity of the existing Mona Substation. In order to position Rocky Mountain Power to optimize future system opportunities and improvements, the location of these new facilities should allow for interconnection with other future transmission projects. Currently, projects are being initiated by the Proponent and external entities, with planned interconnections into northern Utah and the Wasatch Front, including the Energy Gateway South 500kV Transmission Projects.

The existing Mona Substation is an important interconnection point with Deseret Generation and Transmission’s Bonanza Plant and the Intermountain Power Plant. Additionally, Mona has been and will continue to be a hub through which electricity is imported from the Proponent’s southern intertie lines, and it is anticipated as an interconnection point for the Energy Gateway South Project. Strengthening the electrical path between Mona and the Wasatch Front allows utilities greater opportunity to take advantage of economical power transfers, sales, and purchases into and through Utah.

Various new transmission lines would enable the Proponent to access potential new generation resources, providing the flexibility to serve northern Utah from different generation resource areas or import locations within the state or throughout the region. This includes providing access to renewable energy projects proposed throughout the Rocky Mountain region. During times when northern or southern resources are not available due to plant outages or maintenance periods, additional resources may be

necessary to meet the load demand. The proposed Mona Annex Substation near Mona would serve as a regional transmission hub where energy can be distributed. Increased import capability with the proposed Mona to Oquirrh and Terminal transmission lines would provide the flexibility to use these available resources.

A.1.7 Integration with Short-term and Long Range Planning

As northern Utah continues to grow and rural areas become urbanized, the ability to locate high-voltage transmission lines and substations will become increasingly difficult on private, state, and federal lands. In particular, the southwestern portion of Salt Lake County (South Jordan, West Jordan, and Herriman) and areas of eastern Tooele County are rapidly developing. The Project provides an opportunity for these municipalities to incorporate both short- and long-term infrastructure needs into the planning process and designate adequate utility corridors for transmission lines and substations that may be fully integrated into current and future plans.

On public lands, federal agencies including the Department of Energy (DOE), the Bureau of Land Management (BLM), and the U.S. Forest Service (USFS) recently completed the process of evaluating potential energy corridors, as evidenced in the West-wide Energy Corridor Programmatic Environmental Impact Statement (PEIS) (DOE 2009). Studies conducted for the Mona to Oquirrh Transmission Corridor Project and PEIS will result in recommendations that allow the BLM to integrate proposed and future utility projects into both the Salt Lake and Fillmore Field Offices’ Resource Management Plans (RMP), or amend them as appropriate.

A.2 Project Benefits and Costs

A.2.1 Project Cost Estimate

The 2009-2018 Ten-Year Capital Plan outlined the estimates for the Project transmission segments (Table A-1). Estimates were derived from standard company cost models used for transmission facilities, which incorporate standard construction assemblies and recent actual costs. Project scope was a result of engineering analysis utilizing one-line system diagrams.

Transmission line costs recognize urban versus rural construction costs and specific tower sizes, depending on the segments. Likewise, urban and rural right-of-way costs were factored into the estimates, depending on the population density. Costs for communication facilities assume a standard cost per mile for all segments. Estimates are stated in 2008/2009 dollars, with allowance for funds used during construction and corporate overheads.

Construction cash flows assumed engineering, permitting, environmental, and right-of-way acquisition costs on the front-end of the Project for line segments. On-site estimated construction costs were spread over the remaining periods, based on June 2013 in-service dates (Table A-1). The Project’s proposed in-service date is targeted for June 2013.

TABLE A-1 ESTIMATED ON-SITE CONSTRUCTION COSTS					
Project Component	Annual Costs (millions)				
	2009	2010	2011	2012	Total
Mona - Limber 500kV line	\$8.5	\$68.1	\$68.1	\$25.5	\$170.3
Limber - Oquirrh 345kV line	6.4	50.8	50.8	19.1	127.0
Oquirrh - Terminal 345kV line		18.9	75.6	94.6	189.1
Mona Annex Substation	10.0	38.3	30.4		78.7
Limber Substation			15.0	27.1	42.1
Oquirrh Substation Line Position		8.0	17.4		25.4
Terminal Substation Line Position			13.7	21.6	35.3
Total	\$24.9	\$176.1	\$261.7	\$205.2	\$667.9
Source: Rocky Mountain Power, 2009					

A.2.2 Operation and Maintenance Costs

Annual operation and maintenance costs are assumed to be 82 percent of original installed cost, with an inflation factor for future years. Administrative and general expenses are assumed to be 49 percent of original installed cost, with inflation for future years.

Asset life is assumed to be 58 years for book purposes, and 15 years for tax purposes. Transmission right-of-way is not depreciated or amortized for tax purposes. Transmission right-of-way is amortized over 70 years for book purposes.

A.2.3 Economic Project Benefits

Economic benefits resulting from the Project are outlined below.

The Project would add much needed import capacity into the Wasatch Front and beyond, from the desert Southwest or new generation resources in central/southern Utah. It is one of the transmission segments in the PacifiCorp Energy Gateway program designed to leverage net power cost savings by optimizing market purchase or cheaper energy resources outside of the Wasatch Front. Savings are derived from the difference between constructing new generation resources locally and importing energy.

The design path ratings of the Gateway West (originating in eastern Wyoming and terminating near Boise, Idaho) and Gateway South (originating in eastern Wyoming and terminating near Las Vegas, Nevada) would be supported by the Project. Both Gateway West and Gateway South segments rely on the Project transmission lines to link the two segments, thus providing redundancy and supporting designed path ratings. Without the link between Gateway West and Gateway South, stranded transmission capacity would result.

Reliability benefits would be provided by utilizing a different corridor than the existing Mona – Camp Williams corridor, in case of unscheduled or planned outages. Combined with back-up transmission capacity from the north, the Project transmission lines can mitigate the loss of load service should outages occur in the Mona-Camp Williams corridor or north of the Wasatch Front.

Appendix B – Agency and Stakeholder Meetings

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APPENDIX B – AGENCY AND STAKEHOLDER MEETINGS

TABLE B-1 AGENCY AND STAKEHOLDER MEETINGS		
Date	Agency/Organization	Meeting Topic
Cooperating Agencies		
2/7/2007	Cooperating Agency Invitation Letter was mailed to: Utah Governor’s Public Lands Policy Coordination Office (PLPCO), Salt Lake County, Tooele County, Juab County, Utah County, Camp Williams Military Reservation, and Tooele Army Depot	Invite federal, state, and local agencies to become cooperating agencies on the Project
1/30/2008	BLM SLFO BLM Fillmore Field Office (FFO) Utah PLPCO/RDCC Utah Governor’s Office of Energy Advisor Utah Department of Environmental Quality (DEQ) Utah Division of Water Resources Utah School and Institutional Trust Lands Administration (SITLA)	Introduce the Project and identify potential issues
1/29/2009	Public Lands Policy Coordination Office (PLPCO) BLM Salt Lake Field Office (SLFO)	To review PLPCO’s responsibilities as a state agency, and their desired level of involvement with the project.
8/5/2009 9/30/2009	Utah School and Institutional Trust Lands Administration (SITLA)	Discuss areas of concern on SITLA land
Tribes		
10/25/2007	Notification letters were mailed to: Northwestern Band of Shoshone Nation, Eastern Shoshone of Wind River Reservation, Te-Moak Tribe and affiliated Bands, Confederated Tribes of the Goshute Nation, Paiute Indian Tribe of Utah, Uintah Ouray Ute Indian Tribe, Skull Valley Band of Goshute Indians, Art Caamasee, and Elwood Mose.	Notification of the Project
11/21/2007	Letters requesting participation in the preparation of the final draft Programmatic Agreement (PA) were mailed to: Paiute Indian Tribe of Utah, Skull Valley Band of Goshute Indians, Confederated Tribes of Goshute Reservation, and Uintah-Ouray Ute Indian Tribe	Request participation in the preparation of the PA
Interagency		
6/15/2007	BLM U.S. Fish and Wildlife Service (USFWS)	Introduce the Project to the USFWS

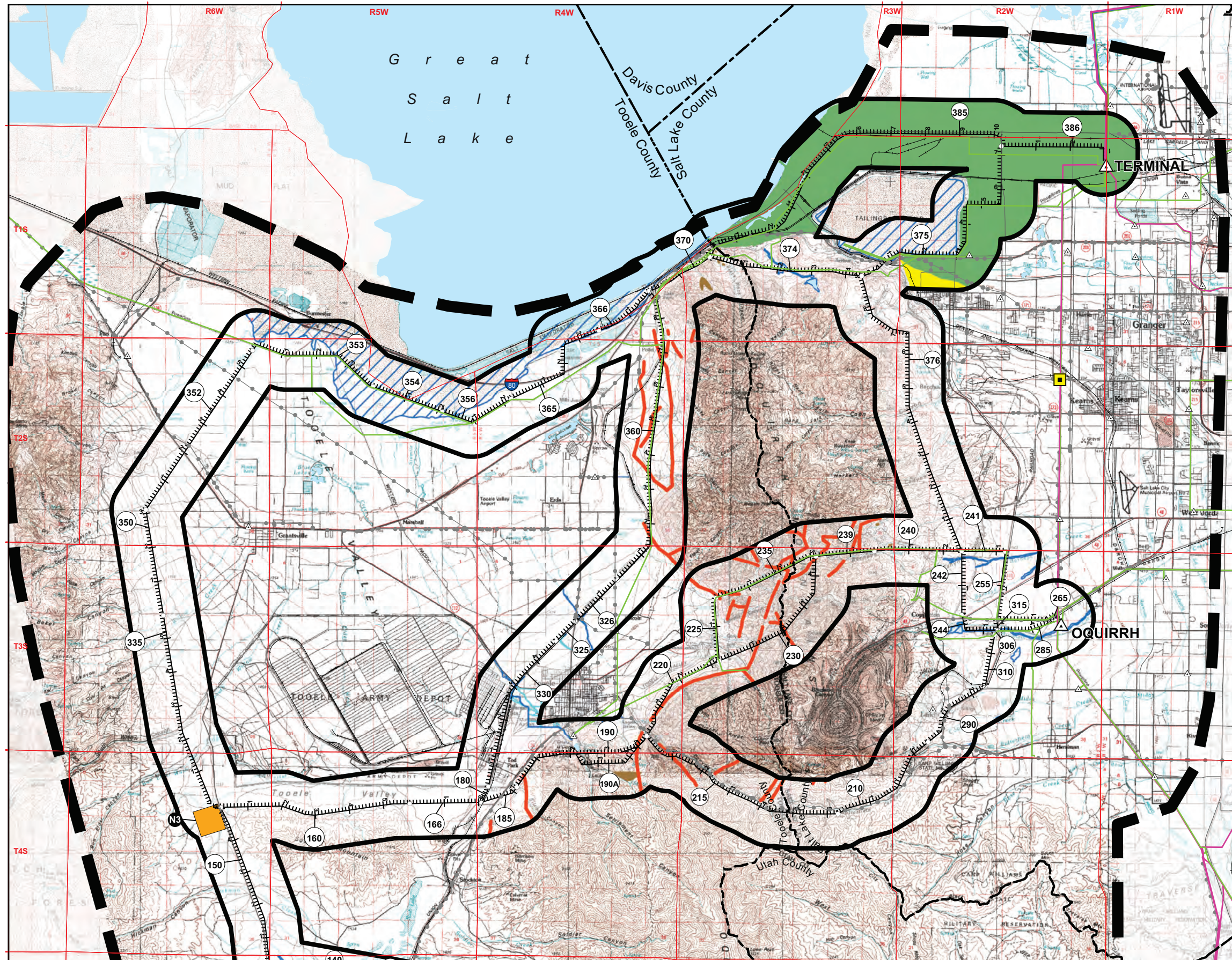
TABLE B-1 AGENCY AND STAKEHOLDER MEETINGS		
Date	Agency/Organization	Meeting Topic
6/19/2007	BLM SLFO BLM FFO Utah Department of Transportation (UDOT) Uinta National Forest Department of Defense (DOD) Hill Air Force Base-UTTR DOD US Army Dugway Proving Grounds Utah PLPCO State Historical Preservation Office (SHPO)	(1) Introduce agency staff (2) Define the process of corridor selection (3) Discuss definitions for Class I, II, and III inventories (4) Discuss the definition of the area of potential effect (APE) (5) Discuss visual resources (6) Discuss the inventory of historical sites (7) Define the level of effort for investigation (8) Discuss the development of a PA (9) Determine the lead agency
7/6/2007	BLM SLFO USFWS (Utah Field Office) Utah Division of Water Resources (Central Region)	(1) Introduce agency staff, (2) Discuss biology issues applicable to the Project
2/5/2008	Tooele Army Depot BLM	Introduce the Project and identify potential issues
2/28/2008	Deseret Chemical Depot BLM	Introduce the Project and identify potential issues
3/6/2008	Uinta National Forest	Introduce the Project and discuss the potential for a route to cross the forest
8/12/2008	BLM SLFO USFWS UDWR	Review information with agency personnel regarding alternative corridors, inventory data, and mitigation measures
10/15/2008	Tooele Army Depot	Review alternative routes and identify potential issues
12/3/2008	U.S. Army Corps of Engineers (USACE)	Introduce the Project and review alternative routes and Project schedule
State Agencies		
1/31/2008	BLM SLFO UDOT	Introduce the Project and identify how the Mona to Oquirrh project may coordinate with the Mid-valley Highway project
Local Governments		
8/3/2007	Tooele City	Introduce the Project
8/7/2007	Tooele County Stockton City	Introduce the Project
8/7/2007	West Jordan City	Introduce the Project
8/17/2007	Mona City	Introduce the Project
8/17/2007	Eureka City	Introduce the Project
8/17/2007	Goshen City	Introduce the Project
8/17/2007	Juab County	Introduce the Project
8/24/2007	Utah County	Introduce the Project
8/28/2007	Salt Lake City	Introduce the Project
9/10/2007	Salt Lake County	Introduce the Project
9/11/2007	Cedar Fort	Introduce the Project
10/3/2007	South Jordan City	Introduce the Project
12/6/2007	Utah County	Identify potential issues and collect land use data
12/6/2007	Juab County	Identify potential issues and collect land use data
12/7/2007	Tooele City	Identify potential issues and collect land use data
12/10/2007	Salt Lake County	Identify potential issues and collect land use data
12/10/2007	West Valley City	Identify potential issues and collect land use data
12/12/2007	Tooele County	Identify potential issues and collect land use data
12/12/2007	Salt Lake City	Identify potential issues and collect land use data

TABLE B-1 AGENCY AND STAKEHOLDER MEETINGS		
Date	Agency/Organization	Meeting Topic
12/13/2007	South Jordan City	Identify potential issues and collect land use data
12/13/2007	West Jordan City	Identify potential issues and collect land use data
8/20/2008	Goshen City	Review Project alternatives and gather feedback
8/20/2008	Mona City	Review Project alternatives and gather feedback
8/20/2008	Juab County	Review Project alternatives and gather feedback
8/24/2008	Utah County	Review Project alternatives and gather feedback
8/25/2008	Tooele City	Review Project alternatives and gather feedback
8/25/2008	Tooele County Grantsville City	Review Project alternatives and gather feedback
8/27/2008	Salt Lake City	Review Project alternatives and gather feedback
8/27/2008	South Jordan City	Review Project alternatives and gather feedback
8/27/2008	West Jordan City	Review Project alternatives and gather feedback
8/29/2008	Salt Lake County	Review Project alternatives and gather feedback
8/29/2008	Utah County	Review project alternatives and gather feedback
9/15/2008	Eureka City	Review Project alternatives and gather feedback
1/16/2009	Mona City Juab County	Discussion of alternative routes and substation sites
1/27/2009	Salt Lake County	Discussion of alternative routes and substation sites
7/7/2009	Utah County	Discuss land use changes within the county
Special Interest Organizations		
6/19/2007	Raptor Inventory Nest Survey (RINS)	Introduce the Project
7/12/2007	Kennecott Land	Introduce the Project
9/18/2007	Kennecott Copper	Introduce the Project
2/4/2008	Inland Sea Shorebird Reserve (ISSR)	Introduce the Project and identify potential issues
2/3/2008	Larry Miller Group	Introduce the Project and identify potential issues
2/14/2008	The Ensign Group	Introduce the Project and identify potential issues
9/16/2008	Kennecott Copper	Review Project potential alternatives and gather feedback
9/23/2008	Kennecott Land	Review Project potential alternatives and gather feedback
10/31/2008	Kennecott Copper and Land	Discussion of potential alternative routes
12/10/2008	Kennecott Copper and Land	Field visit to discuss potential alternative routes
7/7/2009	Farmland Reserve/Suburban Land Reserve	Discuss alternatives and land use plans in Goshen Valley
Proponent's Community Working Group		
11/9/2007	BLM SLFO – Attended as observers BLM FFO – Attended as observers Rocky Mountain Power Tooele County Salt Lake County Tooele City Stockton South Jordan City West Jordan City Salt Lake City Kennecott Land Kennecott Copper	(1) Introduce the Project (2) Discuss the roles and responsibilities of the Community Working Group (CWG) (3) Identify potential issues

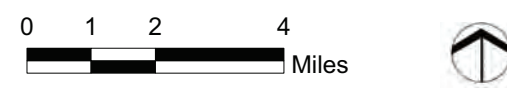
TABLE B-1 AGENCY AND STAKEHOLDER MEETINGS		
Date	Agency/Organization	Meeting Topic
2/15/2008	BLM SLFO – Attended as observers BLM FFO – Attended as observers Rocky Mountain Power Tooele County Salt Lake County Tooele City Stockton South Jordan City West Jordan City Salt Lake City Kennecott Land Kennecott Copper	(1) Review the results of the agency and public scoping (2) Review the preliminary alternative corridors and substation sites (3) Review the resource inventory data and results (4) Discuss the approach to impact assessment and mitigation planning (5) Discuss the screening of alternatives and alternative comparison process
7/11/2008	BLM SLFO – Attended as observers BLM FFO – Attended as observers Rocky Mountain Power Tooele County Salt Lake County Tooele City Stockton South Jordan City West Jordan City Salt Lake City Kennecott Land Kennecott Copper	(1) Review approach to impact assessment and mitigation planning (2) Review of preliminary impact assessment and mitigation planning results (3) Review screening of alternatives and alternative comparison approach (4) Review preliminary results of local area comparison results for northern portion of the project (private lands only)
5/28/2009	BLM SLFO – Attended as observers BLM FFO – Attended as observers Rocky Mountain Power Kennecott Copper Salt Lake County South Jordan City West Jordan City	(1) Review Rocky Mountain Power’s proposed route and BLM’s preferred route (2) Review public involvement opportunities (3) Review the project schedule
Proponent’s Conflict Resolution Meetings		
8/11/2009 8/24/2009 9/10/2009	Rocky Mountain Power Tooele County Tooele City Grantsville City Tooele Citizens Committee Grantsville Citizens Committee Tooele Army Depot Utah State University – Tooele Campus Utah Industrial Depot The Ensign Group BLM SLFO – Attended as observers	(1) Review Rocky Mountain Power’s proposed route (2) Discuss community issues and concerns (3) Review community suggested alternative routes (4) Try to determine a compromise solution for Limber to Oquirrh route

Appendix C – Resource Inventory Maps

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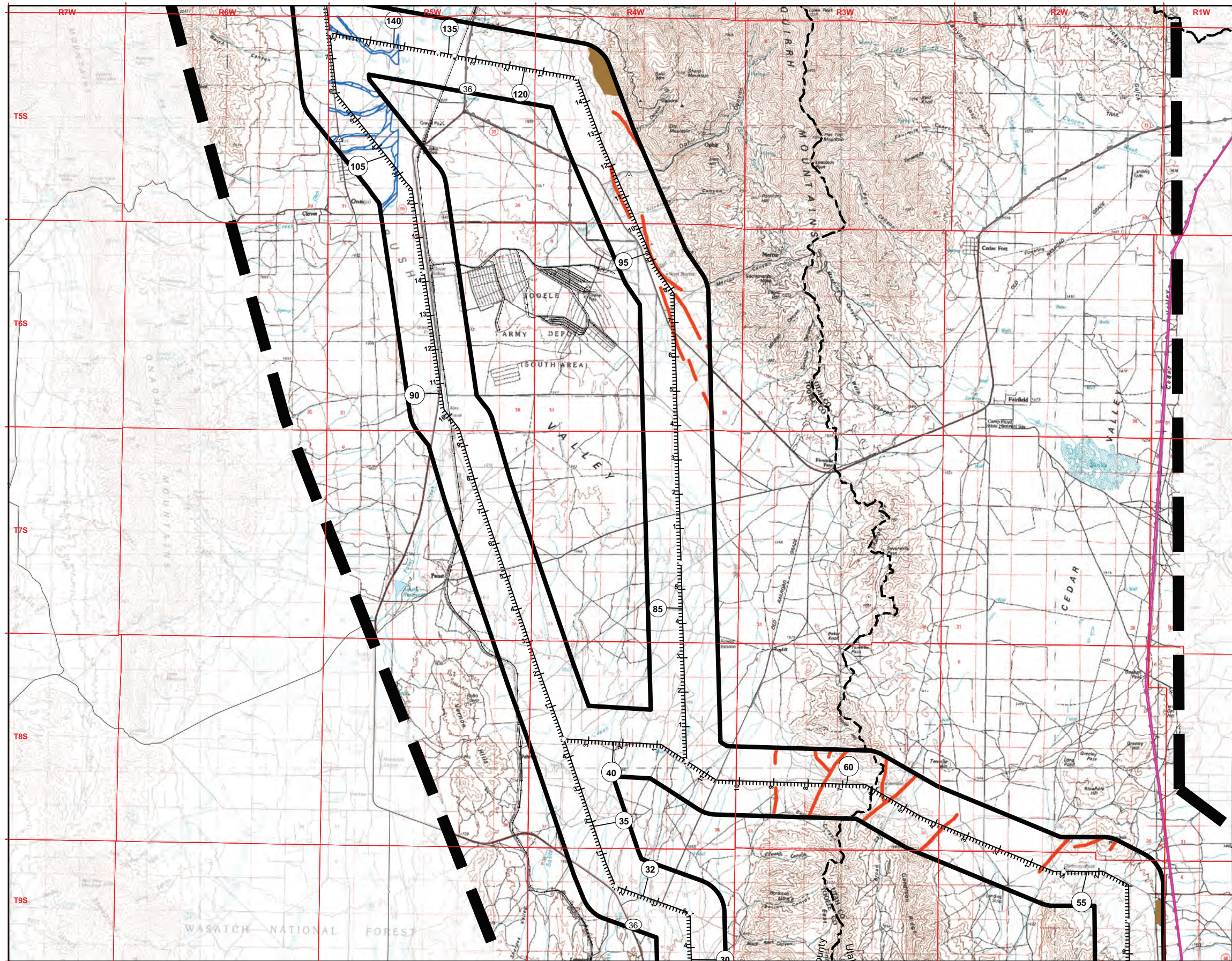
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 - 100-year Floodplain
 - 500-year Floodplain
 - Moderate Liquefaction Potential
 - High Liquefaction Potential
 - Landslide Area
- NOTE: Utah AGRC does not have liquefaction data available for Tooele County.
- ### General Reference Features
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - Alternative Routes
 - Proposed Substation Site
 - 2 Mile Wide Inventory Corridor
 - Township and Range Line



SOURCES: Fault Lines, AGRC and USGS 1990;
 Landslide Areas, USGS 1987;
 Liquefaction Potential, UGS and USU 1994;
 Floodplains, FEMA 1995, 2009;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

Map C-1
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 April 2010





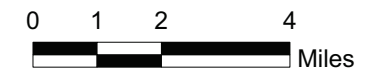
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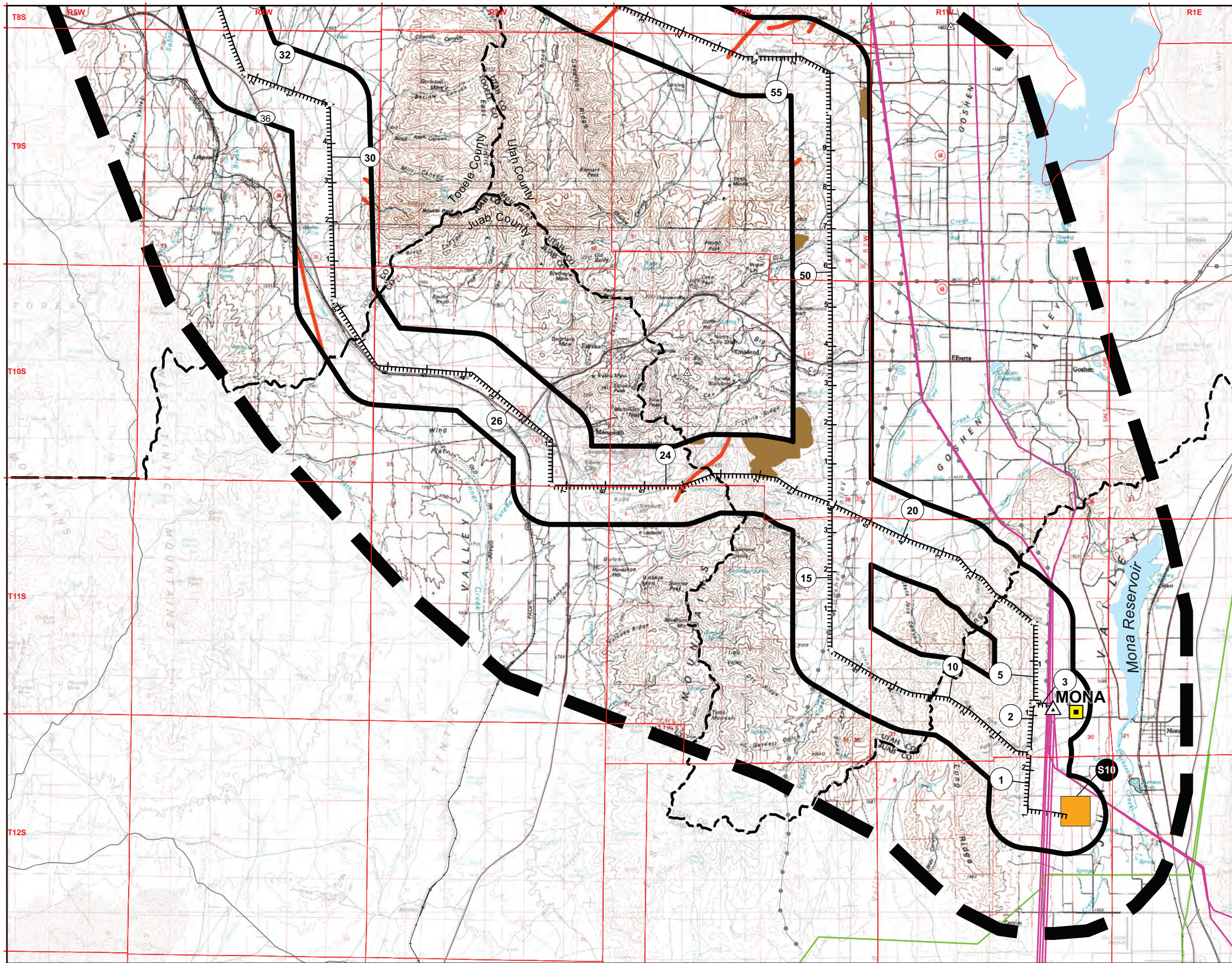
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 Landslide Areas, USGS 1987;
 Liquefaction Potential, UGS and USU 1994;
 Floodplains, FEMA 1995, 2009;
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 Transmission Lines & Substation Locations, PacifiCorp

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 April 2010

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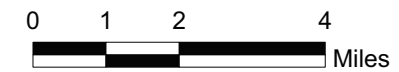
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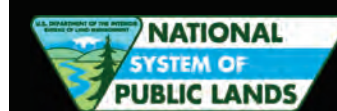


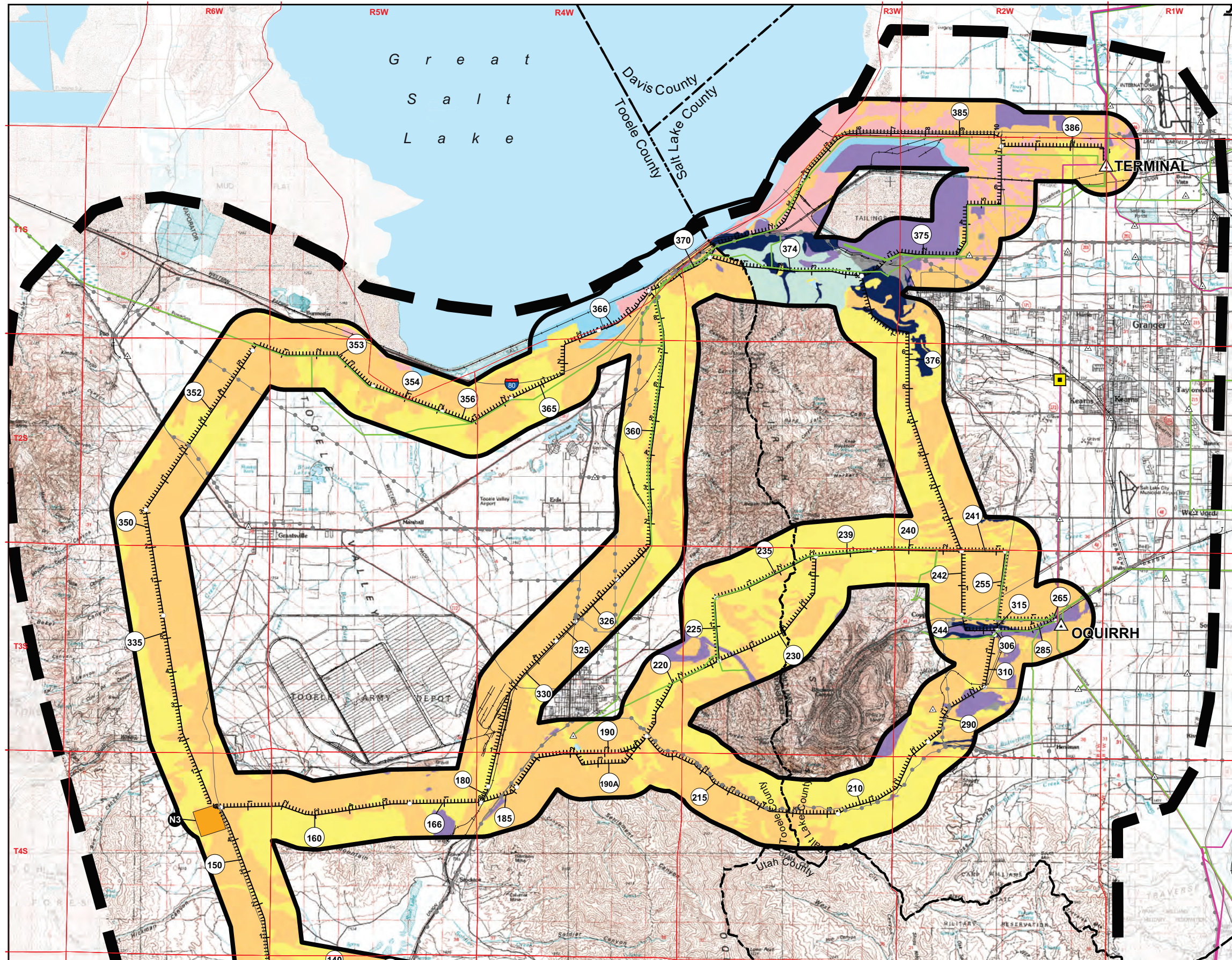
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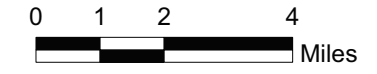
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- ### Legend
- Loam / Coarse Stony Loam / Cobbly Loam
 - Sandy / Gravelly Sand
 - Clay / Silty Clay / Stratified Clay
 - Mines / Mine Wash / Pits / Dumps
 - Gullied Land
 - Rock Outcrop
 - Slightly Decomposed Plant Material
 - Cumulic Haploxerolls
 - Stony Terrace Escarpment / Stony Alluvial Land
 - Xeretic / Xeric Torriorthents
 - Water

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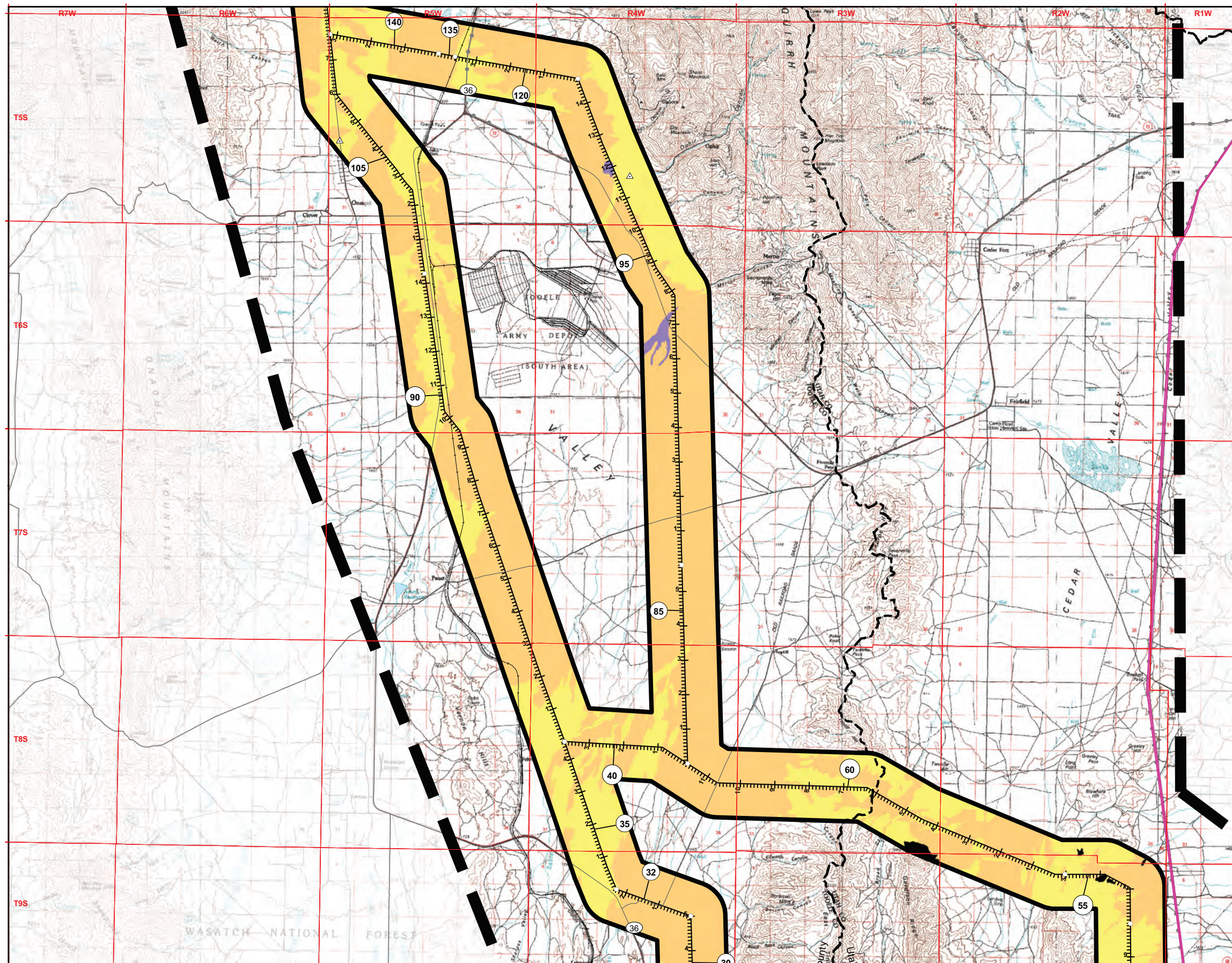
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 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

Soils_FEIS_landscape.mxd

Map C-2

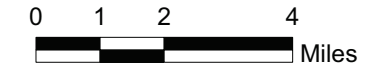
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 April 2010





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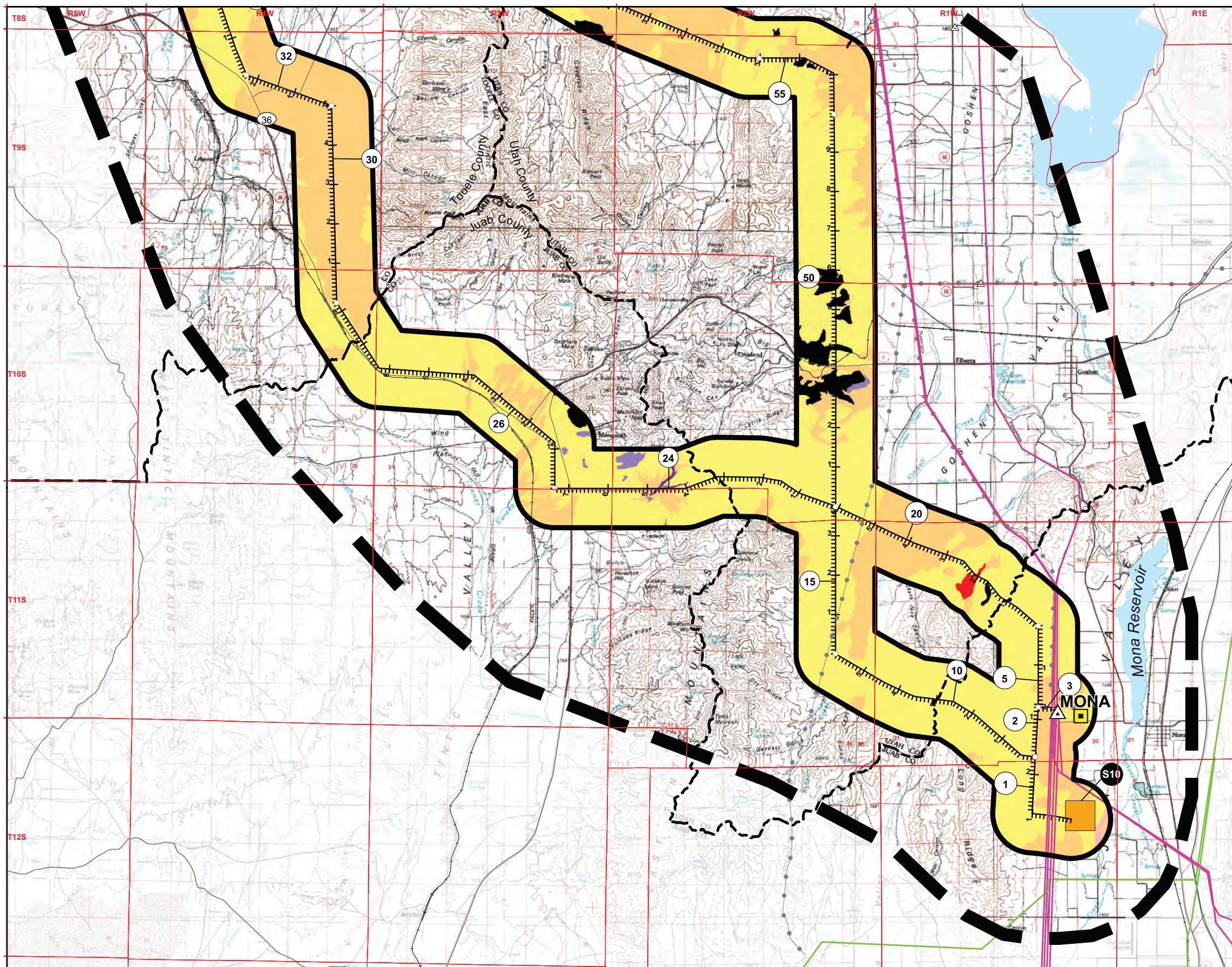


SOURCES: Soils, USGS SSURGO 2006;
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Map C-2

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 April 2010





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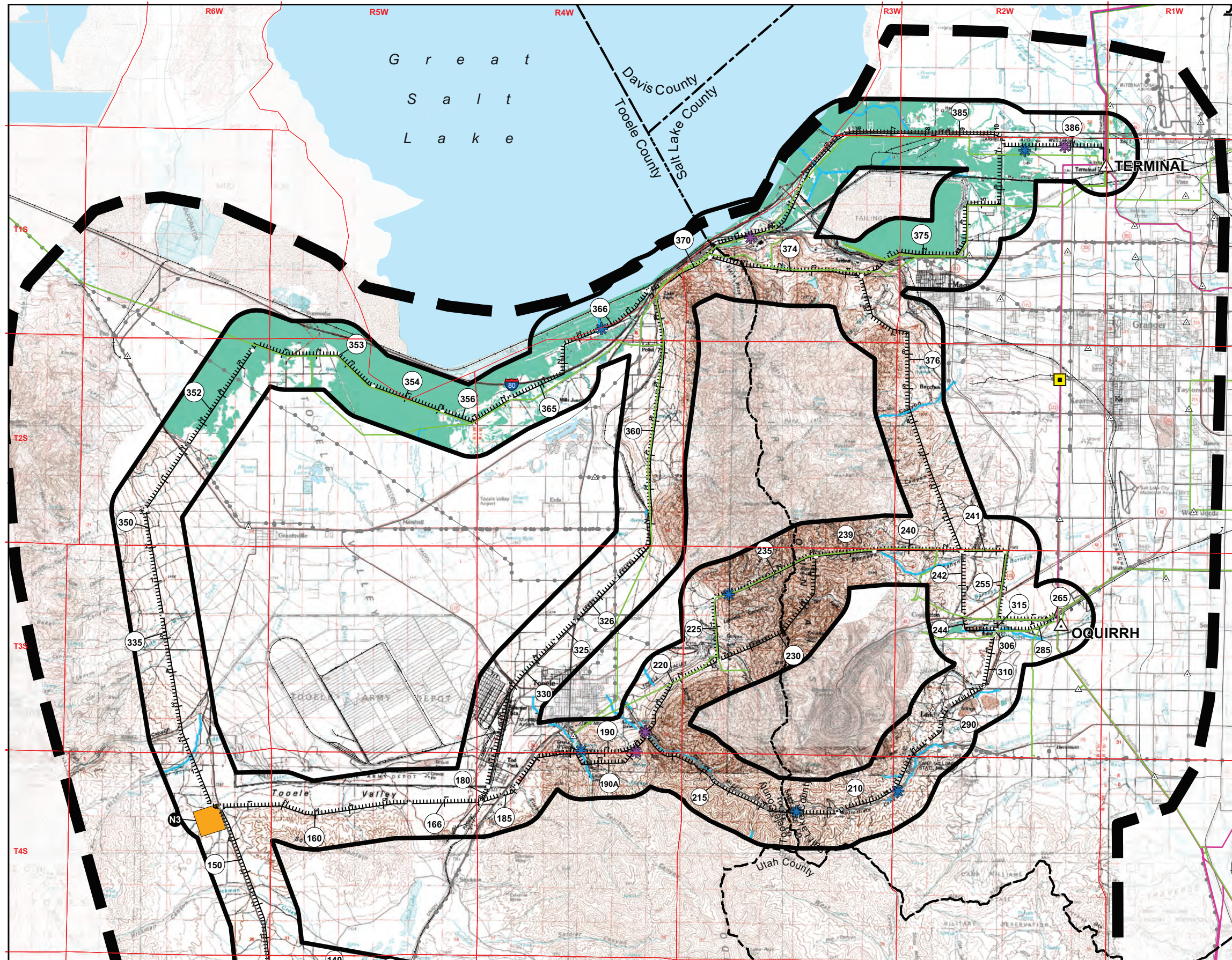
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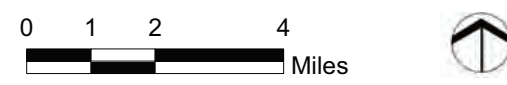
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 April 2010





- Legend**
- Perennial Streams
 - Wetlands
 - Spring (Within 600 ft. of Centerline)
 - Well (Within 600 ft. of Centerline)
- General Reference Features**
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
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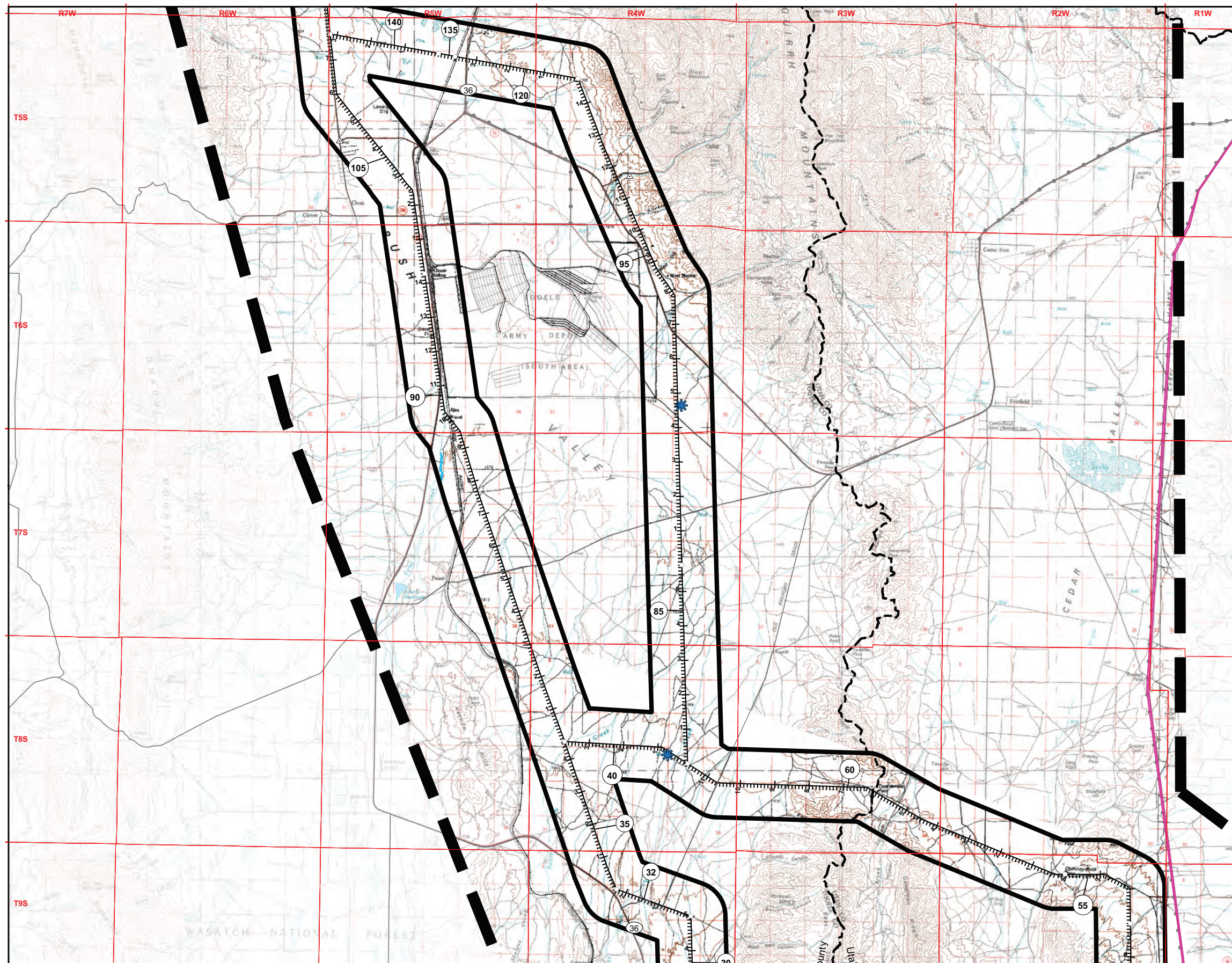


SOURCES: Streams, USGS 1990;
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 Wells, UGS 2002;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

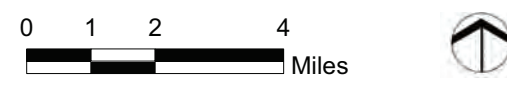
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Streams and Wetlands
MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



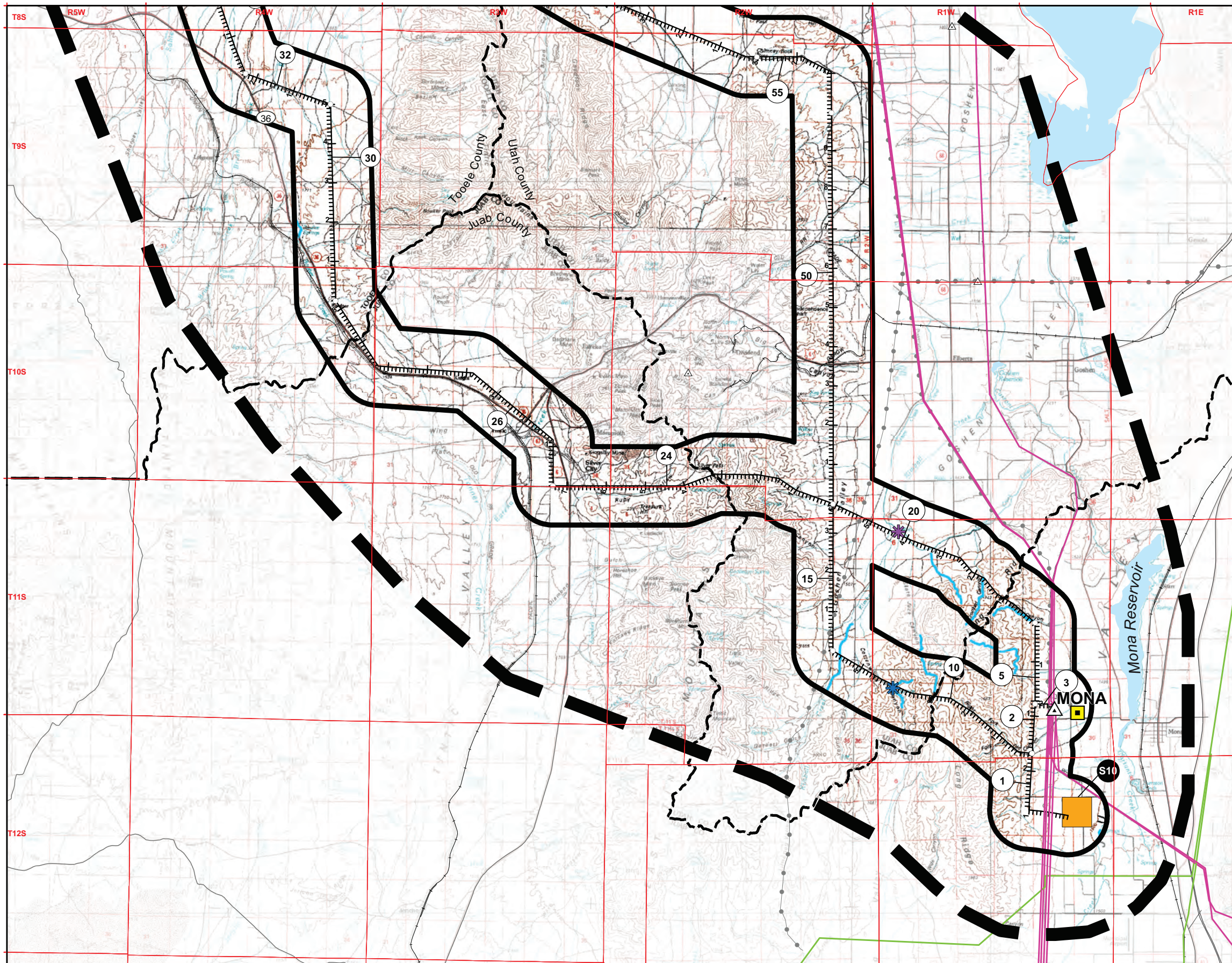
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 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

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 April 2010



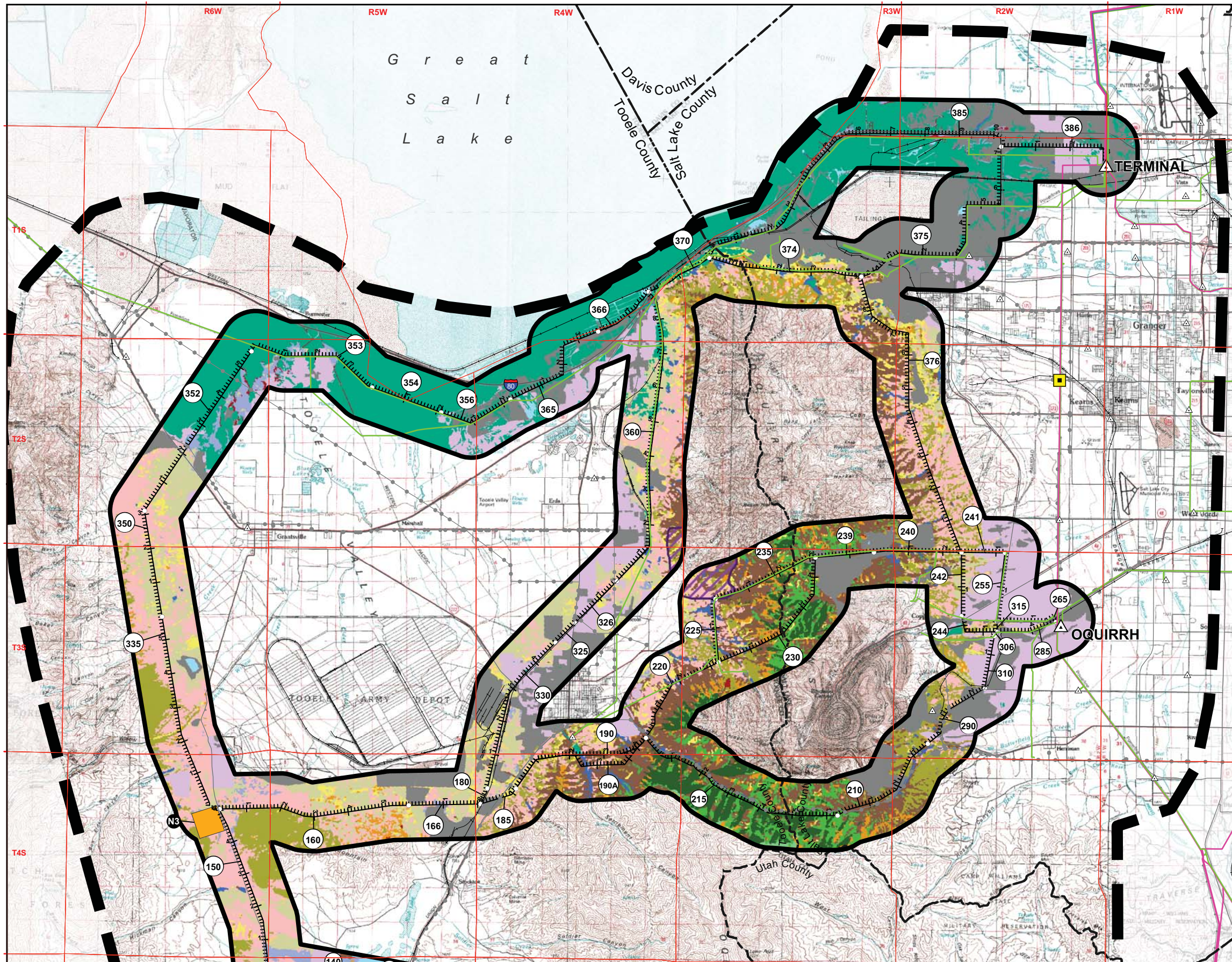


- Legend**
- Perennial Streams
 - Wetlands
 - Spring (Within 600 ft. of Centerline)
 - Well (Within 600 ft. of Centerline)
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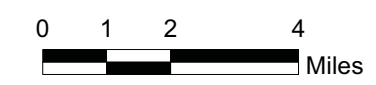
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 Wetlands, NWI FWS 2001;
 Springs, GNIS 2009, Utah AGRC 2009; EPG 2010
 Wells, UGS 2002;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp





- ### Legend
- | | |
|----------------------|-------------------|
| Agriculture | Pinyon-Juniper |
| Barren | Spruce-Fir Forest |
| Disturbed | Riparian |
| Invasive Grassland | Wetlands |
| Salt Desert Shrub | Water |
| Grassland | Hybrid Oak Stand |
| Greasewood | |
| Big Sagebrush | |
| Mixed Sagebrush | |
| Mountain Shrub | |
| Deciduous Forest | |
| Mixed Conifer Forest | |

- ### General Reference Features
- | | |
|---------------------------|--------------------------------|
| Project Study Area | 345kV Transmission Line |
| 138kV Transmission Line | Power Plant |
| Substation | Railroad |
| Major Road | Natural Gas Pipeline |
| County Boundary | Link Node |
| Link Tag / Substation Tag | Alternative Routes |
| Proposed Substation Site | 2 Mile Wide Inventory Corridor |
| Township and Range Line | |



SOURCES: Vegetation, SWREGAP 2004, BLM 1997; Wetlands, NWI 2004; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp

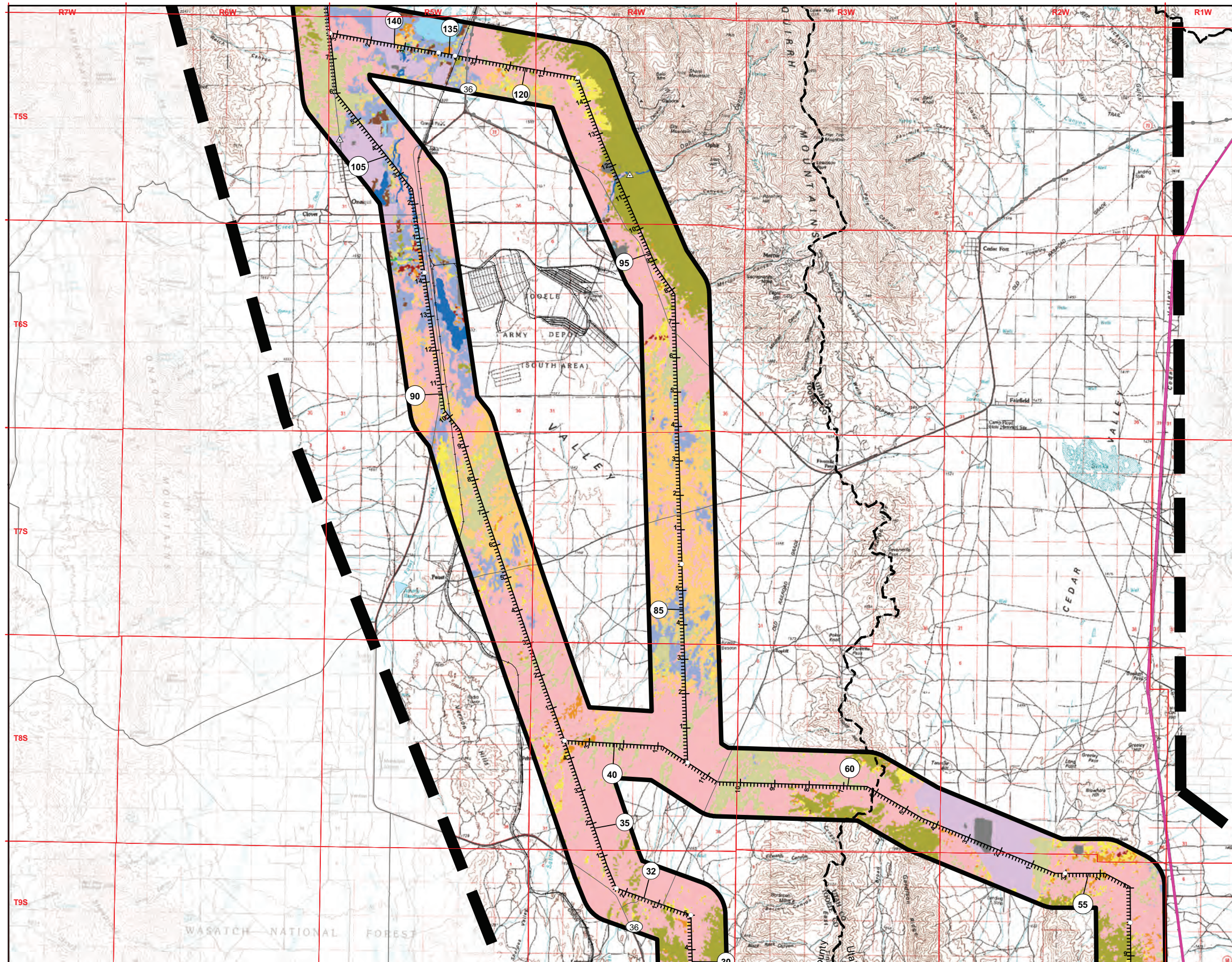
Vegetation_FEIS_landscape.mxd

Map C-4

1 of 3
April 2010



Primary Vegetation Communities MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS

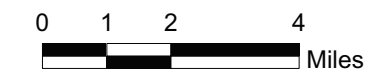


Legend

- | | |
|----------------------|-------------------|
| Agriculture | Pinyon-Juniper |
| Barren | Spruce-Fir Forest |
| Disturbed | Riparian |
| Invasive Grassland | Wetlands |
| Salt Desert Shrub | Water |
| Grassland | Hybrid Oak Stand |
| Greasewood | |
| Big Sagebrush | |
| Mixed Sagebrush | |
| Mountain Shrub | |
| Deciduous Forest | |
| Mixed Conifer Forest | |

General Reference Features

- Project Study Area
- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Railroad
- Major Road
- Natural Gas Pipeline
- County Boundary
- Link Node
- Link Tag / Substation Tag
- Alternative Routes
- Proposed Substation Site
- 2 Mile Wide Inventory Corridor
- Township and Range Line



SOURCES: Vegetation, SWREGAP 2004, BLM 1997; Wetlands, NWI 2004; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp

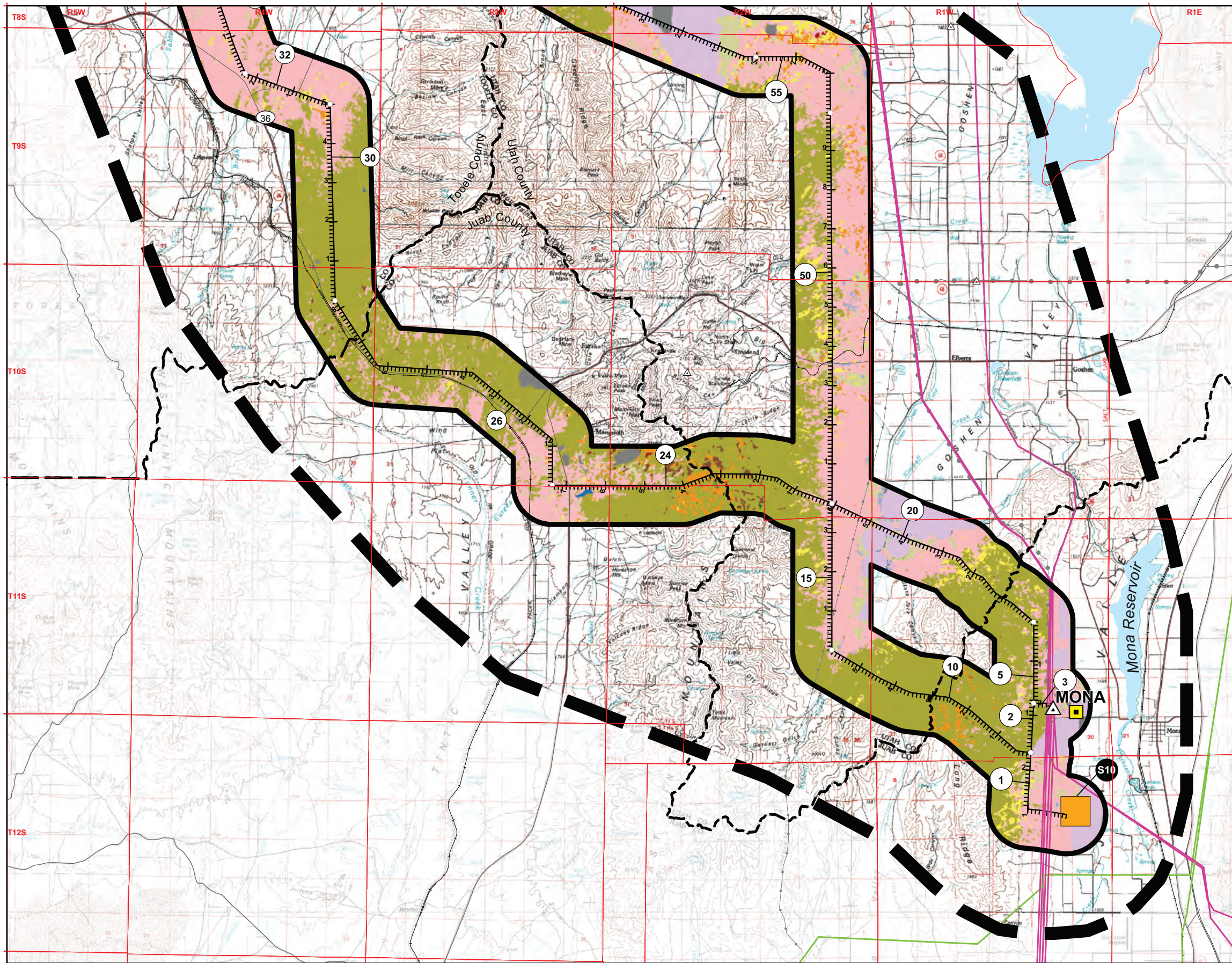
Vegetation_FEIS_landscape.mxd

Map C-4

2 of 3

April 2010





- ### Legend
- | | |
|----------------------|-------------------|
| Agriculture | Pinyon-Juniper |
| Barren | Spruce-Fir Forest |
| Disturbed | Riparian |
| Invasive Grassland | Wetlands |
| Salt Desert Shrub | Water |
| Grassland | Hybrid Oak Stand |
| Greasewood | |
| Big Sagebrush | |
| Mixed Sagebrush | |
| Mountain Shrub | |
| Deciduous Forest | |
| Mixed Conifer Forest | |

- ### General Reference Features
- | | |
|--------------------------------|--|
| Project Study Area | |
| 345kV Transmission Line | |
| 138kV Transmission Line | |
| Power Plant | |
| Substation | |
| Railroad | |
| Major Road | |
| Natural Gas Pipeline | |
| County Boundary | |
| Link Node | |
| Link Tag / Substation Tag | |
| Alternative Routes | |
| Proposed Substation Site | |
| 2 Mile Wide Inventory Corridor | |
| Township and Range Line | |



SOURCES: Vegetation, SWREGAP 2004, BLM 1997; Wetlands, NWI 2004; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp

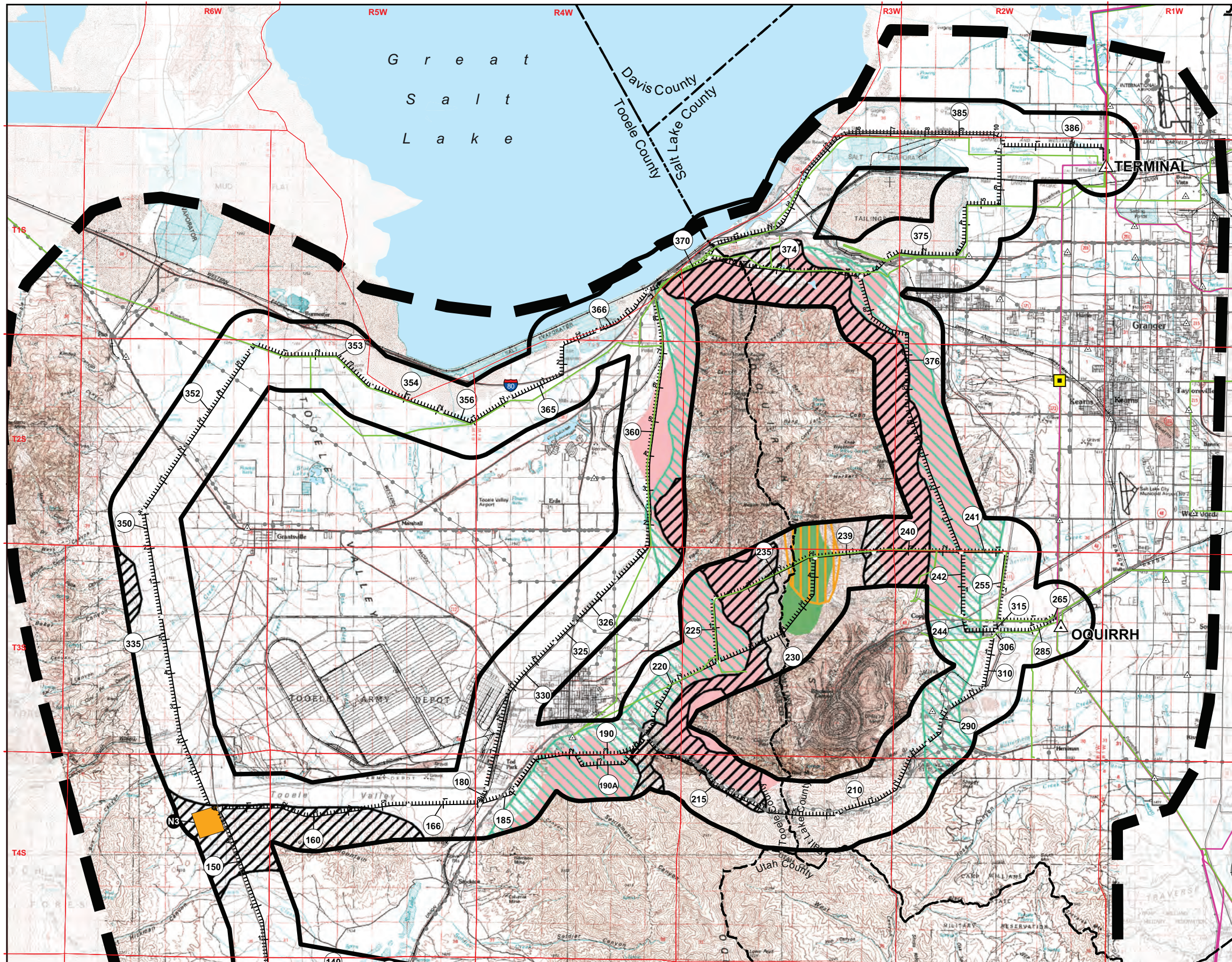
Vegetation_FEIS_landscape.mxd

Map C-4

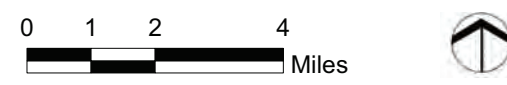
3 of 3

April 2010





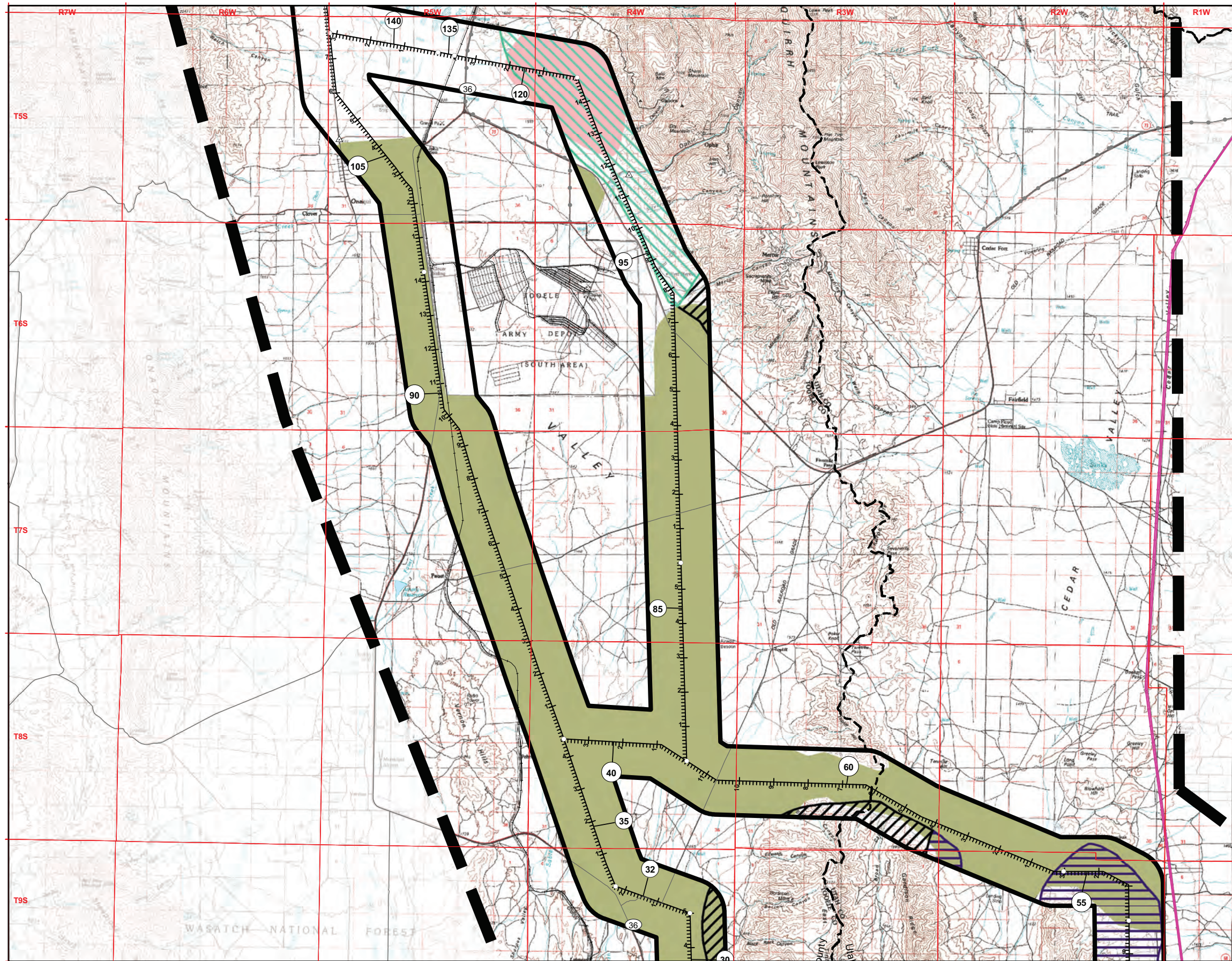
- ### Legend
- Mule Deer Spring/Fall Habitat
 - Mule Deer Summer/Fall Habitat
 - Mule Deer Winter/Spring Habitat
 - Mule Deer Winter Habitat
 - Elk Summer/Fall Habitat
 - Elk Winter/Spring Habitat
 - Elk Winter Habitat
 - Pronghorn Year-Long Habitat
- ### General Reference Features
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - Alternative Routes
 - Proposed Substation Site
 - 2 Mile Wide Inventory Corridor
 - Township and Range Line



SOURCES: Mule Deer, Elk and Pronghorn Habitat, UDWR 2006;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

Map C-5
 1 of 3
 April 2010



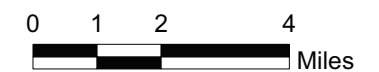


Legend

- Mule Deer Spring/Fall Habitat
- Mule Deer Summer/Fall Habitat
- Mule Deer Winter/Spring Habitat
- Mule Deer Winter Habitat
- Elk Summer/Fall Habitat
- Elk Winter/Spring Habitat
- Elk Winter Habitat
- Pronghorn Year-Long Habitat

General Reference Features

- Project Study Area
- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Railroad
- Major Road
- Natural Gas Pipeline
- County Boundary
- Link Node
- Link Tag / Substation Tag
- Alternative Routes
- Proposed Substation Site
- 2 Mile Wide Inventory Corridor
- Township and Range Line



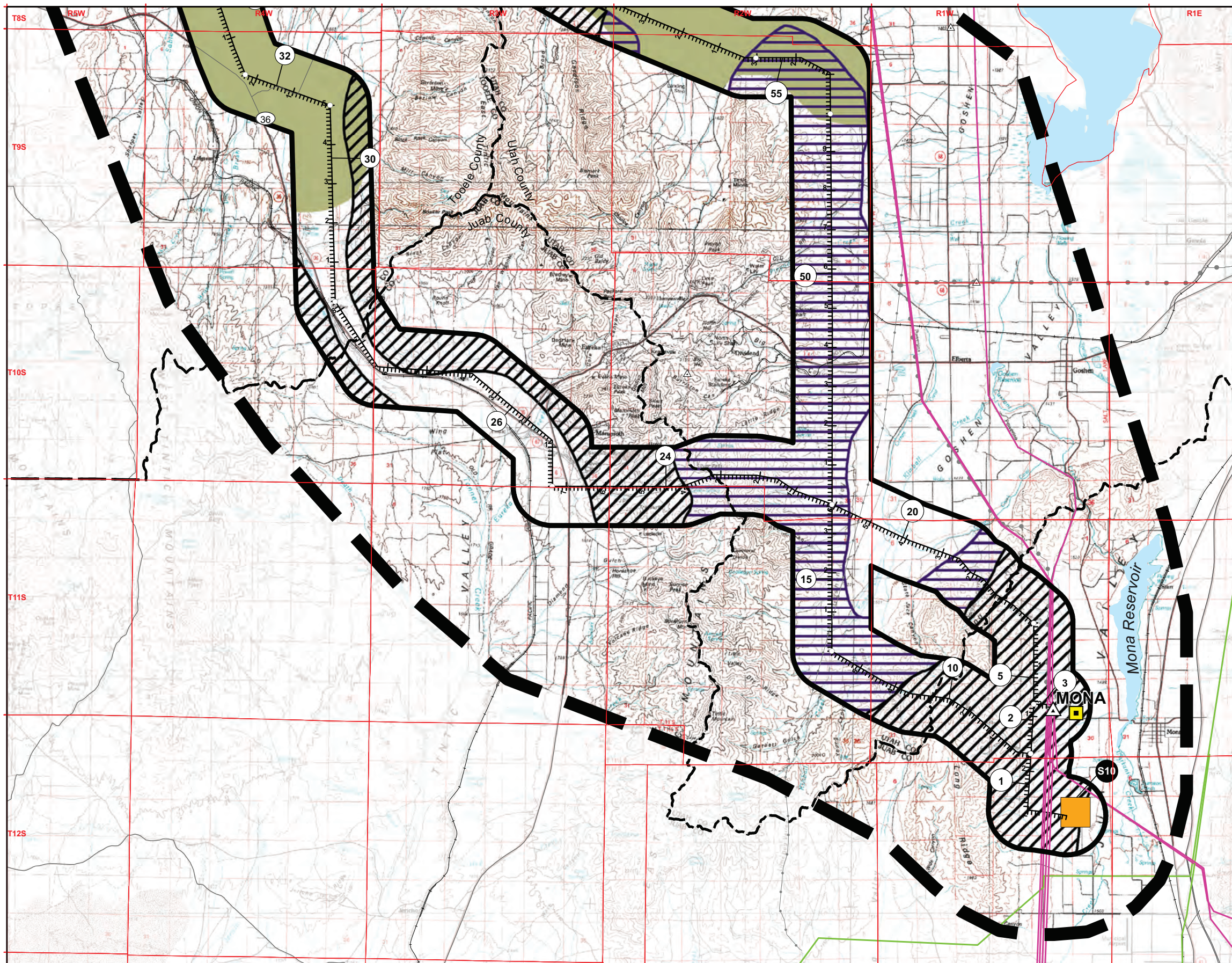
SOURCES: Mule Deer, Elk and Pronghorn Habitat, UDWR 2006;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

Crucial_BigGame_FEIS_landscape.mxd

Map C-5

2 of 3
 April 2010





- ### Legend
- Mule Deer Spring/Fall Habitat
 - Mule Deer Summer/Fall Habitat
 - Mule Deer Winter/Spring Habitat
 - Mule Deer Winter Habitat
 - Elk Summer/Fall Habitat
 - Elk Winter/Spring Habitat
 - Elk Winter Habitat
 - Pronghorn Year-Long Habitat

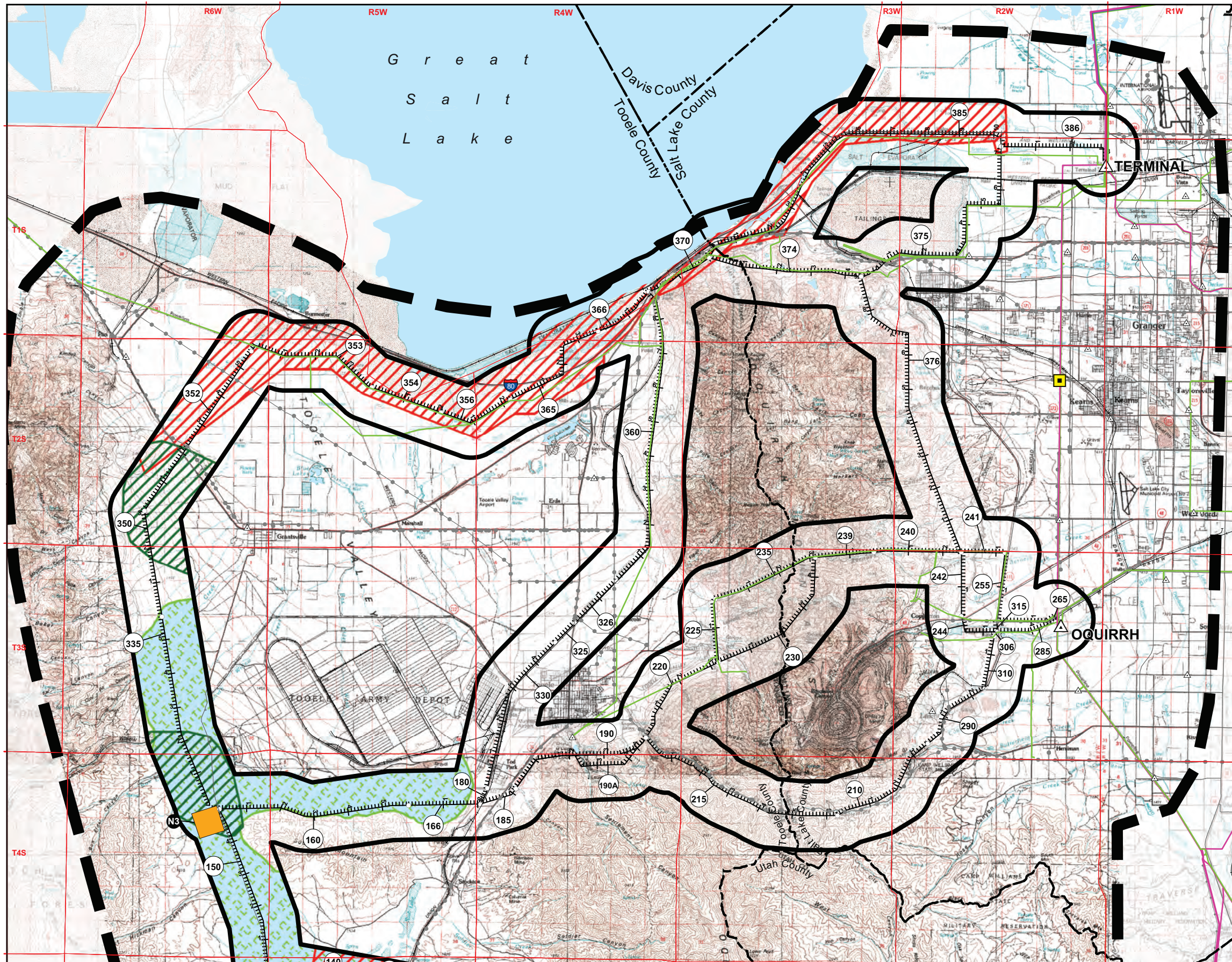
- ### General Reference Features
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - Alternative Routes
 - Proposed Substation Site
 - 2 Mile Wide Inventory Corridor
 - Township and Range Line



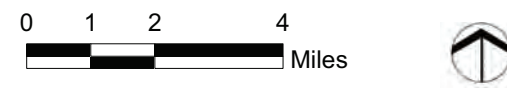
SOURCES: Mule Deer, Elk and Pronghorn Habitat, UDWR 2006;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

Map C-5
 3 of 3
 April 2010



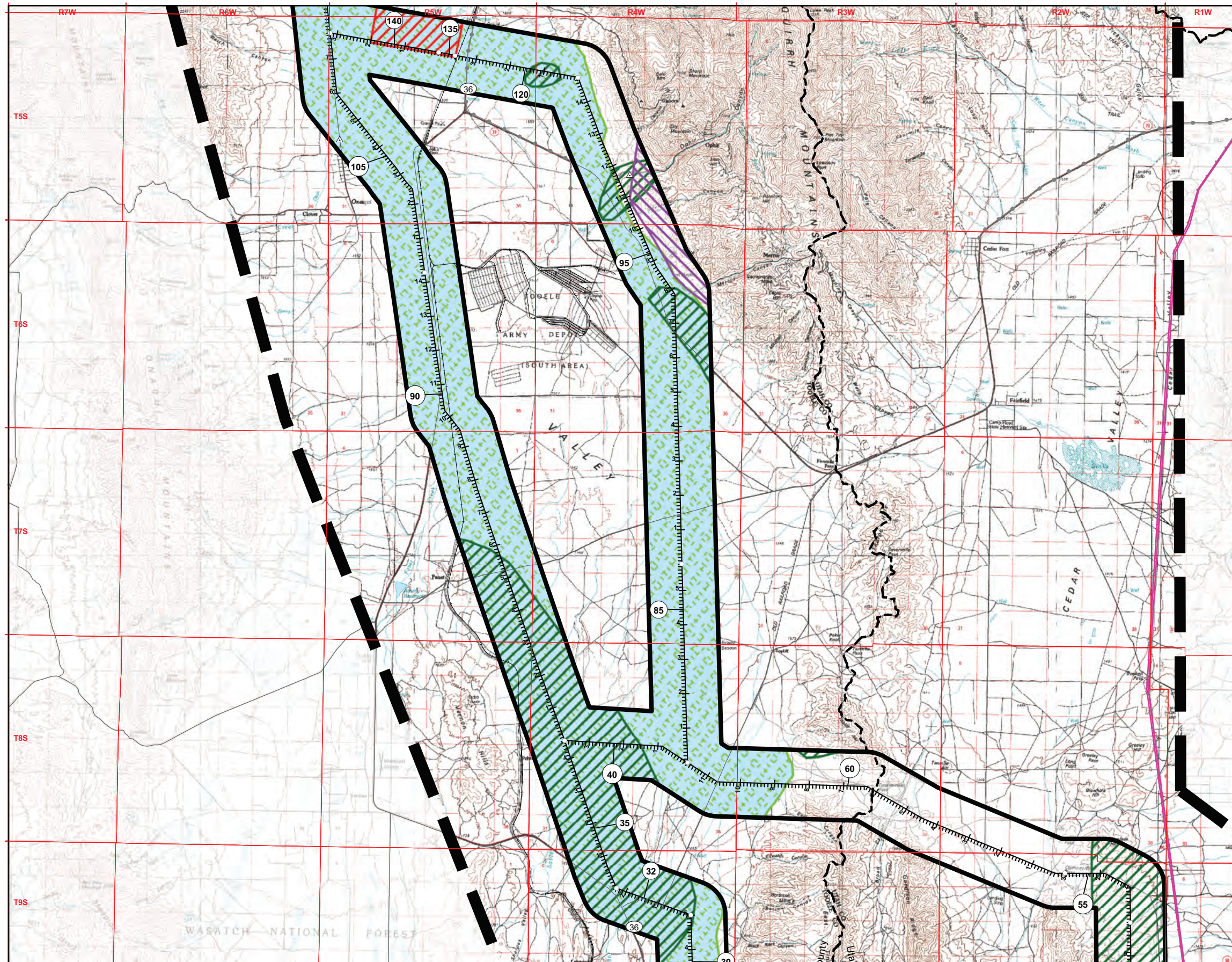


- Legend**
- Waterfowl Habitat and Movement Pathways
 - Core Raptor Nesting Area
 - Crucial Bat Area
 - Crucial Sage Grouse Brood and Winter Habitat
- General Reference Features**
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - Alternative Routes
 - Proposed Substation Site
 - 2 Mile Wide Inventory Corridor
 - Township and Range Line



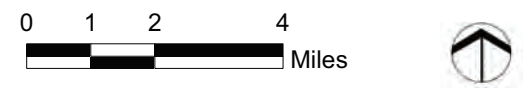
SOURCES: Crucial Sage Grouse Brood and Winter Habitat, UDWR 7/06; Other sensitive wildlife habitats were delineated based on existing data as described in EIS section 3.2.3; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp





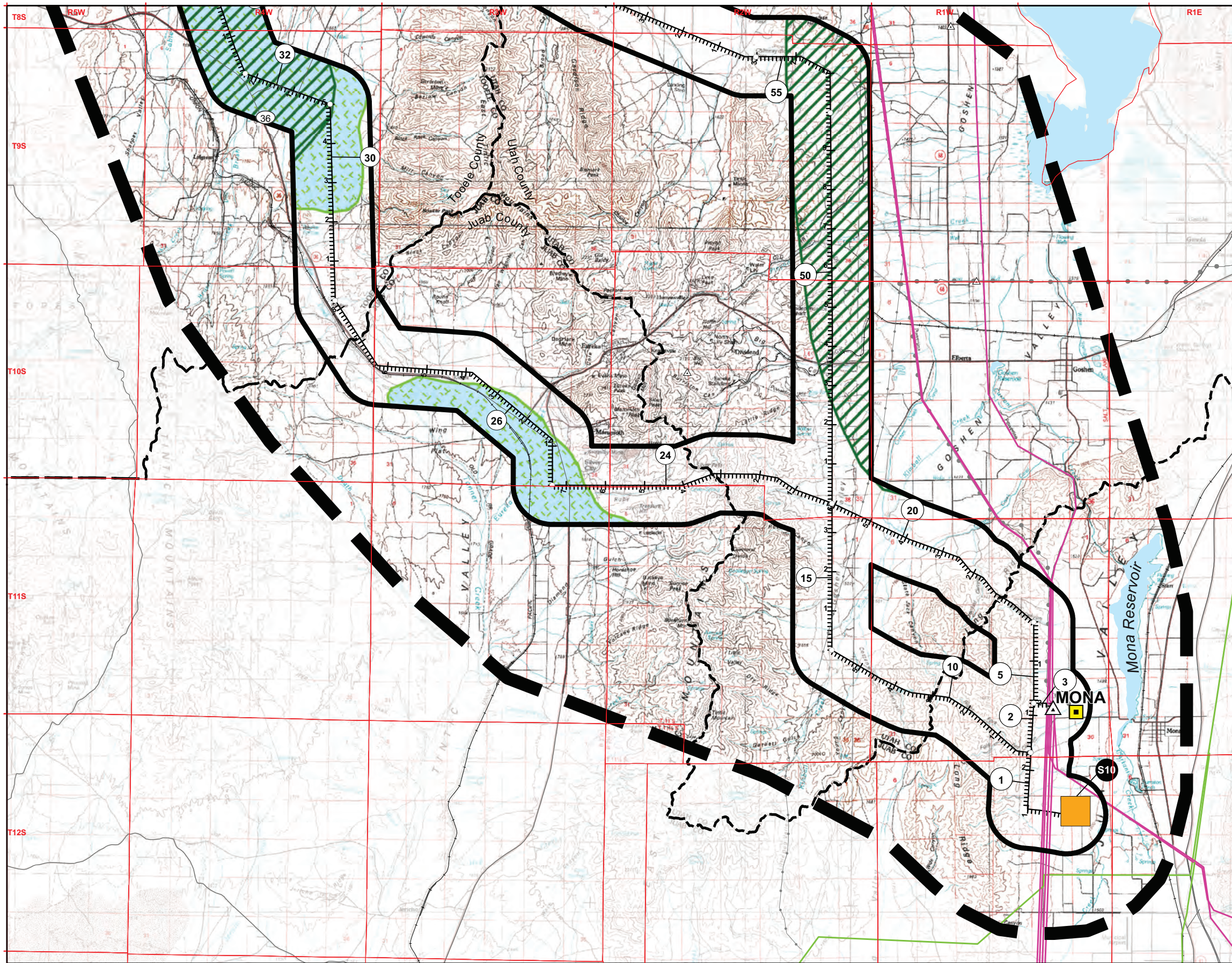
- Legend**
- Waterfowl Habitat and Movement Pathways
 - Core Raptor Nesting Area
 - Crucial Bat Area
 - Crucial Sage Grouse Brood and Winter Habitat

- General Reference Features**
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - Alternative Routes
 - Proposed Substation Site
 - 2 Mile Wide Inventory Corridor
 - Township and Range Line



SOURCES: Crucial Sage Grouse Brood and Winter Habitat, UDWR 7/06; Other sensitive wildlife habitats were delineated based on existing data as described in EIS section 3.2.3; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp





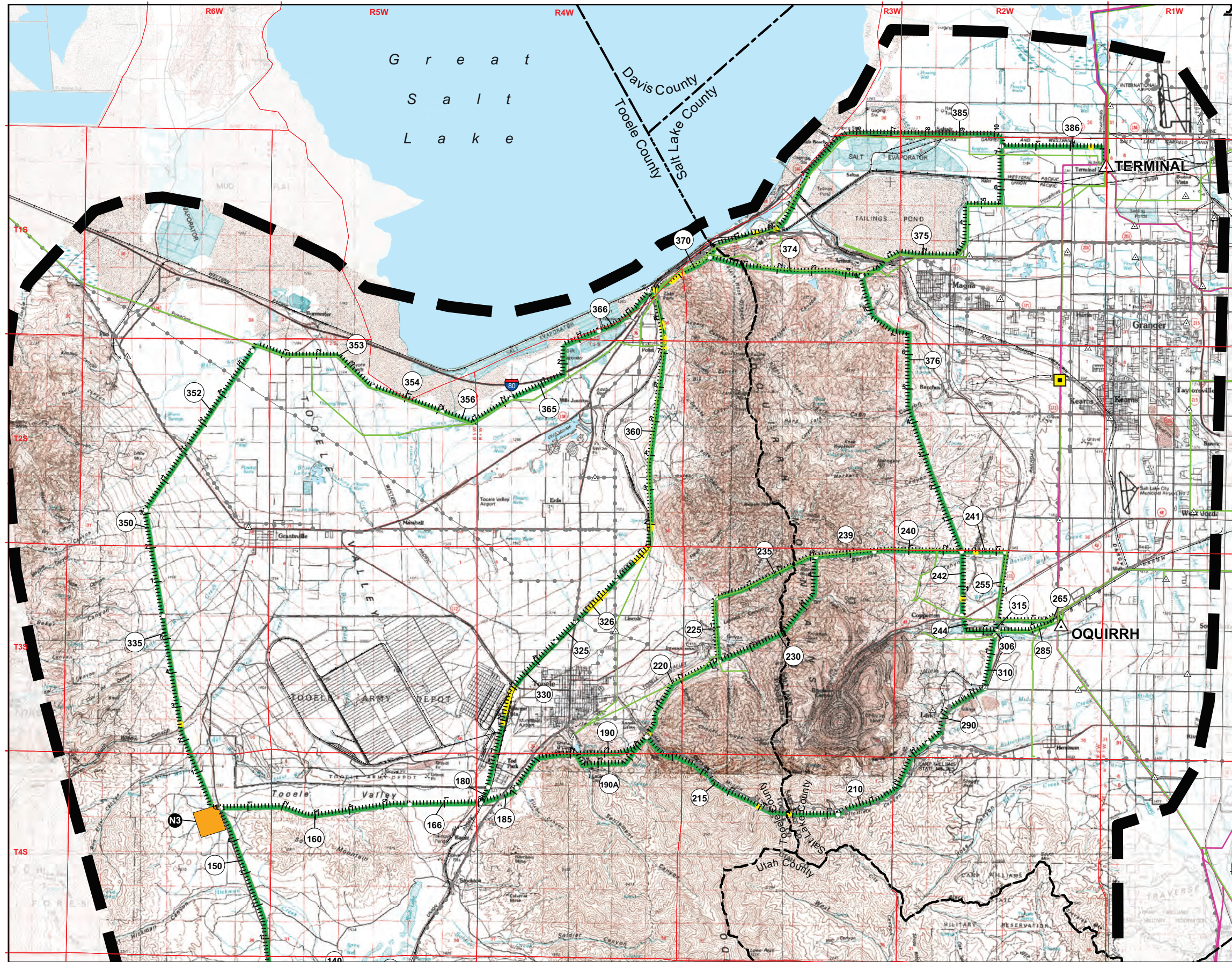
- Legend**
- Waterfowl Habitat and Movement Pathways
 - Core Raptor Nesting Area
 - Crucial Bat Area
 - Crucial Sage Grouse Brood and Winter Habitat

- General Reference Features**
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - Alternative Routes
 - Proposed Substation Site
 - 2 Mile Wide Inventory Corridor
 - Township and Range Line



SOURCES: Crucial Sage Grouse Brood and Winter Habitat, UDWR 7/06; Other sensitive wildlife habitats were delineated based on existing data as described in EIS section 3.2.3; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp





Legend

- Low Sensitivity
- Moderate Sensitivity

General Reference Features

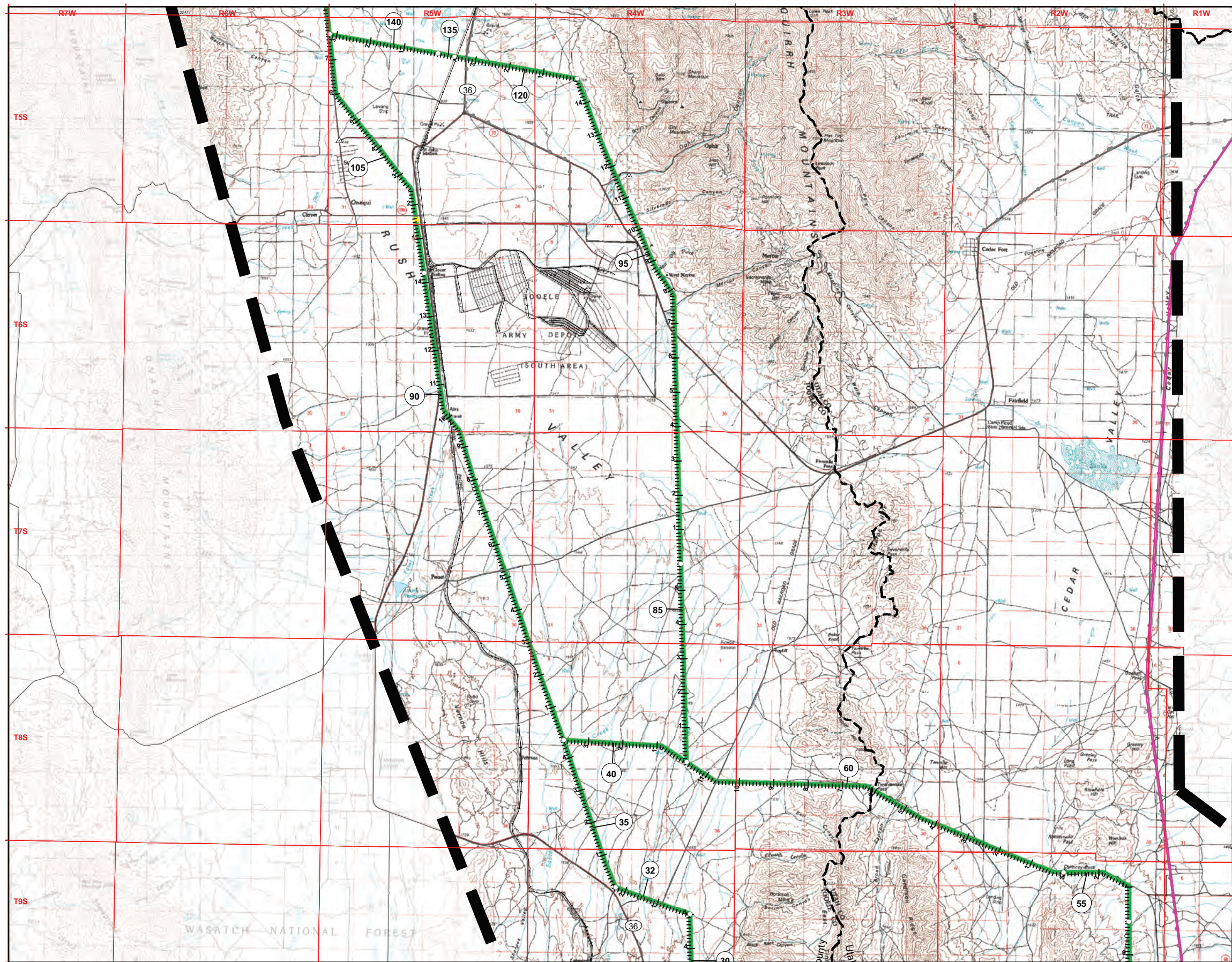
- Project Study Area
- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Railroad
- Major Road
- Natural Gas Pipeline
- County Boundary
- Link Node
- Link Tag / Substation Tag
- Alternative Routes
- Proposed Substation Site
- Township and Range Line



SOURCES: Crucial Sage Grouse Brood and Winter Habitat, UDWR 7/06; Other sensitive wildlife habitats were delineated based on existing data as described in EIS section 3.2.3; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp

Map C-7
1 of 3
April 2010





Legend

- Low Sensitivity
- Moderate Sensitivity

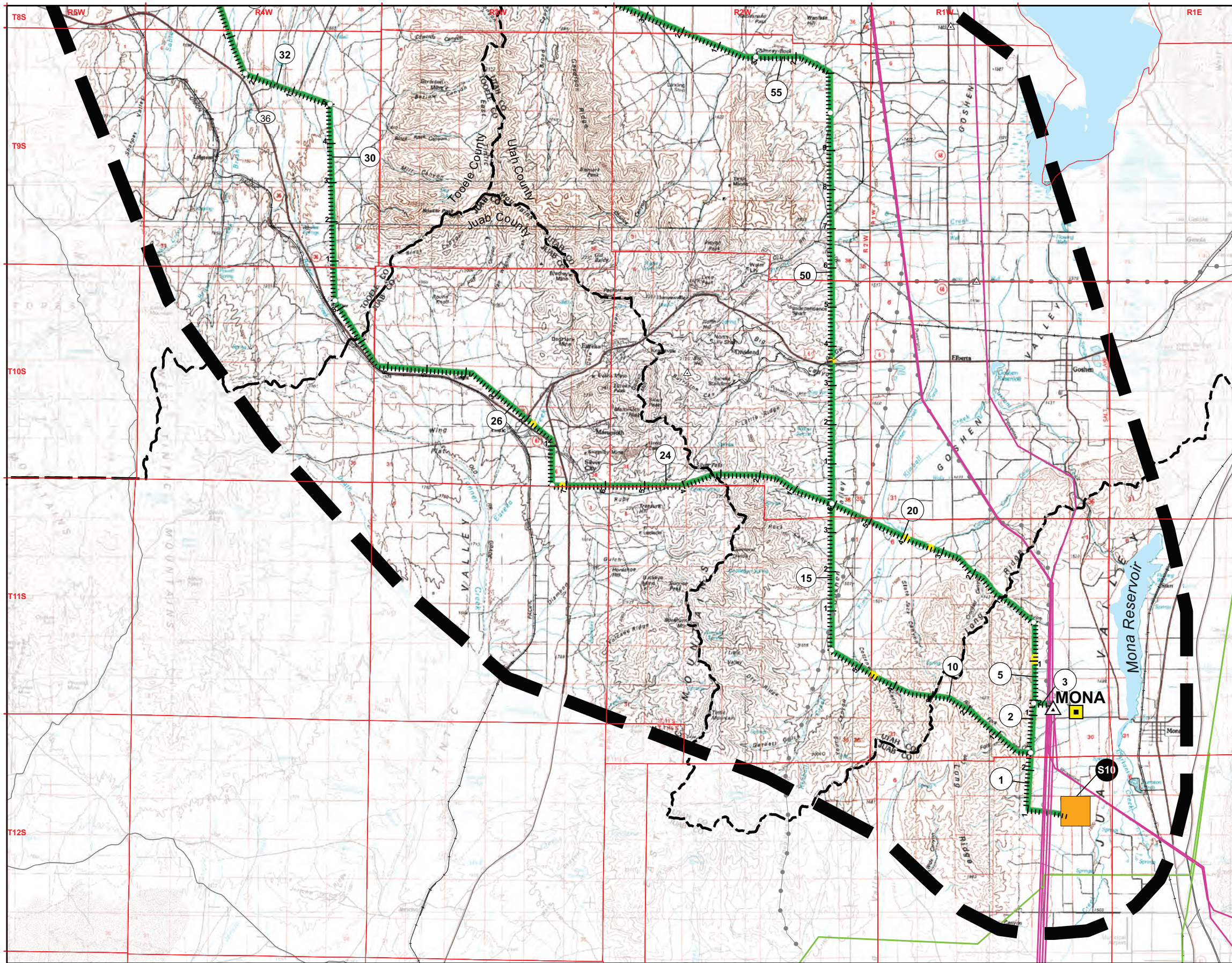
General Reference Features

- Project Study Area
- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Railroad
- Major Road
- Natural Gas Pipeline
- County Boundary
- Link Node
- Link Tag / Substation Tag
- Alternative Routes
- Proposed Substation Site
- Township and Range Line





SOURCES: Crucial Sage Grouse Brood and Winter Habitat, UDWR 7/06; Other sensitive wildlife habitats were delineated based on existing data as described in EIS section 3.2.3; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp



















Legend

-  Low Sensitivity
-  Moderate Sensitivity

General Reference Features

-  Project Study Area
-  345kV Transmission Line
-  138kV Transmission Line
-  Power Plant
-  Substation
-  Railroad
-  Major Road
-  Natural Gas Pipeline
-  County Boundary
-  Link Node
-  Link Tag / Substation Tag
-  Alternative Routes
-  Proposed Substation Site
-  Township and Range Line



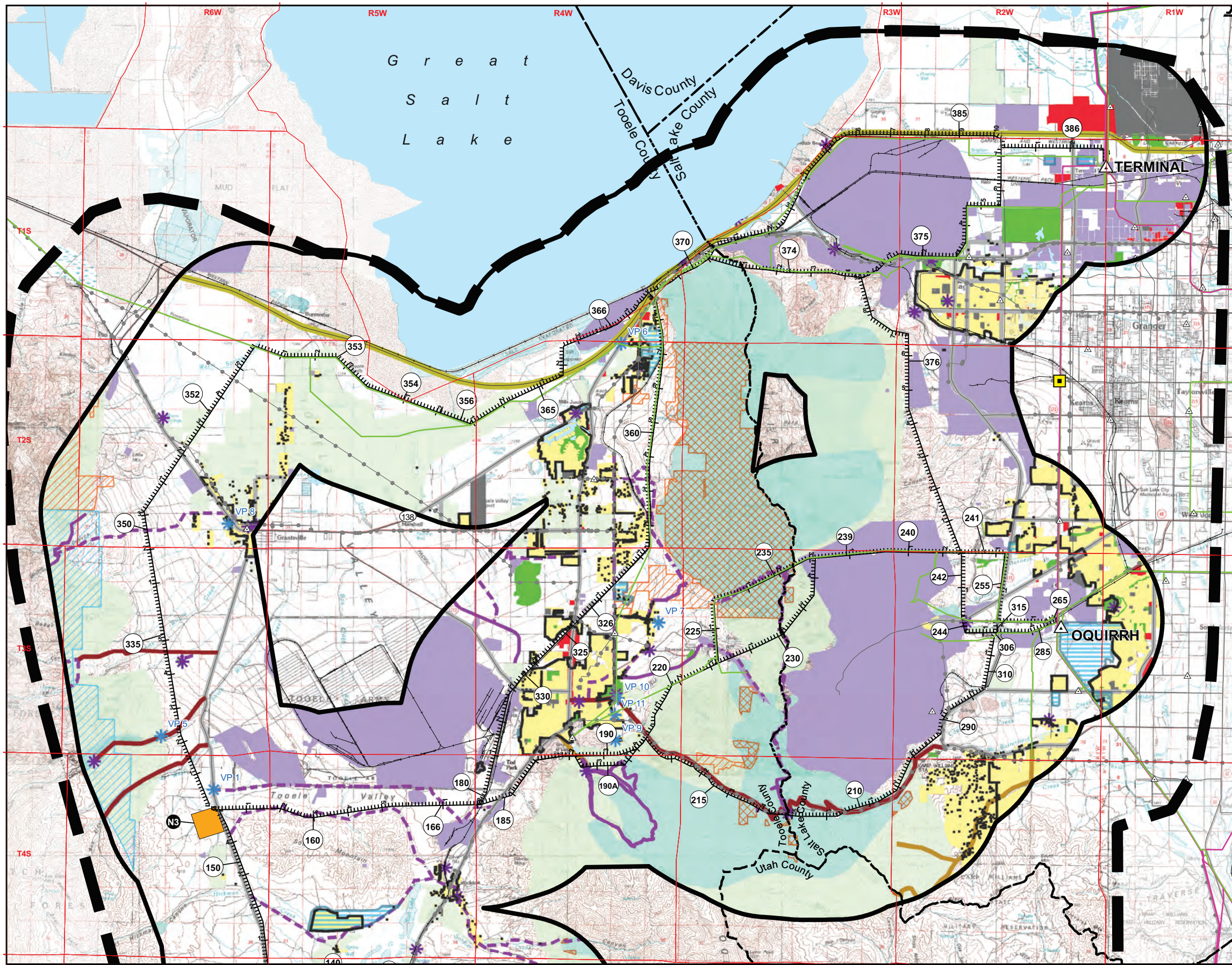
SOURCES: Crucial Sage Grouse Brood and Winter Habitat, UDWR 7/06; Other sensitive wildlife habitats were delineated based on existing data as described in EIS section 3.2.3; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp

Map C-7

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April 2010

Cultural_FEIS_landscape.mxd





Legend

- VP # Simulation Viewpoint
- Residences
- * Recreation Area / Park / Overlook / Historic Site
- Existing Recreation Trail
- Future Recreation Trail
- National Historic Trail - Pony Express or California (Along I-80)
- Designated Scenic Byway / Backway
- Recreation Destination Route
- Travel Routes
- Approved Future Developments

Image Types

- Residential
- Golf Course / Developed Parks
- Commercial
- Industrial / Military
- Institutional

Scenic Quality Classes

- Class A
- Class B
- Class C

Agency Management Objectives

- Bureau of Land Management
 - VRM Class II
 - VRM Class III
- USFS Visual Quality Objectives
 - Modification
 - Partial Retention
- USFS Scenic Integrity Objectives
 - High

General Reference Features

- Project Study Area
- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Railroad
- Major Road
- Natural Gas Pipeline
- City Boundary
- County Boundary
- Link Node
- Link Tag / Substation Tag
- 2 Mile Wide Inventory Corridor
- Alternative Routes
- Proposed Substation Site
- Township and Range Line

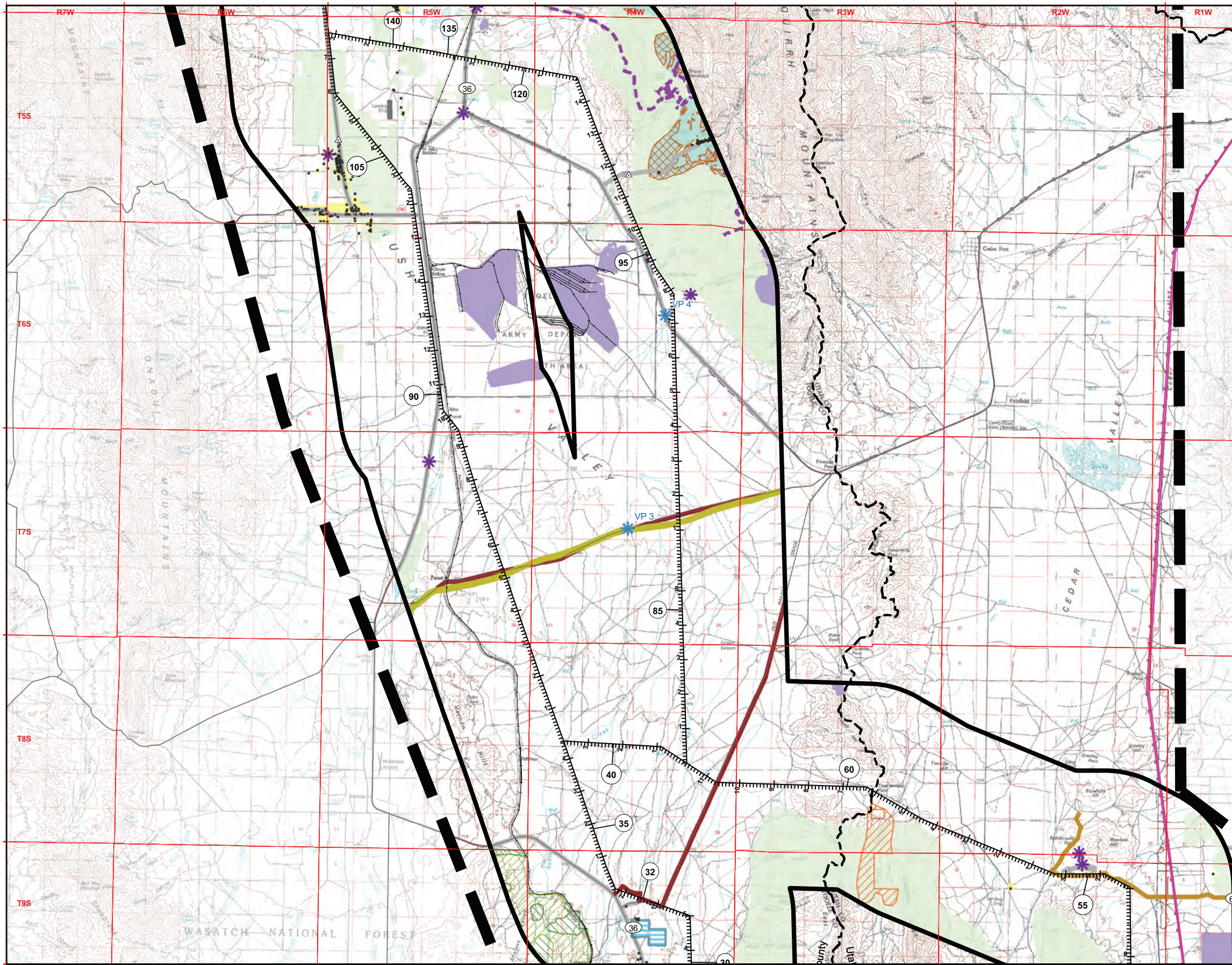
0 1 2 4 Miles

SOURCES: Land Use, Associated Municipalities and Digitized from Aerial Imagery 2006, 2008, 2009; VRM, UTBLM 1990; SQO & SIO, USFS 2003; Sensitive Viewers, Digitized from NAIP 2006; UTBLM, USFS, NRHP; Associated Counties and Municipalities; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp Aerial Imagery, NAIP 2006; DigitalGlobe Satellite Image - Collection date: May 21, 2009; © DigitalGlobe, Inc. All Rights Reserved; Aerial Photography - Captured June 23 - July 13, 2008; Zoning_FEIS_Landscape.mxd

Map C-8



**Visual Resource Management, Sensitive Viewers, and Scenic Quality
MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS**



Legend

- VP # Simulation Viewpoint
 - Residences
 - Recreation Area / Park / Overlook / Historic Site
 - Existing Recreation Trail
 - Future Recreation Trail
 - National Historic Trail - Pony Express or California (Along I-80)
 - Designated Scenic Byway / Backway
 - Recreation Destination Route
 - Travel Routes
 - Approved Future Developments
- Image Types**
- Residential
 - Golf Course / Developed Parks
 - Commercial
 - Industrial / Military
 - Institutional
- Scenic Quality Classes**
- Class A
 - Class B
 - Class C
- Agency Management Objectives**
- Bureau of Land Management**
- VRM Class II
 - VRM Class III
- USFS Visual Quality Objectives**
- Modification
 - Partial Retention
- USFS Scenic Integrity Objectives**
- High

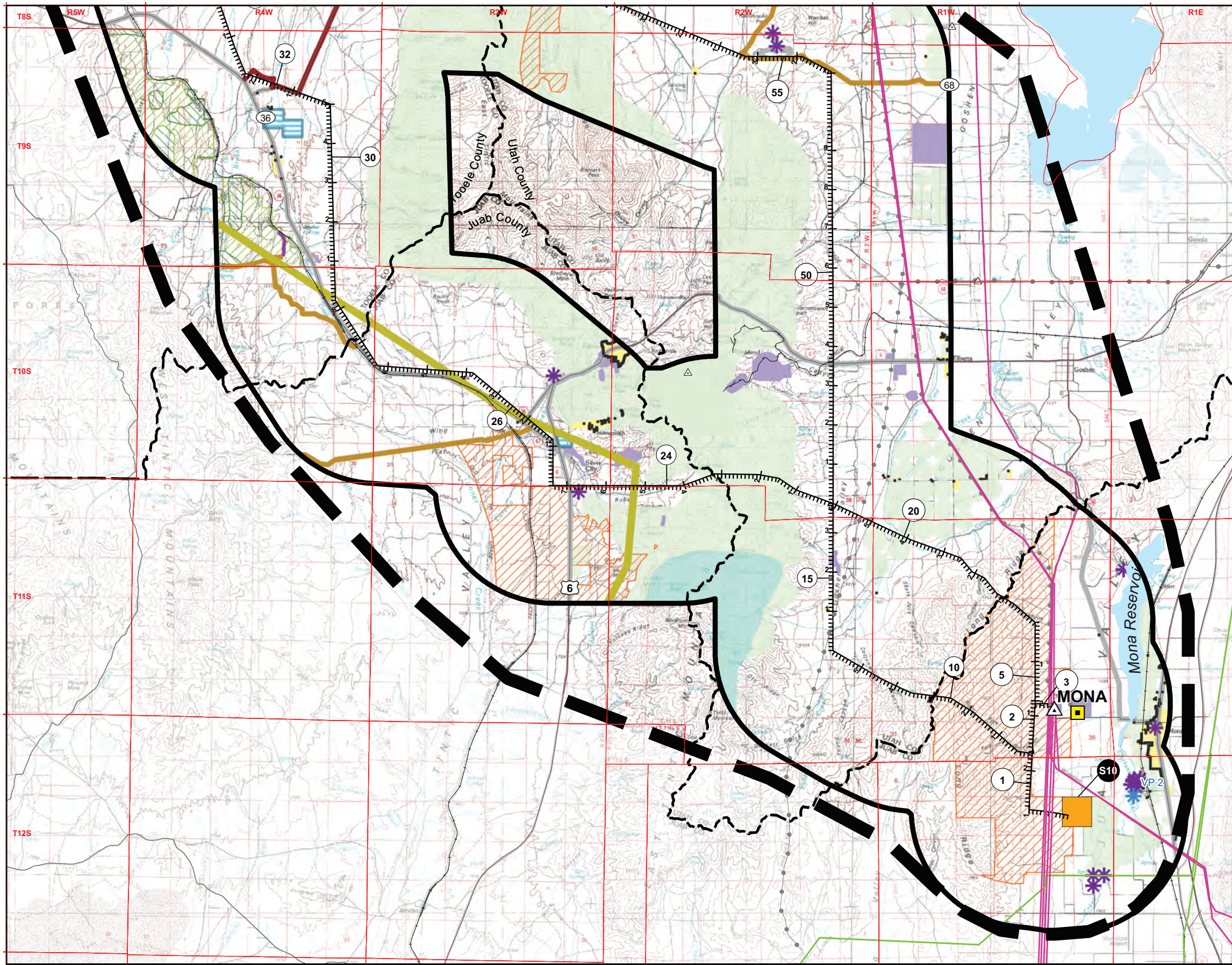
General Reference Features

- Project Study Area
- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Railroad
- Major Road
- Natural Gas Pipeline
- City Boundary
- County Boundary
- Link Node
- Link Tag / Substation Tag
- 2 Mile Wide Inventory Corridor
- Alternative Routes
- Proposed Substation Site
- Township and Range Line



SOURCES: Land Use, Associated Municipalities and Digitized from Aerial Imagery 2006, 2008, 2009; VRM, UTBLM 1990; SQO & SIO, USFS 2003; Sensitive Viewers, Digitized from NAIP 2006; UTBLM, USFS, NRHP; Associated Counties and Municipalities; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp Aerial Imagery, NAIP 2006; DigitalGlobe Satellite Image - Collection date: May 21, 2009; © DigitalGlobe, Inc. All Rights Reserved; Aerial Photography - Captured June 23 - July 13, 2008; Zoning_FEIS_Landscape.mxd





Legend

- VP # Simulation Viewpoint
- Residences
- * Recreation Area / Park / Overlook / Historic Site
- Existing Recreation Trail
- Future Recreation Trail
- National Historic Trail - Pony Express or California (Along I-80)
- Designated Scenic Byway / Backway
- Recreation Destination Route
- Travel Routes
- Approved Future Developments

Image Types

- Residential
- Golf Course / Developed Parks
- Commercial
- Industrial / Military
- Institutional

Scenic Quality Classes

- Class A
- Class B
- Class C

Agency Management Objectives

- Bureau of Land Management
 - VRM Class II
 - VRM Class III
- USFS Visual Quality Objectives
 - Modification
 - Partial Retention
- USFS Scenic Integrity Objectives
 - High

General Reference Features

- Project Study Area
- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Railroad
- Major Road
- Natural Gas Pipeline
- City Boundary
- County Boundary
- Link Node
- Link Tag / Substation Tag
- 2 Mile Wide Inventory Corridor
- Alternative Routes
- Proposed Substation Site
- Township and Range Line

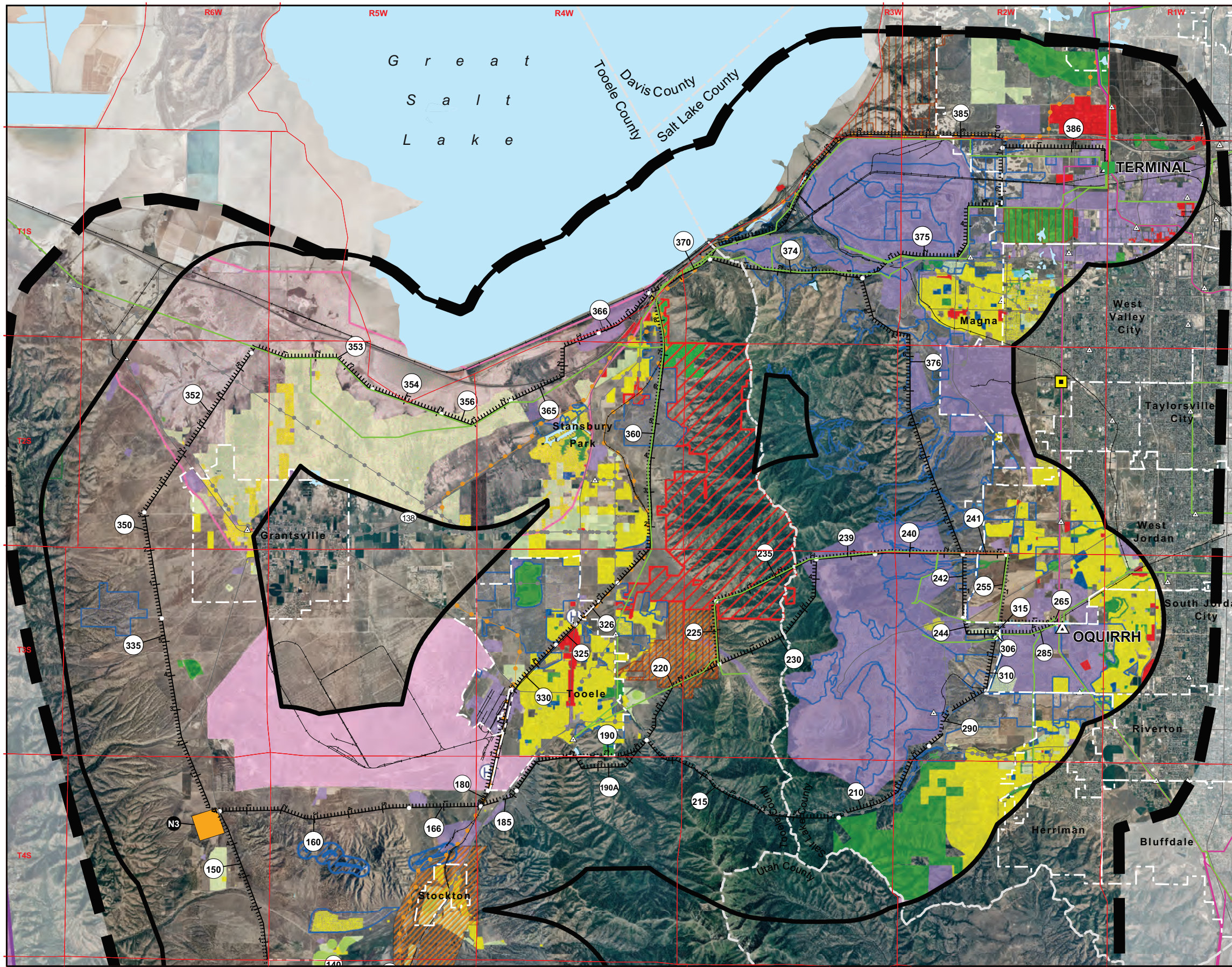
0 1 2 4 Miles

SOURCES: Land Use, Associated Municipalities and Digitized from Aerial Imagery 2006, 2008, 2009; VRM, UTBLM 1990; SQO & SIO, USFS 2003; Sensitive Viewers, Digitized from NAIP 2006; UTBLM, USFS, NRHP; Associated Counties and Municipalities; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp Aerial Imagery, NAIP 2006; DigitalGlobe Satellite Image - Collection date: May 21, 2009; © DigitalGlobe, Inc. All Rights Reserved; Aerial Photography - Captured June 23 - July 13, 2008; Zoning_FEIS_Landscape.mxd

Map C-8

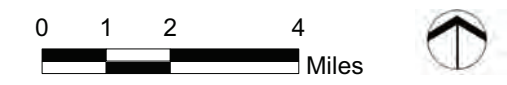


Visual Resource Management, Sensitive Viewers, and Scenic Quality
MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



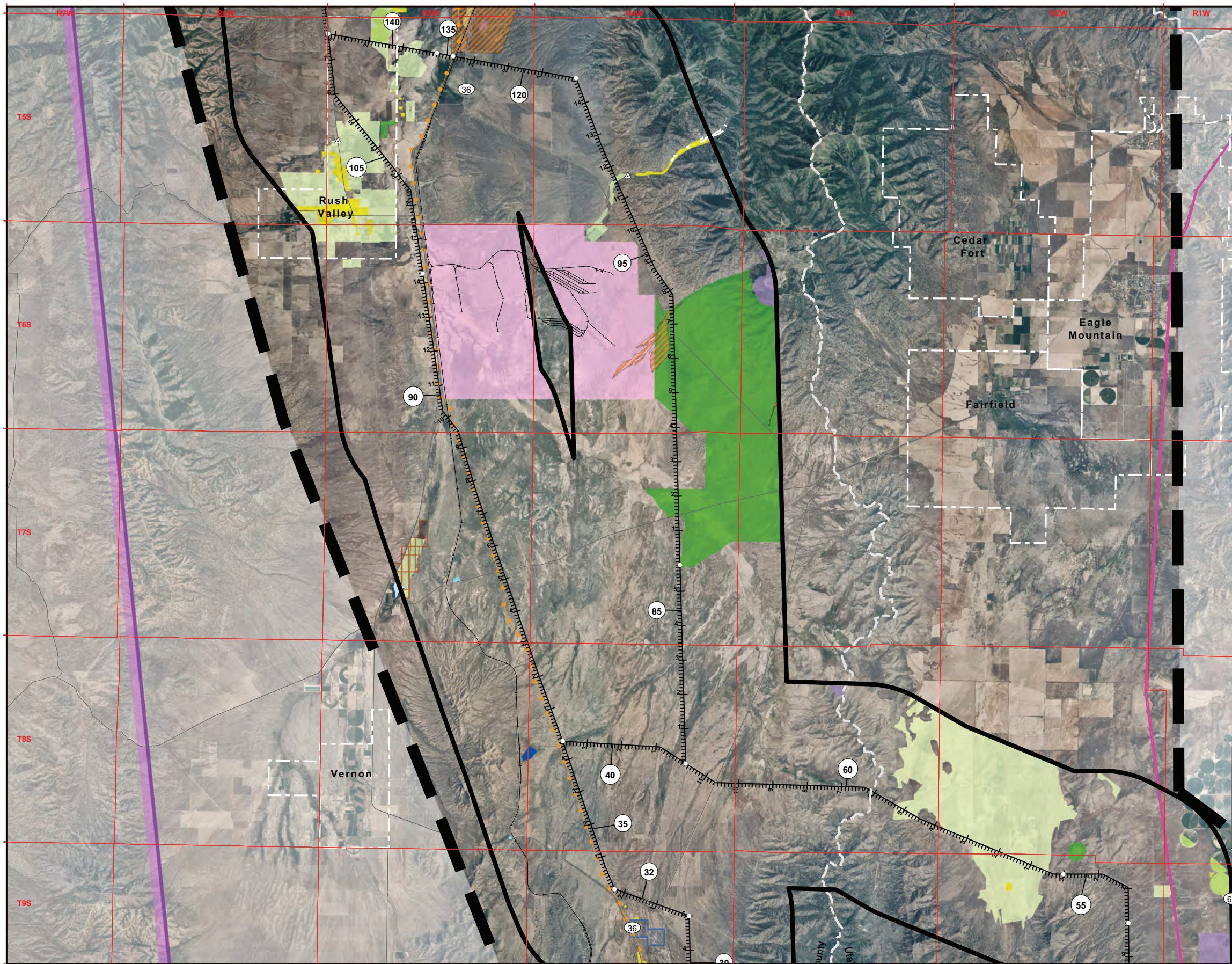
- ### Legend
- | | |
|--|--|
| Residential | Education Facility |
| Commercial | Airport / Airstrip |
| Mixed Use | Military |
| Industrial | Public Facility |
| Church and Cemetery | Utilities |
| Agriculture | Wildlife Mgmt Area |
| Center Pivot Agriculture | Tooele SAMP |
| Communication Facility | Proposed UNEV Pipeline Alignment |
| Recreation / Parks / Preservation | |
| Vacant / Undeveloped / Grazing | |
| Wilderness Study Area | |
| North Oquirrh Mgmt Area | |
| Proposed Development | |
| Superfund / Hazardous Waste Site | |
| Proposed Wind Farm | |
| Helipoint | |
| Military Operating Area | |

- ### General Reference Features
- | | |
|---|--------------------------------|
| | Project Study Area |
| | 345kV Transmission Line |
| | 138kV Transmission Line |
| | Power Plant |
| | Substation |
| | Railroad |
| | Major Road |
| | Natural Gas Pipeline |
| | County Boundary |
| | City Boundary |
| | Link Node |
| 95 | Link Tag / Substation Tag |
| | 6 Mile Wide Inventory Corridor |
| | Alternative Routes |
| | Proposed Substation Site |
| | Township and Range Line |



SOURCES: Land Use, Associated Municipalities and Digitized from NAIP 2006 Aerials; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp Aerial Imagery, NAIP 2006; DigitalGlobe Satellite Image - Collection date: May 21, 2009; © DigitalGlobe, Inc. All Rights Reserved; Aerial Photography - Captured June 23 - July 13, 2008; Existing_Land_Use_FEIS_landscape.mxd





- ### Legend
- | | |
|-----------------------------------|----------------------------------|
| Residential | Education Facility |
| Commercial | Airport / Airstrip |
| Mixed Use | Military |
| Industrial | Public Facility |
| Church and Cemetery | Utilities |
| Agriculture | Wildlife Mgmt Area |
| Center Pivot Agriculture | Tooele SAMP |
| Communication Facility | Proposed UNEV Pipeline Alignment |
| Recreation / Parks / Preservation | |
| Vacant / Undeveloped / Grazing | |
| Wilderness Study Area | |
| North Oquirrh Mgmt Area | |
| Proposed Development | |
| Superfund / Hazardous Waste Site | |
| Proposed Wind Farm | |
| Helipoint | |
| Military Operating Area | |

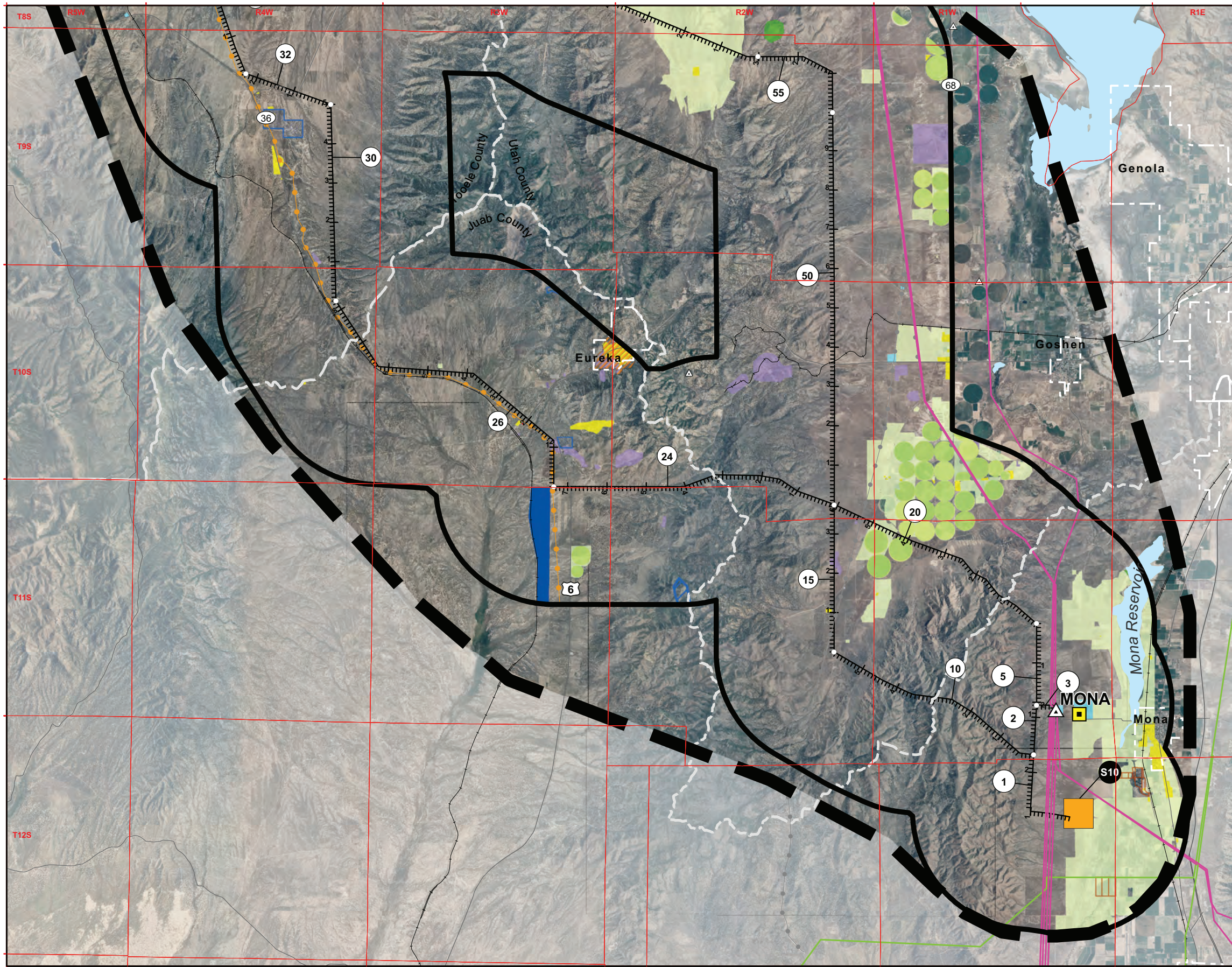
- ### General Reference Features
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - City Boundary
 - Link Node
 - Link Tag / Substation Tag
 - 6 Mile Wide Inventory Corridor
 - Alternative Routes
 - Proposed Substation Site
 - Township and Range Line



SOURCES: Land Use, Associated Municipalities and Digitized from NAIP 2006 Aerials;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp Aerial Imagery, NAIP 2006
 DigitalGlobe Satellite Image - Collection date: May 21, 2009
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 Aerial Photography - Captured June 23 - July 13, 2008
 Existing_Land_Use_FEIS_landscape.mxd



Existing Land Use
MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



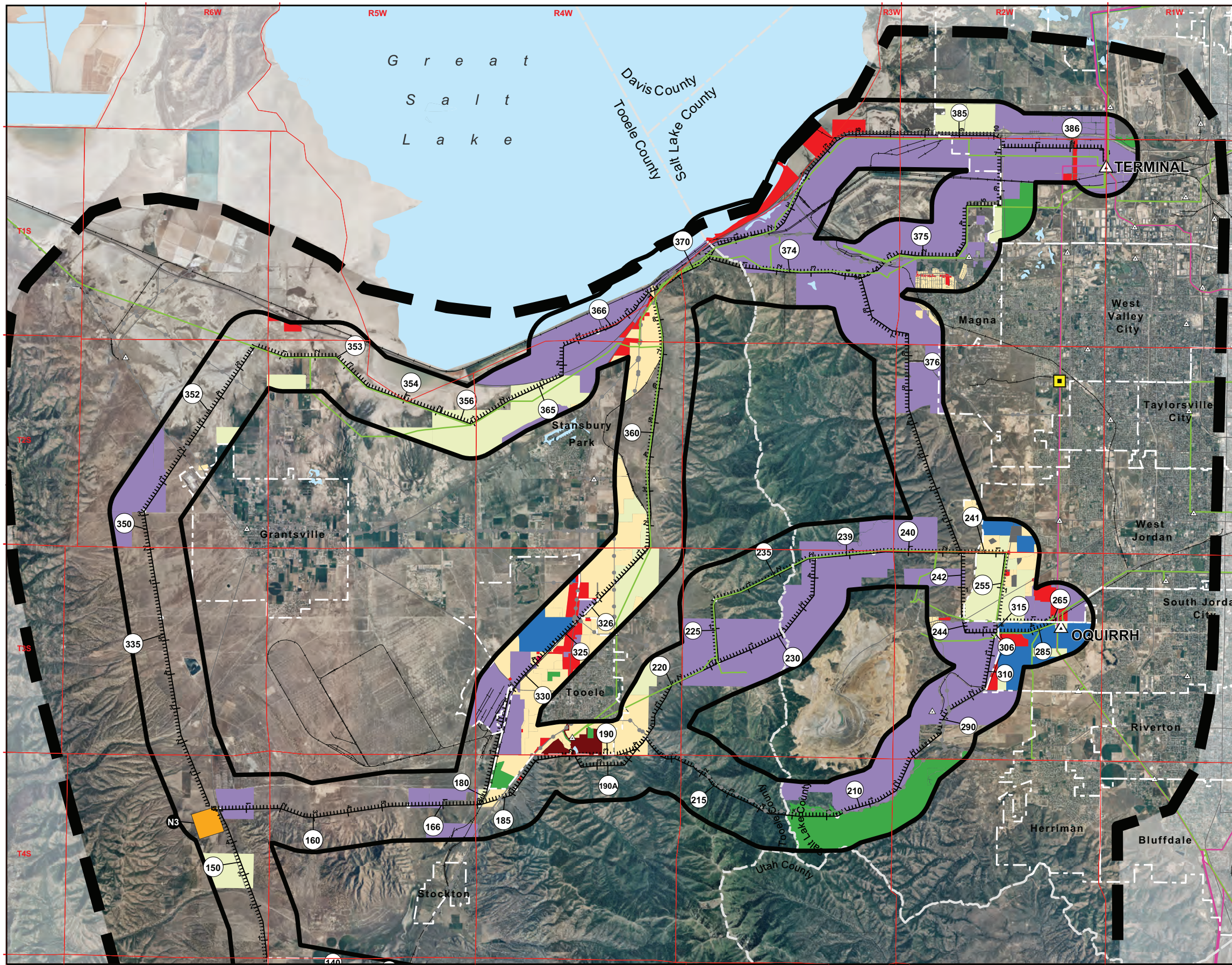
- ### Legend
- | | |
|-----------------------------------|----------------------------------|
| Residential | Education Facility |
| Commercial | Airport / Airstrip |
| Mixed Use | Military |
| Industrial | Public Facility |
| Church and Cemetery | Utilities |
| Agriculture | Wildlife Mgmt Area |
| Center Pivot Agriculture | Tooele SAMP |
| Communication Facility | Proposed UNEV Pipeline Alignment |
| Recreation / Parks / Preservation | |
| Vacant / Undeveloped / Grazing | |
| Wilderness Study Area | |
| North Oquirrh Mgmt Area | |
| Proposed Development | |
| Superfund / Hazardous Waste Site | |
| Proposed Wind Farm | |
| Helipoint | |
| Military Operating Area | |

- ### General Reference Features
- | |
|--------------------------------|
| Project Study Area |
| 345kV Transmission Line |
| 138kV Transmission Line |
| Power Plant |
| Substation |
| Railroad |
| Major Road |
| Natural Gas Pipeline |
| County Boundary |
| City Boundary |
| Link Node |
| Link Tag / Substation Tag |
| 6 Mile Wide Inventory Corridor |
| Alternative Routes |
| Proposed Substation Site |
| Township and Range Line |



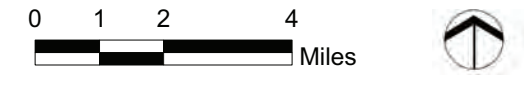
SOURCES: Land Use, Associated Municipalities and Digitized from NAIP 2006 Aerials; County Boundaries, Utah AGRC 2004; Transmission Lines & Substation Locations, PacifiCorp Aerial Imagery, NAIP 2006; DigitalGlobe Satellite Image - Collection date: May 21, 2009; © DigitalGlobe, Inc. All Rights Reserved; Aerial Photography - Captured June 23 - July 13, 2008; Existing_Land_Use_FEIS_landscape.mxd





- ### Legend
- Agriculture
 - Residential
 - Commercial
 - Industrial
 - Mixed Use
 - Public Facilities
 - Planned Community
 - Parks / Preservation / Recreation
 - Multiple Use

- ### General Reference Features
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - City Boundary
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - 2 Mile Wide Inventory Corridor
 - Alternative Routes
 - Proposed Substation Site
 - Township and Range Line



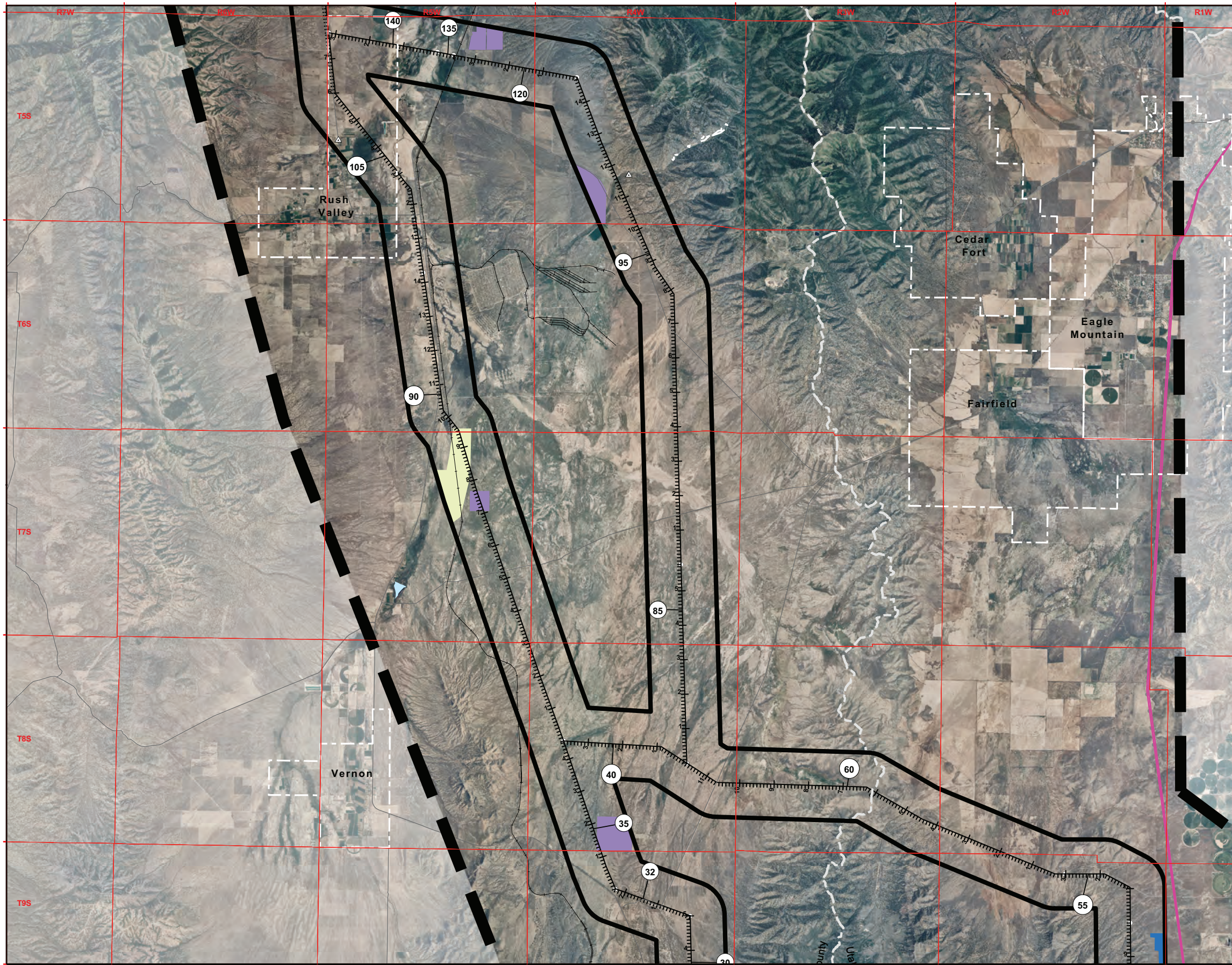
SOURCES: Zoning, Associated Municipalities;
 Associated Counties and Municipalities;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp
 Aerial Photography, NAIP 2009
 Aerial Photography Captured June - August, 2009

Map C-10

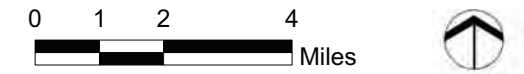
1 of 3
 April 2010



Generalized Zoning MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



- ### Legend
- Agriculture
 - Residential
 - Commercial
 - Industrial
 - Mixed Use
 - Public Facilities
 - Planned Community
 - Parks / Preservation / Recreation
 - Multiple Use
- ### General Reference Features
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - City Boundary
 - County Boundary
 - Link Node
 - 95 Link Tag / Substation Tag
 - 2 Mile Wide Inventory Corridor
 - Alternative Routes
 - Proposed Substation Site
 - Township and Range Line



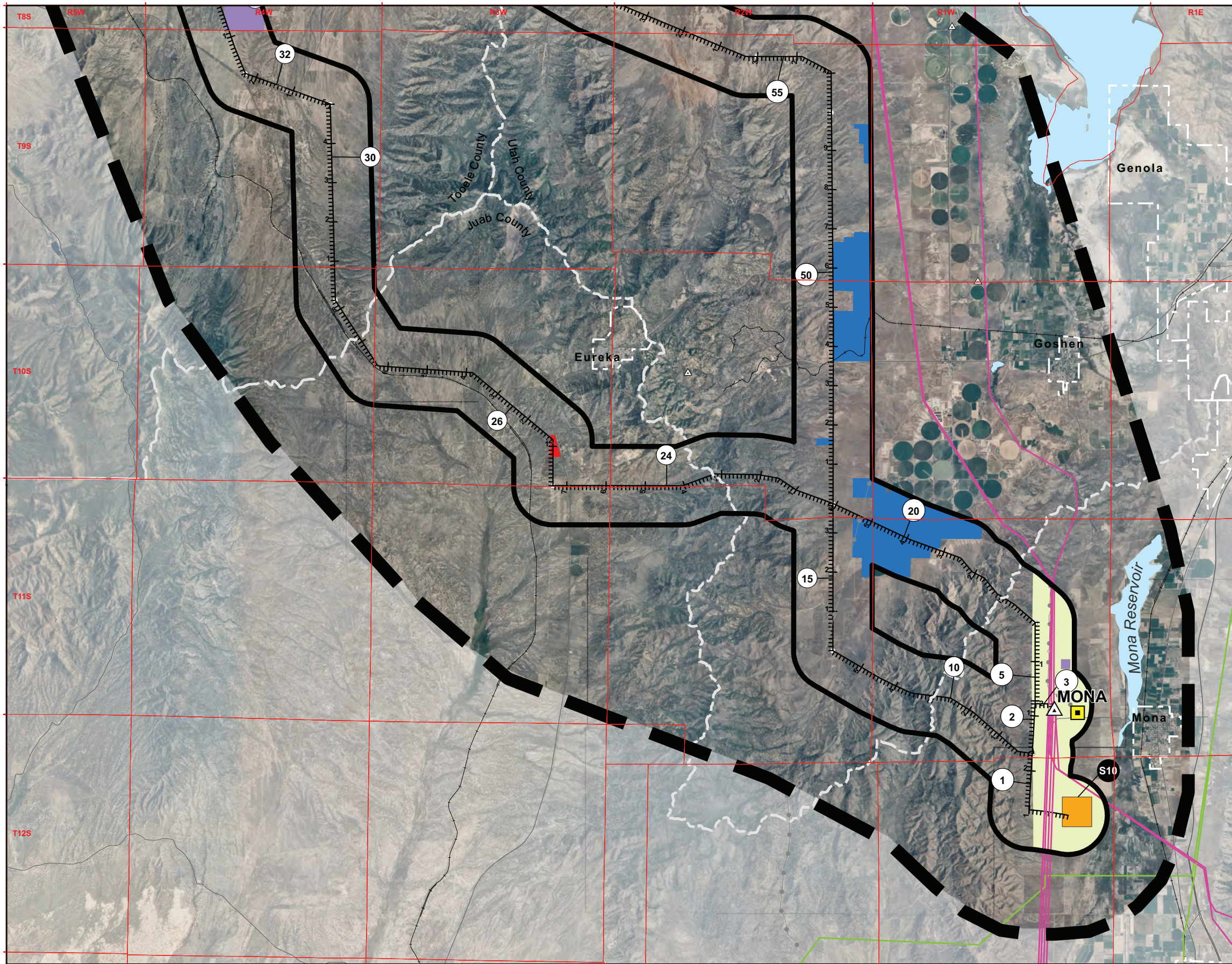
SOURCES: Zoning, Associated Municipalities;
 Associated Counties and Municipalities;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp
 Aerial Photography, NAIP 2009
 Aerial Photography Captured June - August, 2009

Map C-10

2 of 3
 April 2010



Generalized Zoning MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



- ### Legend
- Agriculture
 - Residential
 - Commercial
 - Industrial
 - Mixed Use
 - Public Facilities
 - Planned Community
 - Parks / Preservation / Recreation
 - Multiple Use
- ### General Reference Features
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
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 - Township and Range Line

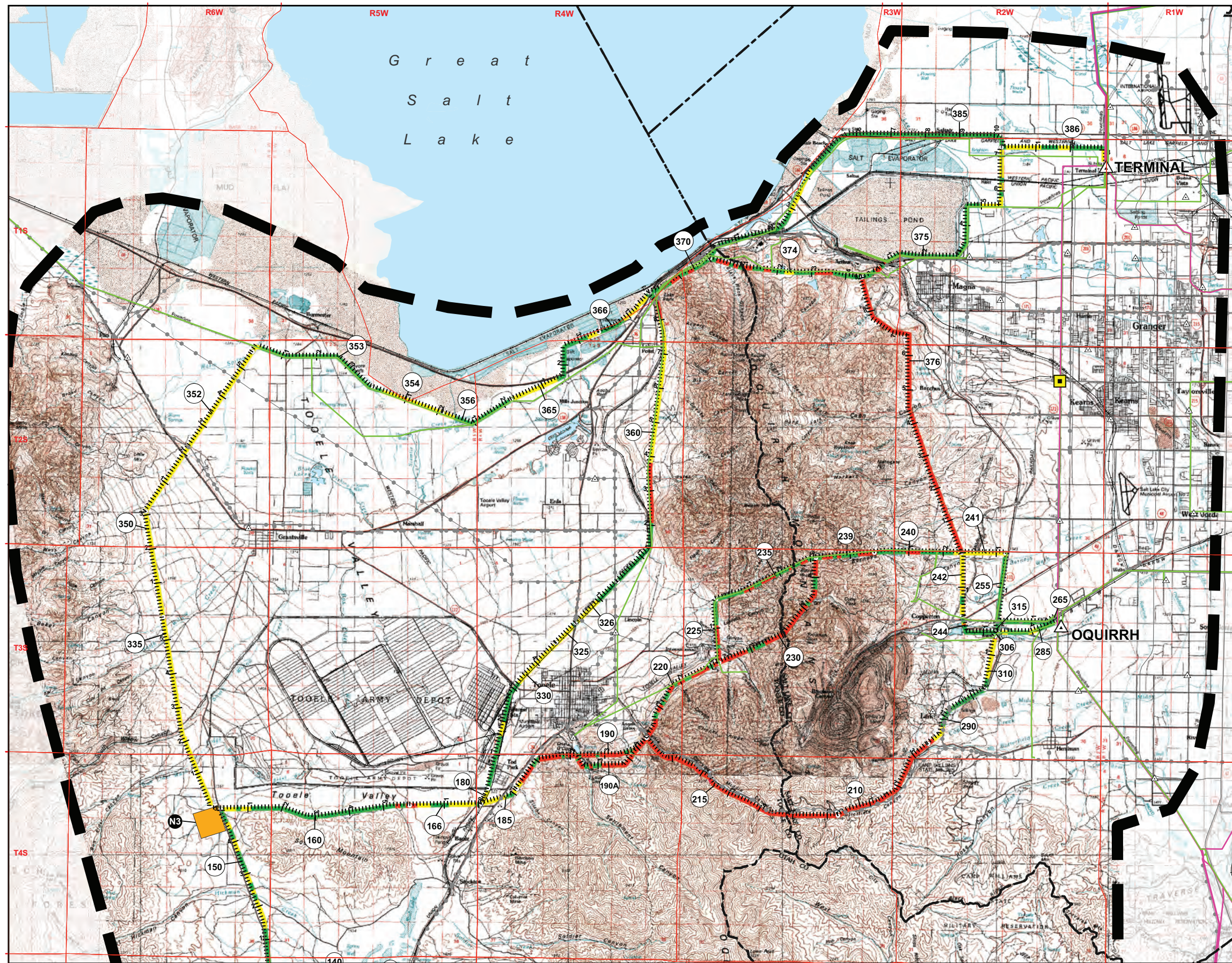
SOURCES: Zoning, Associated Municipalities;
 Associated Counties and Municipalities;
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp
 Aerial Photography, NAIP 2009
 Aerial Photography Captured June - August, 2009

Zoning_FEIS_Landscape.mxd

Map C-10

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 April 2010





- Legend**
- Level 1 - Existing Access/Improved Access
 - Level 2 - New Access (0 - 10% Slope)
 - Level 3 - New Access (>10% Slope)

- General Reference Features**
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
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SOURCES: County Boundaries, Utah AGRC 2004;
Transmission Lines & Substation Locations, PacifiCorp

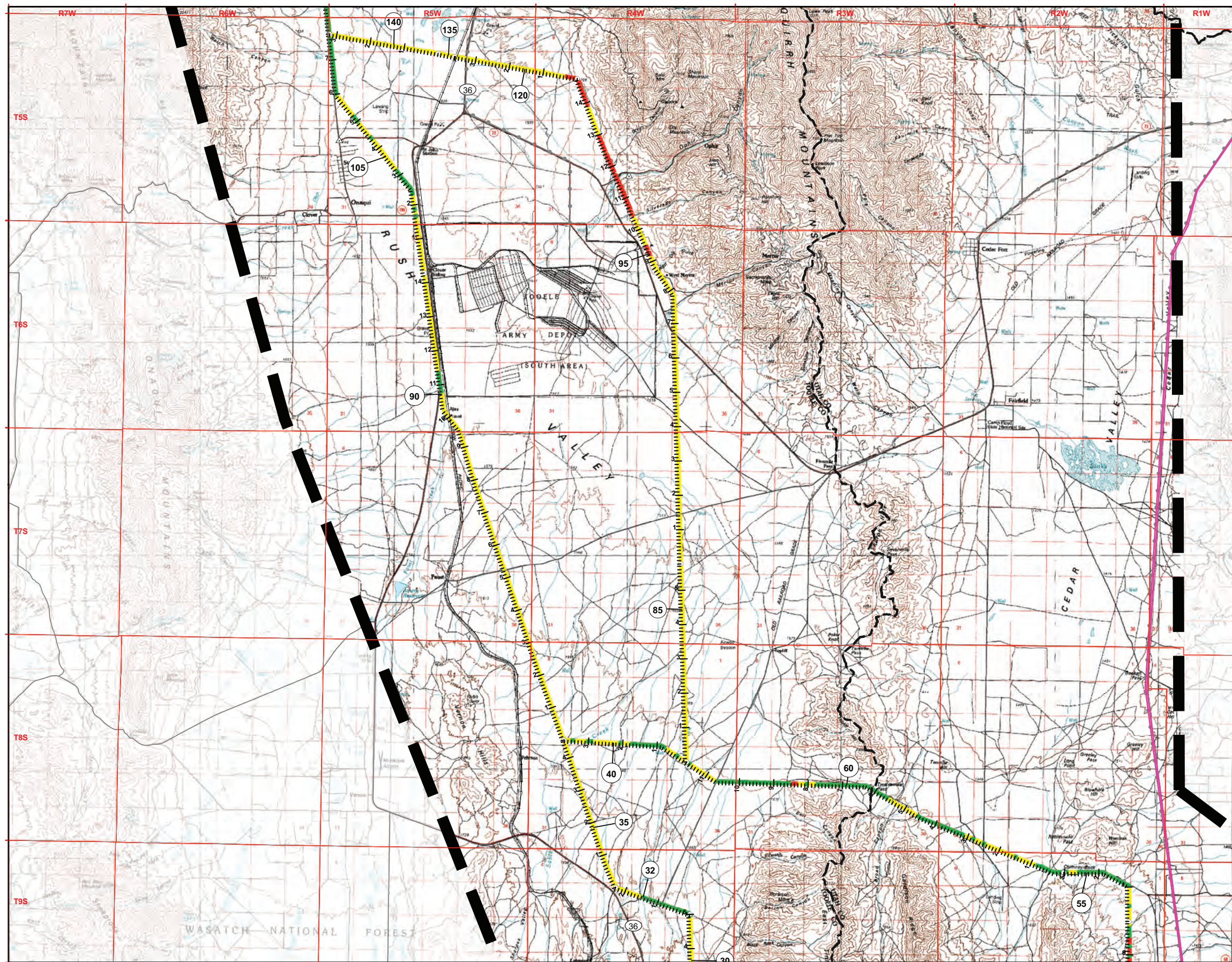
Access_FEIS_landscape.mxd

Map C-11

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April 2010



Access Levels
MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



- Legend**
- Level 1 - Existing Access/Improved Access
 - Level 2 - New Access (0 - 10% Slope)
 - Level 3 - New Access (>10% Slope)
- General Reference Features**
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
 - Major Road
 - Natural Gas Pipeline
 - County Boundary
 - Link Node
 - Link Tag / Substation Tag
 - Alternative Routes
 - Proposed Substation Site
 - Township and Range Line



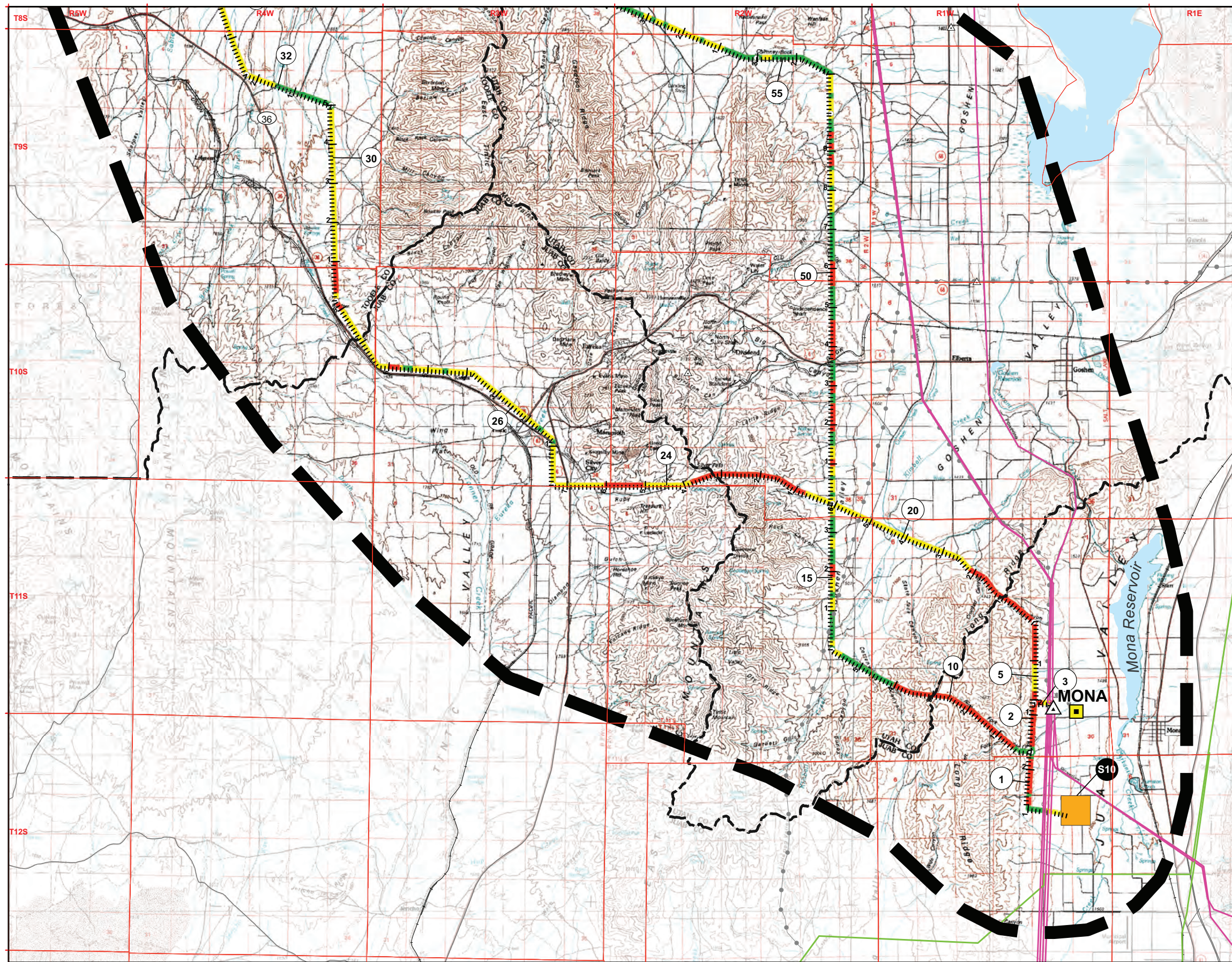
SOURCES: County Boundaries, Utah AGRC 2004;
Transmission Lines & Substation Locations, PacifiCorp

Access_FEIS_landscape.mxd

Map C-11

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April 2010





- Legend**
- Level 1 - Existing Access/Improved Access
 - Level 2 - New Access (0 - 10% Slope)
 - Level 3 - New Access (>10% Slope)
-
- General Reference Features**
- Project Study Area
 - 345kV Transmission Line
 - 138kV Transmission Line
 - Power Plant
 - Substation
 - Railroad
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 - Link Node
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 - Proposed Substation Site
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SOURCES: County Boundaries, Utah AGRC 2004;
Transmission Lines & Substation Locations, PacifiCorp

Access_FEIS_landscape.mxd

Map C-11

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April 2010



Access Levels
MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS

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Appendix D – Interdisciplinary Team Review Matrix

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**TABLE D-1
 INTERDISCIPLINARY TEAM NEPA DOCUMENTATION (UT-020-2008-009)
 FEBRUARY 14, 2008**

Resource	Specialist		Preliminary Key Issues/Concerns	Determination
	BLM	EPG		
Critical Elements				
Air Quality	Pam Schuller Matt Rajala	Christine Brown	<ul style="list-style-type: none"> Dust associated with construction Recognize non-attainment areas 	NI
Areas of Critical Environmental Concern (ACEC)	NA	NA	<ul style="list-style-type: none"> None 	NP
Cultural Resources	Peter Ainsworth Joelle McCarthy	Glenn Darrington Jon Baxter	<ul style="list-style-type: none"> Prehistoric and historic sites Historic structures Cemeteries Donner, Clymen, Stansbury, Pony Express Historic trails Camp Floyd/Stage Coach Inn State Park National Register Historic Mining District in Tintic Mountains 	PI
Environmental Justice	Pam Schuller Matt Rajala	Christine Brown	<ul style="list-style-type: none"> Tooele - low income populations Skull Valley - concerned with anything in Tooele County Potential to disproportionately impact tribes in the study area 	PI
Farmlands (Prime and Unique)	Mike Gates Matt Rajala	Christine Brown	<ul style="list-style-type: none"> Center-pivot agriculture SLFO has some prime and unique farmland 	NI
Floodplain	Mike Gates Matt Rajala	Christine Brown	<ul style="list-style-type: none"> Great Salt Lake floodplain Liquefaction soils 	NI
Invasive, Noxious Weed Species	Gary Kidd David Whitaker	Terry Enk	<ul style="list-style-type: none"> Spotted knapweed (<i>Centaurea maculosa</i>) Cheatgrass (<i>Bromus tectorum</i>) Russian knapweed (<i>Centaurea repens</i>) Squarrose knapweed (<i>Centaurea squarrosa</i>) Scotch thistle (<i>Onopordum acanthium</i>) Johnsongrass (<i>Sorghum halepense</i>) Hoary cress (<i>Cardaria draba</i>) Dalmation toadflax (<i>Linaria genistifolia</i> ssp. <i>dalmatica</i>) Starthistle (<i>Centaurea</i> ssp) Russian olive (<i>Elaeagnus angustifolia</i>) Tamarisk (<i>Tamarix</i> sp) 	PI
Native American Religious Concerns	Peter Ainsworth Joelle McCarthy	Glenn Darrington Jon Baxter	<ul style="list-style-type: none"> 12-16 tribes Tribal Values - Traditional Cultural Properties 	PI

NP = not present in the area impacted by the proposed or alternative actions
 NI = present, but not affected to a degree that detailed analysis is required
 PI = present with potential for significant impact analyzed in detail in the EIS; or identified in a DNA as requiring further analysis
 T = Threatened Species
 E = Endangered Species
 C = Candidate Species

**TABLE D-1
INTERDISCIPLINARY TEAM NEPA DOCUMENTATION (UT-020-2008-009)
FEBRUARY 14, 2008**

Resource	Specialist		Preliminary Key Issues/Concerns	Determination
	BLM	EPG		
Threatened, Endangered, or Candidate Plant Species	Mike Gates David Whitaker	Terry Enk	<ul style="list-style-type: none"> • Ute ladies'-tresses (T) • Goose Creek milk-vetch (Petitioned) • Slender moonwort (C) 	PI
Threatened, Endangered, or Candidate Animal Species	Traci Allen	Terry Enk	<ul style="list-style-type: none"> • June sucker (E) • Black-footed ferret (E, 10(j)) • Bald eagle (T) • Canada lynx (T) • Lohontan cutthroat trout (T) • Western yellow-billed cuckoo (C) • Fat-whorled pondsnail (C) • White-tailed prairie dog (Petitioned) • Pygmy rabbit (Petitioned) • Kit Fox 	PI
Wastes (hazardous or solid)	Tim Ingwell Brent Crawslyn	Christine Brown	<ul style="list-style-type: none"> • Superfund sites: • Jacobs Smelter (Stockton City) • Tooele Army Depot (Tooele City) • Eureka Mills (Eureka City) • International Smelter • Bauer TailingsManning Canyon 	PI
Water Quality (drinking/ground)	Harvey Gates Mike Gates	Nate Ferguson	<ul style="list-style-type: none"> • Lincoln County Water Users in North Oquirrh Mountains (water protection zone around spring) • FFO - numerous springs, plans to drill new wells north of Mona Watershed - Oquirrh 	NI
Wetlands/Riparian Zones	Mike Gates David Whitaker	Terry Enk	<ul style="list-style-type: none"> • Great Salt Lake • Rush Lake • ISSR • Kimball and Tanner Creeks (by the western route) 	PI
Wild and Scenic Rivers	NA	NA	None	NP
Wilderness	NA	NA	None	NP

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**TABLE D-1
INTERDISCIPLINARY TEAM NEPA DOCUMENTATION (UT-020-2008-009)
FEBRUARY 14, 2008**

Resource	Specialist		Preliminary Key Issues/Concerns	Determination
	BLM	EPG		
Other Resources/Concerns				
Rangeland Health Standards and Guidelines	Mike Gates David Whitaker	Christine Brown	<ul style="list-style-type: none"> • Infrastructure (fences, cattle guards, etc.) 	PI
Livestock Grazing	Mike Gates David Whitaker	Christine Brown	<ul style="list-style-type: none"> • Removal of vegetation 	PI
Woodland/Forestry	Mike Gates David Whitaker Tyler Stacks Brent Crawslyn	Christine Brown	<ul style="list-style-type: none"> • Right-of-Way clearing in forest and mountain shrub communities 	PI
Vegetation including Special Status Plant Species other than FWS candidate or listed species	Mike Gates David Whitaker	Terry Enk	<ul style="list-style-type: none"> • Hybrid Oak - North Oquirrh Mountains • Utah BLM sensitive species 	PI
Fish and Wildlife including Special Status Species other than FWS candidate or listed species	Traci Allen	Terry Enk	<ul style="list-style-type: none"> • Raptors • Large game and avian species habitat • Sage grouse habitat and leks • UT BLM sensitive species • Wildlife Management Areas (WMA) - James Walter Fitzgerald, Lee Kay, Carr Fork • Loss of habitat and habitat fragmentation due to construction activities • Loss of individuals due to right-of-way clearing • Creation of wildlife hazards not currently present in the environment • Creation of obstacles to wildlife management goals and objectives • "Crucial" seasonal habitats for elk, deer, pronghorn and sage grouse 	PI

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**TABLE D-1
 INTERDISCIPLINARY TEAM NEPA DOCUMENTATION (UT-020-2008-009)
 FEBRUARY 14, 2008**

Resource	Specialist		Preliminary Key Issues/Concerns	Determination
	BLM	EPG		
Soils	Mike Gates Matt Rajala	Nate Ferguson	<ul style="list-style-type: none"> • Liquefaction soils • Erosion associated with construction/access roads • Slope restrictions (in Resource Management Plan) • Potentially active faults and geologic structures • Areas of prime and unique soils 	PI
Recreation	JuLee Pallette Steve Bonar	Christine Brown	<ul style="list-style-type: none"> • Fivemile Pass Recreation Area • Yellow Fork Canyon area • Off-Highway Vehicle (OHV) use/access roads • Dispersed camping • Larry Miller Motorsports Park • Deseret Peak Complex • South Willow Canyon • Little Moab • Nutty Putty Caves • County trail network concerns 	PI
Visual Resources	Mike Nelson JuLee Pallette Steve Bonar	Darrin Gilbert Marc Schwartz	<ul style="list-style-type: none"> • BLM Visual Resource Management (VRM) Class II and III • USFS Visual Quality Objective - Partial Retention • Travel corridors • Residential areas • Special recreation management areas 	PI
Geology/Minerals Resources/ Energy Production	Larry Garahana Matt Rajala	Nate Ferguson	<ul style="list-style-type: none"> • Mining in Oquirrh and East Tintic Mountains • FFO - mining claims and abandoned mines, no active mines • Proposed wind farm west of Mona • Proposed wind farm near South Mountain in Tooele County 	PI
Paleontology	Larry Garahana	Glenn Darrington Jon Baxter	<ul style="list-style-type: none"> • Construction/buried paleontological resources 	NI

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INTERDISCIPLINARY TEAM NEPA DOCUMENTATION (UT-020-2008-009)
FEBRUARY 14, 2008**

Resource	Specialist		Preliminary Key Issues/Concerns	Determination
	BLM	EPG		
Lands/Access	Mike Nelson Clara Stevens	Christine Brown	<ul style="list-style-type: none"> Unimproved access roads over Oquirrh Mountains DOD lands UT State Trust Land Existing Rights-of-way Limiting roads and route proliferation Needs for roads in conjunction with power line Use of existing roads where possible Non-motorized vehicles only in North Oquirrh plan area 	PI
Fuels/Fire Management	Erin Darboven Lisa Reed (Public Affairs)	Christine Brown	<ul style="list-style-type: none"> Right-of-way clearing in forest communities Defensible space Increased use along access roads lead to increased fire frequency Existing fuels treatments Fire suppression hazard 	NI
Socioeconomics	Pam Schuller	Christine Brown	<ul style="list-style-type: none"> Potential impacts to current land uses: residential, commercial, parks, agriculture, and planned developments Potential impacts to future transportation plans and road expansions Important for PA, provide for appropriate public involvement 	PI
Wild Horses and Burros	Traci Allen	Terry Enk	<ul style="list-style-type: none"> Special Management Area - holding facility in Butterfield Canyon 	NI
Wilderness Characteristics	JuLee Pallette Steve Bonar	Christine Brown	<ul style="list-style-type: none"> Oquirrh Mountains Wilderness Inventory Area (WIA) Citizens' Proposal for Wilderness in Utah - Oquirrh Mountains 	PI
Planning	Pam Schuller Mike Nelson	Christine Brown	<ul style="list-style-type: none"> Potential for future projects if a utility corridor is identified through the North Oquirrh Management Area (NOMA) 	PI

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Appendix E – Biological Resources Supporting Data

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APPENDIX E – BIOLOGICAL RESOURCES SUPPORTING DATA

E.1 Species Lists

TABLE E-1 REPTILE AND AMPHIBIAN SPECIES LIKELY TO OCCUR IN THE STUDY CORRIDORS	
Common Name	Scientific Name
Reptiles	
Desert horned lizard	<i>Phrynosoma platyrhinos</i>
Eastern racer	<i>Coluber constrictor</i>
Garter snake	<i>Thamnophis sirtalis</i>
Gopher snake	<i>Pituophis catenifer</i>
Great Basin rattlesnake	<i>Crotalus oreganus lutosus</i>
Great Basin collared lizard	<i>Crotaphytus bicinctores</i>
Greater short-horned lizard	<i>Phrynosoma hernandesi</i>
Long-nosed leopard lizard	<i>Gambelia wislizenii</i>
Long-nosed snake	<i>Rhinocheilus lecontei</i>
Nightsnake	<i>Hypsiglena torquata</i>
Sagebrush lizard	<i>Sceloporus graciosus</i>
Side-blotched lizard	<i>Uta stansburiana</i>
Striped whipsnake	<i>Masticophis taeniatus</i>
Western garter snake	<i>Thamnophis elegans</i>
Tiger whiptail	<i>Aspidoscelis tigris</i>
Western fence lizard	<i>Sceloporus occidentalis</i>
Western skink	<i>Eumeces skiltonianus</i>
Amphibians	
American bullfrog	<i>Rana catesbeiana</i>
Columbia spotted frog	<i>Rana luteiventris</i>
Great Basin spadefoot	<i>Spea intermontana</i>
Great Plains toad	<i>Bufo cognatus</i>
Northern leopard frog	<i>Rana pipiens</i>
Tiger salamander	<i>Ambystoma tigrinum</i>
Western chorus frog	<i>Pseudacris triseriata</i>
Woodhouse's toad	<i>Bufo woodhousii</i>

TABLE E-2 BIRD SPECIES LIKELY TO OCCUR IN THE STUDY CORRIDORS	
Common Name	Scientific Name
Waterfowl and Shorebirds	
American avocet	<i>Recurvirostra americana</i>
American bittern	<i>Botaurus lentiginosus</i>
American coot	<i>Fulica americana</i>
American white pelican	<i>Pelecanus erythrorhynchos</i>
American wigeon	<i>Anas americana</i>
Black-bellied plover	<i>Pluvialis squatarola</i>
Black-crowned night heron	<i>Nycticorax nycticorax</i>
Black-necked stilt	<i>Himantopus mexicanus</i>
Bufflehead	<i>Bucephala albeola</i>

**TABLE E-2
BIRD SPECIES LIKELY TO OCCUR IN THE STUDY CORRIDORS**

Common Name	Scientific Name
California gull	<i>Larus californicus</i>
Canada goose	<i>Branta canadensis</i>
Canvasback	<i>Aythya valisineria</i>
Caspian tern	<i>Sterna caspia</i>
Cattle egret	<i>Bubulcus ibis</i>
Cinnamon teal	<i>Anas cyanoptera</i>
Common goldeneye	<i>Bucephala clangula</i>
Common snipe	<i>Gallinago gallinago</i>
Double-crested cormorant	<i>Phalacrocorax auritus</i>
Dunlin	<i>Calidris alpina</i>
Eared grebe	<i>Podiceps nigricollis</i>
Franklin's gull	<i>Larus pipixcan</i>
Gadwall	<i>Anas strepera</i>
Glaucous gull	<i>Larus hyperboreus</i>
Great blue heron	<i>Ardea herodias</i>
Greater yellowlegs	<i>Tringa melanoleuca</i>
Green-winged teal	<i>Anas crecca</i>
Horned grebe	<i>Podiceps auritus</i>
Killdeer	<i>Charadrius vociferus</i>
Least sandpiper	<i>Calidris minutilla</i>
Least tern	<i>Sternula antillarum</i>
Lesser golden Plover	<i>Pluvialis dominica</i>
Lesser scaup	<i>Aythya affinis</i>
Lesser yellowlegs	<i>Tringa flavipes</i>
Long-billed curlew	<i>Numenius americanus</i>
Long-billed dowitcher	<i>Limnodromus scolopaceus</i>
Mallard	<i>Anas platyrhynchos</i>
Marbled godwit	<i>Limosa fedoa</i>
Northern pintail	<i>Anas acuta</i>
Northern shoveler	<i>Anas clypeata</i>
Red-breasted merganser	<i>Mergus serrator</i>
Redhead	<i>Aythya americana</i>
Red-necked phalarope	<i>Phalaropus lobatus</i>
Ruddy duck	<i>Oxyura jamaicensis</i>
Sandhill crane	<i>Grus canadensis</i>
Semi-palmated plover	<i>Charadrius semipalmatus</i>
Short-billed dowitcher	<i>Limnodromus griseus</i>
Snowy egret	<i>Egretta thula</i>
Snowy plover	<i>Charadrius alexandrinus</i>
Solitary sandpiper	<i>Tringa solitaria</i>
Sora	<i>Porzana carolina</i>
Spotted sandpiper	<i>Actitis macularius</i>
Tundra swan	<i>Cygnus columbianus</i>
Western grebe	<i>Aechmophorus occidentalis</i>
Western sandpiper	<i>Calidris mauri</i>
Whimbrel	<i>Numenius phaeopus</i>
White-faced ibis	<i>Plegadis chihi</i>
Willet	<i>Catoptrophorus semipalmatus</i>
Wilson's phalarope	<i>Phalaropus tricolor</i>

TABLE E-2	
BIRD SPECIES LIKELY TO OCCUR IN THE STUDY CORRIDORS	
Common Name	Scientific Name
Raptors	
American kestrel	<i>Falco sparverius</i>
Bald eagle	<i>Haliaeetus leucocephalus</i>
Barn owl	<i>Tyto alba</i>
Burrowing owl	<i>Athene cunicularia</i>
Cooper's hawk	<i>Accipiter cooperii</i>
Ferruginous hawk	<i>Buteo regalis</i>
Golden eagle	<i>Aquila chrysaetos</i>
Great-horned owl	<i>Bubo virginianus</i>
Long-eared owl	<i>Asio otus</i>
Merlin	<i>Falco columbarius</i>
Northern harrier	<i>Circus cyaneus</i>
Northern pygmy owl	<i>Glaucidium gnoma</i>
Osprey	<i>Pandion haliaetus</i>
Peregrine falcon	<i>Falco peregrinus</i>
Prairie falcon	<i>Falco mexicanus</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
Rough-legged hawk	<i>Buteo lagopus</i>
Sharp-shinned hawk	<i>Accipiter striatus</i>
Short-eared owl	<i>Asio flammeus</i>
Swainson's hawk	<i>Buteo swainsoni</i>
Turkey vulture	<i>Cathartes aura</i>
Western screech owl	<i>Megascops kennicottii</i>
Upland Game Birds	
California quail	<i>Callipepla californica</i>
Chukar	<i>Alectoris chukar</i>
Greater sage-grouse	<i>Centrocercus urophasianus</i>
Ring-necked pheasant	<i>Phasianus colchicus</i>
Rio Grande turkey	<i>Meleagris gallopavo intermedia</i>
Passerines and Others	
American crow	<i>Corvus brachyrhynchos</i>
American goldfinch	<i>Carduelis tristis</i>
American robin	<i>Turdus migratorius</i>
American tree sparrow	<i>Spizella arborea</i>
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>
Barn swallow	<i>Hirundo rustica</i>
Belted kingfisher	<i>Ceryle alcyon</i>
Bewick's wren	<i>Thryomanes bewickii</i>
Black-billed magpie	<i>Pica hudsonia</i>
Black-capped chickadee	<i>Poecile atricapillus</i>
Black-chinned hummingbird	<i>Archilochus alexandri</i>
Black-throated gray warbler	<i>Dendroica nigrescens</i>
Black-throated sparrow	<i>Amphispiza bilineata</i>
Blue grosbeak	<i>Passerina caerulea</i>
Blue-gray gnatcatcher	<i>Poliptila caerulea</i>
Bobolink	<i>Dolichonyx oryzivorus</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
Brewer's sparrow	<i>Spizella breweri</i>
Broad-tailed hummingbird	<i>Selasphorus platycercus</i>

**TABLE E-2
BIRD SPECIES LIKELY TO OCCUR IN THE STUDY CORRIDORS**

Common Name	Scientific Name
Brown-headed cowbird	<i>Molothrus ater</i>
Bullock's oriole	<i>Icterus bullockii</i>
Bushtit	<i>Psaltriparus minimus</i>
Calliope hummingbird	<i>Stellula calliope</i>
Chipping sparrow	<i>Spizella passerina</i>
Cliff swallow	<i>Petrochelidon pyrrhonota</i>
Common nighthawk	<i>Chordeiles minor</i>
Common poorwill	<i>Phalaenoptilus nuttallii</i>
Common raven	<i>Corvus corax</i>
Common yellowthroat	<i>Geothlypis trichas</i>
Dark-eyed junco	<i>Junco hyemalis</i>
Downy woodpecker	<i>Picoides pubescens</i>
Eastern kingbird	<i>Tyrannus tyrannus</i>
Eurasian collared dove	<i>Streptopelia decaocto</i>
European starling	<i>Sturnus vulgaris</i>
Evening grosbeak	<i>Coccothraustes vespertinus</i>
Golden-crowned sparrow	<i>Zonotrichia atricapilla</i>
Great-tailed grackle	<i>Quiscalus mexicanus</i>
Hairy woodpecker	<i>Picoides villosus</i>
Horned lark	<i>Eremophila alpestris</i>
House finch	<i>Carpodacus mexicanus</i>
House sparrow	<i>Passer domesticus</i>
House wren	<i>Troglodytes aedon</i>
Lark sparrow	<i>Chondestes grammacus</i>
Lazuli bunting	<i>Passerina amoena</i>
Lewis' woodpecker	<i>Melanerpes lewis</i>
Loggerhead shrike	<i>Lanius ludovicianus</i>
Marsh wren	<i>Cistothorus palustris</i>
Mountain bluebird	<i>Sialia currucoides</i>
Mourning dove	<i>Zenaida macroura</i>
Northern flicker	<i>Colaptes auratus</i>
Northern mockingbird	<i>Mimus polyglottos</i>
Olive-sided flycatcher	<i>Contopus cooperi</i>
Pine siskin	<i>Carduelis pinus</i>
Pinyon jay	<i>Gymnorhinus cyanocephalus</i>
Rock dove	<i>Columba livia</i>
Rock wren	<i>Salpinctes obsoletus</i>
Rough-winged swallow	<i>Stelgidopteryx serripennis</i>
Red-breasted nuthatch	<i>Sitta canadensis</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Ruby-crowned kinglet	<i>Regulus calendula</i>
Rufous hummingbird	<i>Selasphorus rufus</i>
Sage sparrow	<i>Amphispiza belli</i>
Sage thrasher	<i>Oreoscoptes montanus</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Say's phoebe	<i>Sayornis saya</i>
Scrub jay	<i>Aphelocoma californica</i>
Song sparrow	<i>Melospiza melodia</i>
Spotted towhee	<i>Pipilo maculatus</i>

**TABLE E-2
BIRD SPECIES LIKELY TO OCCUR IN THE STUDY CORRIDORS**

Common Name	Scientific Name
Steller's jay	<i>Cyanocitta stelleri</i>
Tree swallow	<i>Tachycineta bicolor</i>
Vesper sparrow	<i>Poocetes gramineus</i>
Violet-green swallow	<i>Tachycineta thalassina</i>
Warbling vireo	<i>Vireo gilvus</i>
Western kingbird	<i>Tyrannus verticalis</i>
Western meadowlark	<i>Sturnella neglecta</i>
Western tanager	<i>Piranga ludoviciana</i>
Western wood-peewee	<i>Contopus sordidulus</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
Willow flycatcher	<i>Empidonax traillii</i>
Yellow warbler	<i>Dendroica petechia</i>
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>
Yellow-rumped warbler	<i>Dendroica coronata</i>

**TABLE E-3
MAMMAL SPECIES LIKELY TO OCCUR IN THE STUDY CORRIDORS**

Common Name	Scientific Name
Small Mammals	
Black-tailed jackrabbit	<i>Lepus californicus</i>
Botta's pocket gopher	<i>Thomomys bottae</i>
Bushy-tailed woodrat	<i>Neotoma cinerea</i>
Canyon mouse	<i>Peromyscus crinitus</i>
Chisel-toothed kangaroo rat	<i>Dipodomys microps</i>
Deer mouse	<i>Peromyscus maniculatus</i>
Desert cottontail	<i>Sylvilagus audubonii</i>
Desert woodrat	<i>Neotoma lepida</i>
Golden-mantled ground squirrel	<i>Spermophilus lateralis</i>
Hopi chipmunk	<i>Neotamias rufus</i>
Least chipmunk	<i>Neotamias minimus</i>
Merriam's shrew	<i>Sorex merriami</i>
Montane shrew	<i>Sorex monticolus</i>
Muskrat	<i>Ondatra zibethicus</i>
Northern grasshopper mouse	<i>Onychomys leucogaster</i>
Ord's kangaroo rat	<i>Dipodomys ordii</i>
Pinyon mouse	<i>Peromyscus truei</i>
Piute ground squirrel	<i>Spermophilus mollis</i>
Pygmy rabbit	<i>Brachylagus idahoensis</i>
Rock squirrel	<i>Spermophilus variegatus</i>
Sagebrush vole	<i>Lemmyscus curtatus</i>
Vagrant shrew	<i>Sorex vagrans</i>
White-tailed antelope squirrel	<i>Ammospermophilus leucurus</i>
White-tailed jackrabbit	<i>Lepus townsendii</i>
Yellow-bellied marmot	<i>Marmota flaviventris</i>
Bats	
Big brown bat	<i>Eptesicus fuscus</i>
Big free-tailed bat	<i>Nyctinomops macrotis</i>
Brazilian free-tailed bat	<i>Tadarida brasiliensis</i>

Common Name	Scientific Name
Fringed myotis	<i>Myotis thysanodes</i>
Hoary bat	<i>Lasiurus cinereus</i>
Little brown myotis	<i>Myotis lucifugus</i>
Long-eared myotis	<i>Myotis evotis</i>
Long-legged myotis	<i>Myotis volans</i>
Silver-haired bat	<i>Lasionycteris noctivagans</i>
Spotted bat	<i>Euderma maculatum</i>
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>
Western pipistrelle	<i>Pipistrellus hesperus</i>
Western small-footed myotis	<i>Myotis ciliolabrum</i>
Carnivores	
Badger	<i>Taxidea taxus</i>
Black bear	<i>Ursus americanus</i>
Bobcat	<i>Lynx rufus</i>
Coyote	<i>Canis latrans</i>
Kit fox	<i>Vulpes macrotis</i>
Long-tailed weasel	<i>Mustela frenata</i>
Mountain lion	<i>Felis concolor</i>
Raccoon	<i>Procyon lotor</i>
Red fox	<i>Vulpes vulpes</i>
Ringtail	<i>Bassariscus astutus</i>
Striped skunk	<i>Mephitis mephitis</i>
Western spotted skunk	<i>Spilogale gracilis</i>
Ungulates	
Mule deer	<i>Odocoileus hemionus</i>
Pronghorn antelope	<i>Antilocapra americana</i>
Rocky Mountain elk	<i>Cervus canadensis</i>

Common Name	Scientific Name	Status²	Suitable Habitat³	Documented Occurrence⁴	Likelihood of Occurrence⁵
Plants					
Barneby woody aster	<i>Aster kingii barnebyana</i>	S	Absent	No	Does not occur
Clay phacelia	<i>Phacelia argillacea</i>	FE	Absent	No	Does not occur
Cottam's cinquefoil	<i>Potentilla cottamii</i>	BLM	Absent	No	Does not occur
Dainty moonwort	<i>Botrychium crenulatum</i>	S	Absent	No	Does not occur
Deep creek stickweed	<i>Hackelia ibapensis</i>	BLM	Absent	No	Does not occur
Deseret milkvetch	<i>Astragalus desereticus</i>	FT	Absent	No	Does not occur
Garrett's bladderpod	<i>Lesquerella garrettii</i>	S	Absent	No	Does not occur
Giant four-wing saltbush	<i>Atriplex canescens</i> var. <i>gigantea</i>	BLM	Absent	No	Does not occur
Kass' rockcress	<i>Draba kassii</i>	BLM	Absent	No	Does not occur
Neese narrowleaf penstemon	<i>Penstemon angustifolius</i> var. <i>dulcis</i>	BLM	Absent	No	Does not occur
Pohl's milkvetch	<i>Astragalus lentiginosus</i> var. <i>pohlii</i>	BLM	Present	Yes	Known to Occur
Rockcress draba	<i>Draba globosa</i>	S	Absent	No	Does not occur

TABLE E-4 SPECIAL STATUS SPECIES THAT POTENTIALLY OCCUR IN THE STUDY CORRIDORS¹					
Common Name	Scientific Name	Status²	Suitable Habitat³	Documented Occurrence⁴	Likelihood of Occurrence⁵
Slender moonwort	<i>Botrychium lineare</i>	FR, S	Absent	No	Does not occur
Small springparsley	<i>Cymopterus acaulis</i> var. <i>parvus</i>	BLM	Absent	No	Does not occur
Ute ladies'-tresses	<i>Spiranthes diluvialis</i>	FT	Absent	No	Does not occur
Wasatch jamesia	<i>Jamesia americana</i>	S	Absent	No	Does not occur
Invertebrates					
California floater	<i>Anodonta californiensis</i>	UT/BLM	Absent	No	Does not occur
Eureka mountainsnail	<i>Oreohelix eurekensis</i>	UT/BLM	Present	Yes	Known to occur
Lyrate mountainsnail	<i>Oreohelix haydeni</i>	UT/BLM	Present	Yes	May occur
Northwest Bonneville pyrg	<i>Pyrgulopsis variegata</i>	UT/BLM	Absent	No	Does not occur
Southern Bonneville springsnail	<i>Pyrgulopsis transversa</i>	UT/BLM	Absent	No	Does not occur
Southern tightcoil	<i>Ogaridiscus subrupicola</i>	UT/BLM	Present	Yes	May occur
Utah physa	<i>Physella utahensis</i>	UT/BLM	Absent	Extirpated	Does not occur
Utah (desert) valvata	<i>Valvata utahensis</i>	FE, UT/BLM	Absent	Extirpated	Does not occur
Western pearlshell	<i>Margaritifera falcata</i>	UT/BLM	Absent	Extirpated	Does not occur
Fish					
Bluehead sucker	<i>Catostomus discobolus</i>	UT/BLM	Absent	No	Does not occur
Bonneville cutthroat trout	<i>Oncorhynchus clarkii</i> <i>utah</i>	UT/BLM, S, MIS	Absent	No	Does not occur
Colorado River cutthroat trout	<i>Oncorhynchus clarkii</i> <i>pleuriticus</i>	UT/BLM, S, MIS	Absent	No	Does not occur
June sucker	<i>Chasmistes liorus</i>	FE	Absent	No	Does not occur
Least chub	<i>Lotichthys phiegethontis</i>	UT/BLM	Absent	No	Does not occur
Leatherside chub	<i>Gila copei</i>	UT/BLM	Absent	No	Does not occur
Roundtail chub	<i>Gila robusta</i>	UT/BLM	Absent	No	Does not occur
Amphibians/Reptiles					
Columbia spotted frog	<i>Rana luteiventris</i>	UT/BLM, S	Absent	No	Does not occur
Smooth greensnake	<i>Opheodrys vernalis</i>	UT/BLM	Absent	No	Does not occur
Western toad	<i>Bufo boreas</i>	UT/BLM	Present	Yes	May occur
Birds					
American white pelican	<i>Pelecanus erythrorhynchos</i>	UT/BLM	Present	Yes	Known to occur
Bald eagle	<i>Haliaeetus leucocephalus</i>	FD, UT/BLM	Present	Yes	Known to occur
Black swift	<i>Cypseloides niger</i>	UT/BLM	Absent	No	Not likely to occur
Bobolink	<i>Dolichonyx oryzivorus</i>	UT/BLM	Breeding habitat absent	Yes	Transients may occur
Boreal owl	<i>Aegolius funereus</i>	S	Absent	No	Does not occur
Burrowing owl	<i>Athene cunicularia</i>	UT/BLM	Present	Yes	Known to occur
Ferruginous hawk	<i>Buteo regalis</i>	UT/BLM	Present	Yes	Known to occur
Flammulated owl	<i>Otus flammeolus</i>	S	Present	Yes	Likely to occur
Grasshopper sparrow	<i>Ammodramus savannarum</i>	UT/BLM	Present	Yes	May occur

**TABLE E-4
SPECIAL STATUS SPECIES THAT POTENTIALLY OCCUR IN THE STUDY CORRIDORS¹**

Common Name	Scientific Name	Status²	Suitable Habitat³	Documented Occurrence⁴	Likelihood of Occurrence⁵
Great gray owl	<i>Strix nebulosa</i>	S	Absent	No	Does not occur
Greater sage-grouse	<i>Centrocercus urophasianus</i>	UT/BLM, S	Present	Yes	Known to occur
Lewis's woodpecker	<i>Melanerpes lewis</i>	UT/BLM	Present	Yes	May occur
Long-billed curlew	<i>Numenius americanus</i>	UT/BLM	Present	Yes	Known to occur
Northern goshawk	<i>Accipiter gentilis</i>	UT/BLM, S, MIS	Present	Yes	Known to occur
Peregrine falcon	<i>Falco peregrinus</i>	S	Present	Yes	Known to occur
Short-eared owl	<i>Asio flammeus</i>	UT/BLM	Present	Yes	Known to occur
Three-toed woodpecker	<i>Picoides tridactylus</i>	UT/BLM, S, MIS	Absent	No	Does not occur
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	FC	Breeding habitat absent	No	Transients may occur
Mammals					
Canada lynx	<i>Lynx canadensis</i>	FT	Absent	No	Does not occur
Dark kangaroo mouse	<i>Microdipodops megacephalus</i>	UT/BLM	Absent	No	Does not occur
Fisher	<i>Martes pennanti</i>	S	Absent	No	Does not occur
Fringed myotis	<i>Myotis thysanodes</i>	UT/BLM	Present	No	Likely to occur
Kit fox	<i>Vulpes macrotis</i>	UT/BLM	Present	Yes	Known to occur
North American beaver	<i>Castor canadensis</i>	MIS	Absent	No	Does not occur
Preble's shrew	<i>Sorex preblei</i>	UT/BLM	Present	No	May occur
Pygmy rabbit	<i>Brachylagus idahoensis</i>	UT/BLM	Present	No	Likely to Occur
Spotted bat	<i>Euderma maculatum</i>	UT/BLM, S	Present	No	Likely to occur
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	UT/BLM, S	Present	Yes	Known to occur
Western red bat	<i>Lasiurus blossevillii</i>	UT/BLM	Present	No	May occur
White-tailed prairie dog	<i>Cynomys leucurus</i>	UT/BLM	Absent	No	Does not occur

NOTES:

¹ based upon species lists obtained from the USFWS (county level), BLM (district level), Uinta National Forest, and State of Utah (county level)

² FE = Federal Endangered; FT = Federal Threatened; FC = Federal Candidate; FR = removed from federal candidate list; FD = de-listed

UT/BLM = wildlife species designated as sensitive by the State of Utah and Utah BLM.

BLM = plant species designated as sensitive by the Utah BLM

S = species designated as sensitive by the USFS-Intermountain Region

MIS = species designated as Management Indicator Species by the Uinta National Forest

³ suitable habitat is classified as absent if the Project area does not contain required habitat or is located outside the known species range

⁴ documented in Project area based upon data from the Utah Natural Heritage Program (UNHP), RINS, or other reliable sources such as annual breeding bird surveys

⁵ probability of occurrence within the Project area based species habitat requirements, current known range and distribution, and documented occurrence

E.2 Special Status Species Accounts

E.2.1 Plants

E.2.1.1 Barneby Woody Aster (Forest Service Sensitive)

The barneby woody aster is endemic to the Canyon Mountains in Millard and Juab Counties, where it grows on quartz outcrops at 7,500 to 9,640 feet msl (Utah Native Plant Study [UNPS] 2007). The study corridors are located outside the known range of the species in Utah, and the barneby woody aster does not occur in the study corridors.

E.2.1.2 Clay Phacelia (Federally Endangered)

The clay phacelia was designated as federally endangered on September 28, 1978 (43 FR 44810). The clay phacelia is a narrow endemic that is only known to grow on steep talus slopes in the Spanish Fork Canyon in Utah County (Franklin 2005). The study corridors are located outside the known range of the species in Utah, and the clay phacelia does not occur in the study corridors.

E.2.1.3 Cottam's Cinquefoil (BLM Sensitive)

The Cottam's cinquefoil is endemic to the Raft River, Stansbury, Deep Creek, and Pilot mountain ranges. Although the species typically grows on rock crevices and ledges on north-facing cliffs at elevations between 7,500 and 10,400 feet msl, a population was recently discovered on an east-facing cliff in the western Stansbury Mountains (Franklin 2005). The study corridors are located outside the known range of the species in Utah, and Cottam's cinquefoil does not occur in the study corridors.

E.2.1.4 Dainty Moonwort (Forest Service Sensitive)

The dainty moonwort grows in high elevation wet meadows and marshes, and the only known Utah populations occur in Silver Meadow in Wasatch County and Tony Grove in Cache County (Franklin 2005). Historic populations were documented in the Bear River and Deep Creek mountain ranges and in Spirit Lake in Summit County (Franklin 2005). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the dainty moonwort. The species does not occur in the study corridors.

E.2.1.5 Deep Creek Stickweed (BLM Sensitive)

The Deep Creek stickweed is a local endemic that is restricted to granite rock outcrops in the Deep Creek Mountains (UNPS 2007). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the Deep Creek stickweed. The species does not occur in the study corridors.

E.2.1.6 Deseret Milkvetch (Federally Threatened)

The Deseret milkvetch was listed as federally threatened on October 20, 1999 (64 FR 56590). This local endemic is only known to grow on steep slopes of the Moroni Formation (ash-flow tuft) at elevations between 5,400 and 5,600 feet msl in the Thistle Creek Valley (Franklin 2005). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the Deseret milkvetch. The species does not occur in the study corridors.

E.2.1.7 Garrett’s Bladderpod (Forest Service Sensitive)

The Garrett’s bladderpod is a Wasatch Mountain endemic that occurs in scattered locations between Big Cottonwood Canyon and Provo Peak. The species grows on talus slopes and other unstable, sparsely vegetated substrates at elevations between 8,900 and 11,400 feet msl (Franklin 2005). The study corridors are located outside the known range of the species in Utah, and do not contain suitable high elevation habitat for the Garrett’s bladderpod. The species does not occur in the study corridors.

E.2.1.8 Giant Four-wing Saltbush (BLM Sensitive)

The giant four-wing saltbush is a rare varietal that is endemic to the interdunal valleys and leeward dune margins in the Jericho Dunes (or Lynndyl Dunes) in Juab County (UNPS 2007). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the giant four-wing saltbush. The species does not occur in the study corridors.

E.2.1.9 Kass’ Draba (BLM Sensitive)

The Kass’ draba is a local endemic that is only known to grow in rock crevices in the Deep Creek Mountains (Franklin 2005). The study corridors are located outside the known range of the species in Utah, and the Kass’ draba does not occur in the study corridors.

E.2.1.10 Neese Narrowleaf Penstemon (BLM Sensitive)

The Neese narrowleaf penstemon is a Great Basin endemic that is only known to grow on sand dunes in Juab and Millard counties (UNPS 2007). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat. The Neese narrowleaf penstemon does not occur in the study corridors.

E.2.1.11 Pohl’s Milkvetch (BLM Sensitive)

The Pohl’s milkvetch is endemic to the Rush and Skull Valleys where it grows within a vegetation association of Wyoming big sagebrush/black greasewood/bottlebrush squirreltail (Rodd Hardy, Botanist-BLM SLFO, personal communication 2008c). There are two primary populations in the Rush Valley. Population 1 is located west of the Tooele Army Depot. Population 2 is located between the Vernon Hills and Highway 36. The Pohl’s milkvetch is known to occur along Link 90, and may occur in suitable habitats along Links 30, 32, 35, 40, 85, 105, 120, and 150.

E.2.1.12 Rockcress Draba (Forest Service Sensitive)

The rockcress draba grows on gravelly soils at high elevations in the Deep Creek, Wasatch, and Uinta mountain ranges (USDA 2001*a*). The study corridors are located outside the known range of the species in Utah, and the rockcress draba does not occur in the study corridors.

E.2.1.13 Slender Moonwort (Removed from Federal Candidate List, Forest Service Sensitive)

The slender moonwort was removed from the list of candidate species for federal listing on December 6, 2007 (72 FR 69034). The slender moonwort grows in a variety of habitats, including mesic meadows, montane riparian zones, and limestone cliffs. The species is only known from two historic localities in Utah, near “Silver Lake” in Big Cottonwood Canyon and near the “Summit of Indian Canyon, Duchesne-Price Road” in either Duchesne or Carbon County (Franklin 2005). No individuals were found during intensive surveys conducted in historic habitat at Silver Lake during 2003 and 2004. The current range of slender moonwort includes eight states (Alaska, Colorado, Minnesota, Montana, Oregon, South Dakota, Washington, and Wyoming); the species is currently not known to occur in Utah. The study corridors are located outside the known range of the species, and the slender moonwort does not occur in the corridors.

E.2.1.14 Small Springparsley (BLM Sensitive)

The small springparsley is endemic to Aeolian sand habitats in the Sevier Desert and extreme western Millard and Tooele counties (UNPS 2007). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the small springparsley. The species does not occur in the study corridors.

E.2.1.15 Ute Ladies’-tresses (Federally Threatened)

The Ute ladies’-tresses was listed as federally threatened on January 17, 1992 (57 FR 2048). The species grows in wetlands and mesic riparian meadows along lakes and major rivers. While the Ute ladies’-tresses historically occurred in the Salt Lake Valley, the species is currently only known to occur in the Uinta Basin and along the Green River, Diamond Fork and Spanish Fork, Willow Spring, and the Freemont River (Franklin 2005). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the Ute ladies’-tresses. The species does not occur in the study corridors.

E.2.1.16 Wasatch Jamesia (Forest Service Sensitive)

The Wasatch jamesia is endemic to the Deep Creek and Wasatch Mountain ranges, where it grows on rock outcrops and cliffs, at elevations between 5,700 and 9,000 feet msl (USDA 2001*a*). The study corridors are located outside the known range of the species in Utah, and the Wasatch jamesia does not occur in the study corridors.

E.2.2 Invertebrates

E.2.2.1 California Floater (BLM/State Sensitive)

The California floater is a freshwater mussel that inhabits lakes, ponds, and low-gradient streams (UDWR 2006). There are currently seven known California floater populations in eastern Utah. Several historic populations (including Utah Lake) have been extirpated, and reported sightings of the California floater in Tooele County have not been verified (Oliver and Bosworth 1999). The nearest known California floater population occurs within the Burrison Ponds, south of Mona (UNHP 2008). The study corridors do not contain suitable habitat for the California floater, and the California floater does not occur in the study corridors.

E.2.2.2 Eureka Mountainsnail (BLM/State Sensitive)

The Eureka mountainsnail is endemic to shrub and forest communities on limestone outcrops and calcium soils that support a well-developed layer of herbaceous vegetation or plant litter. The historic species distribution includes the northern East Tintic Mountains, Deep Creek Mountains, Hominy Creek in Duchesne County, and East Tavaputs Plateau in Grand County (Oliver and Bosworth 1999). Two of the four historic localities (East Tintic Mountains and Hominy Creek) were recently surveyed and found to support small populations (UDWR 2006). The Utah National Heritage Program (UNHP) database includes two observations of the Eureka mountainsnail in the mountains near Eureka (UNHP 2008). The Eureka mountainsnail is known to occur in the study corridors, and suitable habitat occurs along Link 24.

E.2.2.3 Lyrate Mountainsnail (BLM/State Sensitive)

The lyrate mountainsnail is variably distributed throughout Cache, Rich, Weber, Morgan, Salt Lake, and Tooele counties, where it is associated with limestone outcrops and calcium soils in sagebrush and mountain shrub habitats (UDWR 2006). Oliver and Bosworth (1999) report historic populations in the northern Oquirrh Mountains, although no recent surveys have been conducted to determine whether these populations still exist. The UNHP also has two historic records of the species in Big Canyon and Black Rock Canyon. The study corridors are within the known historic species range, and suitable habitat for the lyrate mountainsnail occurs along Links 210, 215, 235, 240, 360, 370, 374, and 376.

E.2.2.4 Northwest Bonneville Pyrg (BLM/State Sensitive)

The northwest Bonneville pyrg is a freshwater snail that is currently known to occur in eight freshwater springs in western Box Elder County and one spring in extreme northwestern Tooele County (UDWR 2006). The study corridors are located outside the known range of the species in Utah, and there are no historical records of the northwest Bonneville pyrg within the study area. The study corridors do not contain suitable habitat for the species, and the northwest Bonneville pyrg does not occur in the study corridors.

E.2.2.5 Southern Bonneville Springsnail (BLM/State Sensitive)

The southern Bonneville springsnail is a Utah endemic that is known to currently occur in six freshwater springs in central Utah, including four localities in Tooele County and one each in Utah County and

Sanpete County (UDWR 2006). There are no historical records of the southern Bonneville springsnail within the study corridors and they do not contain suitable habitat for the species. The southern Bonneville springsnail does not occur in the study corridors.

E.2.2.6 Southern Tightcoil (BLM/State Sensitive)

The southern tightcoil is known from a single historical location in Utah: Clinton's Cave in Tooele County (Oliver and Bosworth 1999). There have been no attempts to relocate this species since the original observation was made in 1929. Clinton's Cave does not appear on topographic maps and is currently considered a "lost locality" by the UDWR (UDWR 2006). Although the precise location of Clinton's Cave is unknown, Oliver and Bosworth (1999) and the UNHP (UNHP 2008) identify the location in the extreme north end of the Oquirrh Mountains. Although there is significant uncertainty regarding the species status, the southern tightcoil may occur along Links 370 and 374.

E.2.2.7 Utah Physa (BLM/State Sensitive)

The Utah physa is currently known to inhabit four freshwater springs in northeastern Box Elder County and southwestern Tooele County (UDWR 2006). Several historic populations, including one in Utah Lake, are extirpated (Oliver and Bosworth 1999). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the Utah physa. The species does not occur in the study corridors.

E.2.2.8 Utah Valvata (Federally Endangered, BLM/State Sensitive)

The Utah valvata (or "desert" valvata) was listed as federally endangered on December 14, 1992 (57 FR 59244). The species, which historically occurred in Utah Lake, is currently classified as extirpated in Utah (Oliver and Bosworth 1999). The current range of the Utah valvata includes short segments of three rivers in southern Idaho (USFWS 2007c). The study corridors are located outside the known species range and do not contain suitable habitat for the Utah valvata. The species does not occur in the study corridors.

E.2.2.9 Western Pearlshell (BLM/State Sensitive)

The western pearlshell is a freshwater mussel that historically occurred in at least 11 localities in northern Utah, including Salt Lake County (Oliver and Bosworth 1999). There are no detailed habitat descriptions for the western pearlshell, but nearly all historical populations occurred in small streams. The species is currently classified extirpated in Utah (Oliver and Bosworth 1999). The western pearlshell does not occur in the study corridors.

E.2.3 Fish

E.2.3.1 Bluehead Sucker (BLM/State Sensitive)

The bluehead sucker inhabits rivers in the Colorado River, Weber River, and Bear River drainages (Bosworth 2003). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the bluehead sucker. The species does not occur in the study corridors.

E.2.3.2 Bonneville Cutthroat Trout (BLM/State, Forest Service Sensitive and Management Indicator Species [MIS])

The Bonneville cutthroat trout inhabits streams and lakes in the Bear Lake/Bear River, Weber River, Jordan River, Sevier River, Virgin River, and Snake Valley drainages in Utah (USFWS 2001). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the Bonneville cutthroat trout. The species does not occur in the study corridors.

E.2.3.3 Colorado River Cutthroat Trout (BLM/State, Forest Service Sensitive and MIS)

The Colorado River cutthroat trout inhabits headwater streams and mountain lakes in the Uinta, La Sal, and Abajo mountains, as well as the Escalante and Fremont River drainages (Bosworth 2003). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the Colorado River cutthroat trout. The species does not occur in the study corridors.

E.2.3.4 June Sucker (Federally Endangered)

The June sucker is a Utah Lake endemic that was listed as federally endangered on April 30, 1986 (51 FR 10851). The species' spawning habitat, which historically included all major tributaries of Utah Lake, is currently restricted to a short segment of the lower Provo River (Bosworth 2003). June sucker populations have been established at the Springville Hatchery, Camp Creek Reservoir, Red Butte Reservoir, Ogden Nature Center, and Utah Fisheries Experiment Station for conservation purposes (UCDC 2007). The study corridors do not contain suitable habitat for the June sucker, and the species does not occur in the study corridors.

E.2.3.5 Least Chub (BLM/State Sensitive)

The least chub is endemic to low elevation streams, marshes, springs, and ponds in the Bonneville Basin. Native populations are currently limited to isolated alkaline marshes and springs along the Wasatch Front and in the West Desert (Bosworth 2003). There are records of native least chub from the Mona Springs complex north of the Burrison Ponds (UNHP 2008), and the UDWR established a population in the Atherly Reservoir in 2006. The study corridors do not contain suitable habitat for the least chub, and the species does not occur in the study corridors.

E.2.3.6 Leatherside Chub (BLM/State Sensitive)

The current distribution of the leatherside chub in Utah includes native populations in the Snake, Bear, and Sevier River drainages and Utah Lake, as well as introduced populations in the Colorado River Basin (UDWR 2006). The leatherside chub generally inhabits low gradient pools with limited riparian vegetation. The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the leatherside chub. The species does not occur in the study corridors.

E.2.3.7 Roundtail Chub (BLM/State Sensitive)

The roundtail chub is endemic to rivers and streams in the Colorado River drainage (Bosworth 2003). In Utah, the species occurs in the eastern side of the state, with one historic observation in the extreme southeastern corner of Utah County. The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the roundtail chub. The species does not occur in the study corridors.

E.2.4 Amphibians and Reptiles

E.2.4.1 Columbia Spotted Frog (BLM/State and Forest Service Sensitive)

The Columbia spotted frog is variably distributed in isolated springs and wetlands along the Wasatch Front and in the West Desert (Bosworth 2003). Existing populations are known to occur in Juab, Sanpete, Summit, Utah, and Wasatch Counties (Perkins and Lentsch 1998). The nearest known populations are located in the Goshen Valley and in the vicinity of Burrison Ponds (Bosworth 2003; UNHP 2008). The study corridors do not contain suitable habitat for the Columbia spotted frog, and the species does not occur in the corridors.

E.2.4.2 Smooth Greensnake (BLM/State Sensitive)

The smooth greensnake inhabits montane riparian and wet meadow communities in scattered localities in the Wasatch, Uinta, Abajo, and La Sal Mountain ranges, as well as on the East Tavaputs Plateau (Bosworth 2003). There is one historic record of the smooth greensnake in Utah County from 1938, but there are no records of the species in the vicinity of the study corridors. The corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the smooth greensnake. The species does not occur in the study corridors.

E.2.4.3 Western Toad (BLM/State Sensitive)

The western toad occurs in montane habitats in central and northern Utah, where it is associated with permanent water bodies in riparian, mountain shrub, and mixed conifer forest and aspen-conifer forest habitats (Bosworth 2003). The species breeds in small pools, beaver ponds, reservoirs, and side channels of creeks and rivers. Adults utilize upland habitats during non-breeding periods. The UNHP data includes one historic observation in 1931 near the existing Kennecott tailings ponds, but there are no recent records in the vicinity of the study corridors. Potential habitat for the western toad occurs along Links 210, 215, 220, 225, and 235.

E.2.5 Birds

E.2.5.1 American White Pelican (BLM/State Sensitive)

The American white pelican is a migratory species that breeds in northern Utah and winters in Mexico and southern California (Parrish et al. 2002). Gunnison Island in the northern arm of the Great Salt Lake is the only nesting site for the American white pelican in Utah and represents one of the four largest breeding colonies in North America (Parrish et al. 2002). Adult pelicans fly daily from Gunnison Island

to traditional foraging areas in the Bear River Bay, wetlands along the shores of the Great Salt Lake, and Utah Lake (Parrish et al. 2002). During spring and fall migrations, pelicans occur on lakes and reservoirs throughout Utah. The American white pelican is commonly observed on lakes and reservoirs within and adjacent to the study corridors. Although transient individuals are likely to fly through/over the study corridors during seasonal migrations, the pelican is most likely to occur along Links 353, 354, 356, 365, 366, 370, 375, and 385.

E.2.5.2 Bald Eagle (BLM/State Sensitive)

The bald eagle was de-listed on August 8, 2007 (72 FR 37346), but the species continues to receive federal protection through the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. There are 11 active bald eagle nests in Utah, all of which are located in large, mature cottonwood trees. Utah also supports a winter population of more than 1,200 birds, with the largest concentrations occurring along the Great Salt Lake and adjacent Wasatch Mountains. Wintering eagles typically forage along lakes, wetlands, and desert valleys, and roost in large trees and wooded canyons (UDWR 2005). There are no known bald eagle nests within or adjacent to the study corridors, but several bald eagle roosts occur along Ophir Creek. Wintering eagles have been observed throughout the study corridors. The bald eagle is likely to forage throughout the study corridors. Potential roost sites include large trees along Links 95, 190, 210, 215, 220, 225, 235, and 240.

E.2.5.3 Black Swift (BLM/State Sensitive)

The black swift is a colonial nesting species that constructs nests adjacent to waterfalls above 6,000 feet msl, and forages in montane riparian habitats (Parrish et al. 2002). The only known breeding sites are located in the Wasatch Mountains at Bridal Veil Falls, Aspen Grove, and Stewart Falls (Bosworth 2003). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the black swift. The species does not occur in the study corridors.

E.2.5.4 Boreal Owl (Forest Service Sensitive)

The boreal owl is an extremely rare species in Utah that is restricted to high-elevation, old growth coniferous forests in the Wasatch, Bear River, and Uinta Mountain Ranges (UDWR 2007s). The study corridors are located outside the known range of the species in Utah and do not contain suitable habitat for the boreal owl. The species does not occur in the study corridors.

E.2.5.5 Burrowing Owl (BLM/State Sensitive)

The burrowing owl is widely distributed in sparsely vegetated grassland, sagebrush, and desert shrub communities, as well as agricultural fields throughout Utah (UDWR 2006). The owl utilizes burrows constructed by prairie dogs (*Cynomys* spp.), ground squirrels (*Spermophilus* spp.), and badgers (*Taxidea taxus*), as well as culverts and various man-made structures. The RINS data indicates relatively high densities of burrowing owl nests in the Goshen, Cedar, Rush, and Tooele valleys. Known nests are included in the core raptor nesting areas. The species is frequently observed in the study corridors and general vicinity. The study corridors contain suitable nesting and foraging habitat for the burrowing owl along Links 5, 20, 30, 32, 35, 50, 55, 60, 90, 95, 105, 120, 140, 150, 160, 165, 325, 335, 350, and 360.

E.2.5.6 Ferruginous Hawk (BLM/State Sensitive)

The ferruginous hawk is widely distributed throughout Utah, nests in trees and large shrubs in grassland, desert shrub, sagebrush, and pinyon-juniper habitats, and preys upon small mammals including rabbits, hares, and pocket gophers (Bosworth 2003; Parrish et al. 2002). Data from UNHP and RINS indicate that ferruginous hawk nests are located throughout the valleys and foothills in the vicinity of the study corridors. Areas supporting relatively high densities of ferruginous hawk nests are included in the core raptor nesting areas (Map C-6). The species is relatively common throughout the study corridors, with primary habitat occurring along Links 5, 30, 32, 35, 40, 50, 55, 60, 90, 95, 105, 120, 140, 150, and 335.

E.2.5.7 Flammulated Owl (Forest Service Sensitive)

The flammulated owl occurs in montane habitats throughout Utah, with core breeding ranges in southwest and north-central portions of the state (UDWR 2007t). The species inhabits mature, open-canopied ponderosa pine and aspen communities, where it forages on insects. The UNHP data include records of individual flammulated owls from Silver City in 1912 and South Willow Creek in 1932. The study corridors are located within the known range of the species in Utah, and suitable habitat occurs along Links 210, 215, 235, and 240.

E.2.5.8 Grasshopper Sparrow (BLM/State Sensitive)

The grasshopper sparrow is a migratory species that breeds in a few sites in northern Utah (Bosworth 2003). The species nests in early successional native short grass habitats. Although the species has been observed in Utah and Salt Lake counties, there are no records for the grasshopper sparrow within or in the vicinity of the study corridors (UNHP 2008). The corridors contain a very limited amount of suitable breeding habitat, although transient individuals may occur in the corridors during seasonal migrations.

E.2.5.9 Great Gray Owl (Forest Service Sensitive)

The great gray owl is an uncommon winter resident in the extreme northeast corner of Utah (Bosworth 2003). The species inhabits old growth boreal forests, with Idaho and Wyoming representing the southern extent of the species breeding range. The study corridors are located outside the range of the species in Utah and do not contain suitable habitat for the great gray owl. The species does not occur in the study corridors.

E.2.5.10 Greater Sage-grouse (BLM/State Sensitive and Forest Service Sensitive)

On February 26, 2008, the USFWS initiated a status review to determine whether the greater sage-grouse warrants protection under the Endangered Species Act (ESA) (73 FR 10218). This status review is ongoing. The greater sage-grouse is a sagebrush obligate species that depends on sagebrush habitats in all seasons (Connelly et al. 2004). Sage-grouse typically utilize several seasonal habitats, including breeding and nesting habitat in the spring and early summer, brood-rearing habitat in the summer and fall, and winter habitat. High quality sagebrush vegetation is an essential habitat component in all seasonal habitats. Greater sage-grouse populations in the general study area have declined over the past several decades as a result of the degradation of sagebrush habitats (UDWR 2002).

Male sage-grouse perform elaborate breeding displays on traditional strutting grounds (“leks”). A lek is an open area located within relatively dense stands of sagebrush and generally represents the center of a population’s distribution. Female sage-grouse construct nests under large sagebrush plants in proximity to the lek and then move to brood-rearing habitat (mesic meadows or sagebrush grasslands) once the eggs have hatched. An essential component of high quality brood-rearing habitat is an abundance of native grasses and forbs. Fall habitats include sagebrush, upland meadows, riparian areas, and irrigated pastures, while winter habitat generally consists of mature sagebrush communities on exposed, windswept ridges.

Sagebrush habitats occur throughout the study corridors, and the UDWR has delineated crucial brooding/winter habitat for greater sage-grouse in the Rush Valley, Tooele Valley, and Tintic Valley (UDWR 2007u; Map C-6). Crucial greater sage-grouse habitat occurs along Links 26, 30, 32, 35, 40, 60, 90, 95, 105, 120, 135, 140, 150, 160, and 335. The Rush Valley represents the primary sage-grouse habitat in the study corridors. However, sagebrush communities in the Rush Valley have been significantly degraded by a number of factors, including wildfire, grazing, agricultural activities, and the spread of invasive grasses and reduction in native grasses and forbs. The quality of sage brush communities and associated greater sage-grouse habitat in the Rush Valley is generally poor, but increases as one moves from east to west across the valley (Ashley Green 2008b, UDWR Regional Habitat Manager, personal communication). There are no known active leks within or adjacent to the study corridors, and although UNHP data include a few recent observations of greater sage-grouse in the western Rush Valley, the species is rarely observed in the vicinity of the study corridors (Ashley Green 2008b, UDWR Regional Habitat Manager, personal communication; Robinson 2006; UNHP 2008).

E.2.5.11 Lewis’s Woodpecker (BLM/State Sensitive)

The Lewis’s woodpecker inhabits open ponderosa pine and cottonwood riparian forests in northeastern and southern Utah (Parrish et al. 2002). The species requires mature or burned stands with large dead or decaying trees that provide nesting cavities. Although there are species observations from the Oquirrh Mountains (UNHP 2008) and Burrison Ponds, the Lewis’s woodpecker has not been recorded in the study corridors. Potential suitable habitat for the Lewis’s woodpecker occurs along Links 95, 210, and 215.

E.2.5.12 Long-billed Curlew (BLM/State Sensitive)

The long-billed curlew is a relatively common migratory species that inhabits mesic grasslands in northern and central Utah. Wetlands associated with the Great Salt Lake represent a primary breeding area for the species (Parrish et al. 2002). The curlew is frequently observed in the vicinity of the study corridors, with most records in the Goshen, Cedar, and Tooele Valleys, as well as the south shore of the Great Salt Lake (UNHP 2008). Suitable habitat for the long-billed curlew occurs along Links 5, 20, 50, 90, 105, 335, 350, 356, 360, 365, 375, and 385.

E.2.5.13 Northern Goshawk (BLM/State Sensitive, Forest Service Sensitive and MIS)

The northern goshawk is a relatively uncommon species in Utah (Graham et al. 1999). The goshawk generally inhabits mature mixed conifer and aspen communities at elevations between 6,000 and 10,000 feet msl. Forest communities in the Oquirrh, Stansbury, and East Tintic mountains have been classified as low value nesting habitat for the northern goshawk (Graham et al. 1999). UNHP data include three

historic goshawk observations in the Oquirrh Mountains, and an observation in Butterfield Canyon in 2005. Suitable habitat for the northern goshawk occurs along Links 210, 215, 235, and 240.

E.2.5.14 Peregrine Falcon (Forest Service Sensitive)

The peregrine falcon currently breeds on the Colorado Plateau and along the Wasatch Front in Utah (Bosworth 2003). Nests are typically located on cliff ledges, but introduced individuals are known to nest on buildings in downtown Salt Lake City. Peregrine falcons forage for avian prey in a variety of open habitats, including marshes, desert shrub, sagebrush, and grasslands. The species has been observed foraging in the wetlands along the southern shore of the Great Salt Lake, and active nests have been recently reported near Elberta (UNHP 2008) and in South Willow Creek Canyon (Tom Becker 2008c, UDWR, personal communication). There are no known nests within the study corridors, but the peregrine falcon is likely to forage throughout the study corridors.

E.2.5.15 Short-eared Owl (BLM/State Sensitive)

The short-eared owl breeds across the northern two-thirds of Utah and occurs throughout the state during non-breeding periods (Bosworth 2003). The species nests on the ground in a variety of open habitats, including arid grasslands, marshes, and agricultural fields and winters in desert scrub and sagebrush habitats (Bosworth 2003). The short-eared owl is known to nest in the vicinity of the study corridors (RINS data) (UNHP 2008). Potential short-eared owl habitat occurs throughout those links that traverse grasslands, wetland marshes, and agricultural fields.

E.2.5.16 Three-toed Woodpecker (BLM/State Sensitive, Forest Service Sensitive and MIS)

The three-toed woodpecker is a relatively uncommon species that inhabits high-elevation, montane coniferous forests in the Wasatch and Uinta mountains (Parrish et al. 2002). Spruce-fir forests represent the primary breeding habitats for the three-toed woodpecker, and the species depends on recent burns and spruce bark beetle infestations to create foraging habitat. The three-toed woodpecker has been observed near Brighton in Salt Lake County and on Nebo Bench in Utah County. The study corridors are located outside the general range of the species in Utah; there are no records of the species within or in the vicinity of the corridors (UNHP 2008). The three-toed woodpecker does not occur in the study corridors.

E.2.5.17 Yellow-billed Cuckoo (Federal Candidate)

The yellow-billed cuckoo was designated as a candidate for Federal listing on October 30, 2001 (66 FR 38611). The cuckoo is a riparian obligate species that requires large tracts of mature cottonwood/willow with a dense sub-canopy (Parrish et al. 2002). The species is considered to be an extremely rare breeder in suitable riparian habitats throughout the state, with only three breeding records in the last 10 years (Provo River, Moab Sloughs, and Ouray National Wildlife Refuge) (Parrish et al. 2002). Although transient individuals may pass through the study corridors, none of the corridors contain suitable nesting habitat for the yellow-billed cuckoo.

E.2.6 Mammals

E.2.6.1 Canada Lynx (Federally Threatened)

The Canada lynx was listed as federally threatened in the contiguous United States on March 24, 2000 (65 FR 16052). The USFWS issued a Notice of Remanded Determination of Status in 2003, which stated that (1) there is no evidence of lynx reproduction in Utah, and (2) lynx that do occur in Utah are dispersers from adjacent states rather than residents. No critical habitat has been designated for the Canada lynx in Utah.

The Canada lynx breeds in high-elevation, mature spruce-fir forests and forages for snowshoe hare (*Lepus americanus*) in early successional montane habitats. Although it is believed that the Canada lynx historically occupied the northern and central mountains of Utah, there are few data to substantiate the species historical range (Bosworth 2003). The study area is located outside the current range of the species and does not contain suitable habitat. The Canada lynx does not occur in the study corridors.

E.2.6.2 Dark Kangaroo Mouse (BLM/State Sensitive)

The dark kangaroo mouse is restricted to desert shrub and sagebrush communities with fine, gravelly soils in the West Desert (Bosworth 2003). The study corridors are located outside the range of the species in Utah, and the dark kangaroo mouse does not occur in the study corridors.

E.2.6.3 Fisher (Forest Service Sensitive)

The fisher inhabits mature spruce-fir forests with extensive canopy cover. There are no reliable records establishing its historical presence in Utah, and the UDWR classifies the species as extirpated in Utah (UDWR 2006). The study corridors are located outside the species distribution in North America and do not contain suitable habitat. The fisher does not occur in the study corridors.

E.2.6.4 Fringed Myotis (BLM/State Sensitive)

The fringed myotis is a widely distributed, but relatively rare species that is known to occur in central and northeastern Utah (Oliver 2000). The species forages in a variety of habitats, including desert shrub, sagebrush, pinyon–juniper, ponderosa pine, and montane forest, and roosts in abandoned buildings, mines, and caves (Oliver 2000). Of 157 individual bats that were captured during surveys near Dugway Proving Ground, one was a fringed myotis. The study corridors are located within the range of the species in Utah and contain suitable habitat. Although the species has not been documented in the study corridors, the fringed myotis is likely to forage throughout the corridors.

E.2.6.5 Kit Fox (BLM/State Sensitive)

The kit fox inhabits arid desert shrub and sagebrush communities in east-central and western Utah (Bosworth 2003). The kit fox has been observed infrequently in the study area over the past 40 years (UNHP 2008). There were a series of observations in the Goshen and Cedar Valleys in the 1960s, and a more recent observation near the James Walter Fitzgerald Waterfowl Management Area. The study

corridors are located within the range of the species in Utah and contain suitable habitat for the kit fox. The species is likely to occur throughout desert shrub and sagebrush communities in the study corridors.

E.2.6.6 North American Beaver (Forest Service MIS)

The North American beaver is relatively common throughout Utah, where it inhabits slow moving streams, ponds, small lakes, and reservoirs (UDWR 2007v). The study corridors do not contain suitable habitat for the North American beaver, and the species does not occur in the study corridors.

E.2.6.7 Preble's Shrew (BLM/State Sensitive)

The Preble's shrew is associated with bogs, marshes, and riparian habitats. The species is extremely rare in Utah and has been only documented at two sites in Tooele County (Bosworth 2003). Both sites are located in wetlands/desert saltgrass habitats along the southern shore of the Great Salt Lake. Although the species has not been documented within the study corridors, the Preble's shrew may occur in suitable habitat along Links 352, 353, 354, 356, 365, 366, and 385.

E.2.6.8 Pygmy Rabbit (BLM/State Sensitive)

On January 8, 2008, the USFWS announced a 90-day finding, showing substantial scientific/commercial information indicating that listing the pygmy rabbit under the ESA may be warranted. The agency was initiating a status review to determine if listing the species is warranted (73 FR 13212). The status review is ongoing.

The pygmy rabbit is a Great Basin endemic that is generally restricted to mature sagebrush habitats with deep friable soils. The species is patchily distributed across northern and western Utah (Bosworth 2003), and the study area is within the historic range of the species in Utah. Suitable habitat for the pygmy rabbit within the study area is limited, largely due to the general quality of sagebrush communities and the absence of large tracts of tall, mature sagebrush plants. Although the UNHP database does not contain any observations of the pygmy rabbit in the study corridors, no formal surveys have been conducted in these areas. The pygmy rabbit may occur in sagebrush habitats throughout the study corridors.

E.2.6.9 Spotted Bat (BLM/State Sensitive and Forest Service Sensitive)

The spotted bat is widely distributed across Utah, but is primarily associated with deep, rocky canyons in eastern and southern portions of the state (Oliver 2000). The species roosts in crevices on cliff walls and forages in open grassland, desert shrub, sagebrush, and mountain meadow communities. Although there are no UNHP records or known roosts in the study corridors, the spotted bat is likely to forage throughout the study corridors.

E.2.6.10 Townsend's Big-eared Bat (BLM/State Sensitive and Forest Service Sensitive)

The Townsend's big-eared bat is a relatively common species that roosts in caves and abandoned mines and forages in sagebrush, pinyon-juniper, mountain shrub, and mixed conifer communities throughout Utah (Oliver 2000). The Townsend's big-eared bat is one of the few bat species known to winter in Utah,

and several hibernacula have been documented in the vicinity of Ophir Canyon (Lengas 1997; Oliver 2000; UNHP 2008). Although no known roosts and hibernacula are located within the study corridors, a core bat area has been delineated along Link 95. The Townsend's big-eared bat is likely to forage in suitable habitats throughout the study corridors.

E.2.6.11 Western Red Bat (BLM/State Sensitive)

The western red bat is considered extremely rare in Utah (Oliver 2000). Although most of the few species records are from Washington County, there is a specimen from Utah County and a verbal report of a capture in Cache County in recent years (Oliver 2000). The western red bat roosts in trees and foliage in low elevation, riparian cottonwood forests. There are no records of the species within or adjacent to the study corridors, and the corridors contain a limited amount of potential roosting habitat. The western red bat may occur in suitable riparian habitats along Links 95, 210, and 215.

E.2.6.12 White-tailed Prairie Dog (BLM/State Sensitive)

The white-tailed prairie dog is restricted to the Uinta Basin and the northern Colorado Plateau (Bosworth 2003). The study corridors are located outside the current range of the species in Utah, and the white-tailed prairie dog does not occur in the corridors.

Biological Report

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**BIOLOGICAL REPORT
FOR THE
MONA-OQUIRRH TRANSMISSION CORRIDOR PROJECT**

**Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119**

September 2009

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EXECUTIVE SUMMARY

This Biological Report has been prepared to evaluate the potential effects of the construction, operation, and maintenance of the Mona-Oquirrh Transmission Corridor Project on federally-listed plant and animal species in accordance with the requirements of Section 7 of the Endangered Species Act (ESA). The Project consists of three major components including a new 500kV transmission line, two new 345kV transmission lines, and two new substations. A total of nine species are evaluated in this BA, including two that are currently being reviewed for listing under the ESA (Table 1).

No designated Critical Habitat occurs within or adjacent to the project area, and the area does not contain suitable habitat for any federally listed or Candidate species. A No Effect determination was made for each of these species (Table 1). The greater sage-grouse and pygmy rabbit were also evaluated because these species are currently being reviewed for federal listing under the Endangered Species Act. Although greater sage-grouse and pygmy rabbits may occur in the project area, there is no high quality habitat for either species in the project area. No greater sage-grouse or pygmy rabbits were observed during field surveys. The Project is not likely to result in any adverse impacts to either of these species.

Table 1			
Species Evaluated for the Project Area			
Common Name	Scientific Name	Status	Effects Determination
Clay phacelia	<i>Phacelia argillacea</i>	Endangered	No Adverse Effect
Deseret milk-vetch	<i>Astragalus desereticus</i>	Threatened	No Adverse Effect
Ute ladies'-tresses	<i>Spiranthes diluvalis</i>	Threatened	No Adverse Effect
Utah valvata snail	<i>Valvata utahensis</i>	Endangered	No Adverse Effect
June sucker	<i>Chasmistes liorus</i>	Endangered	No Adverse Effect
Yellow-billed cuckoo	<i>Coccyzus americanus</i>	Candidate	No Adverse Effect
Canada lynx	<i>Lynx canadensis</i>	Threatened	No Adverse Effect
Greater sage-grouse	<i>Centrocercus urophasianus</i>	under status review	No adverse impacts
Pygmy rabbit	<i>Brachylagus idahoensis</i>	under status review	No adverse impacts

1.0 INTRODUCTION

1.1 PURPOSE

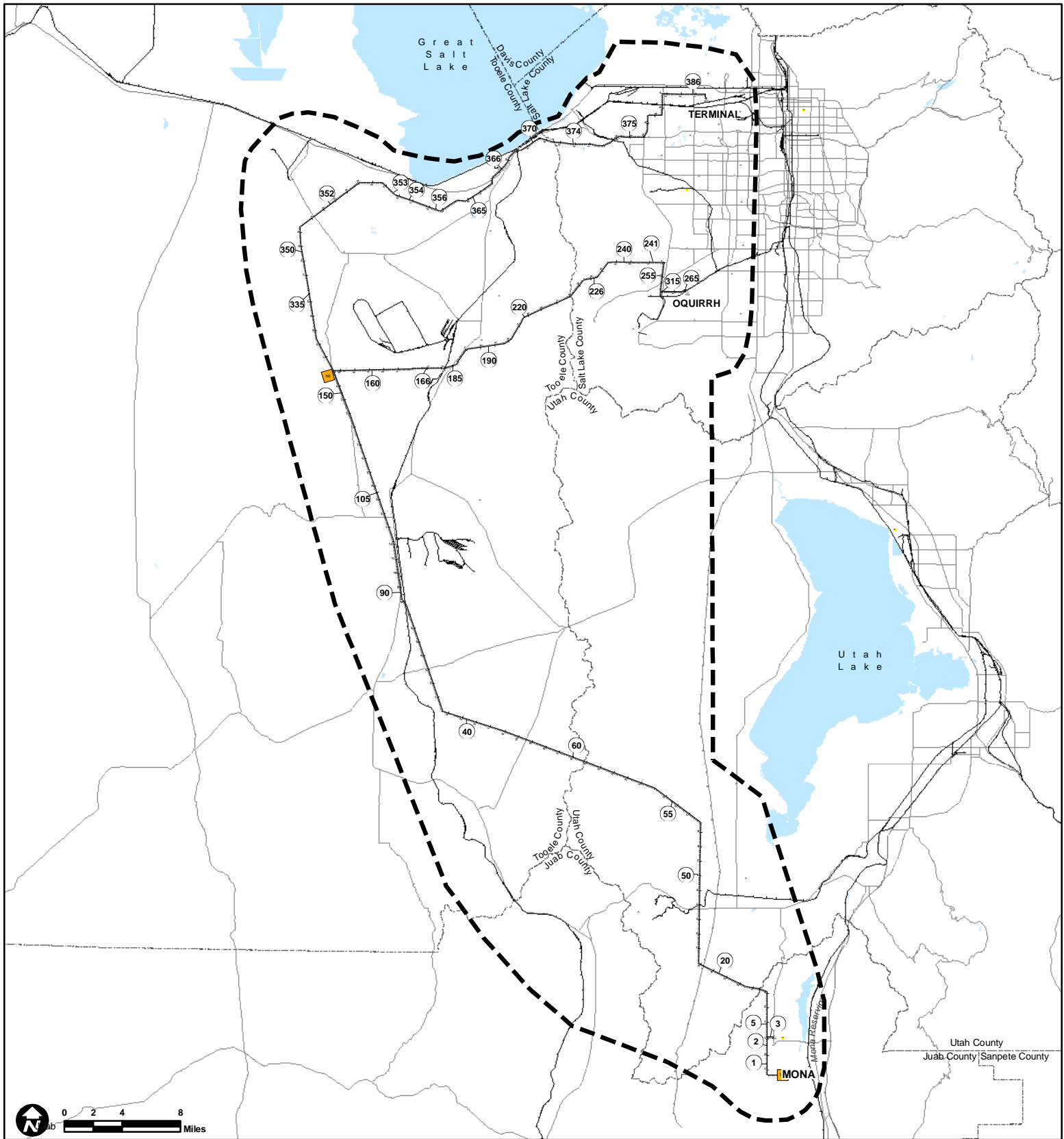
The purpose of this Biological Report is to evaluate the potential effects of the construction, operation, and maintenance of the Mona-Oquirrh Transmission Corridor Project (Project) on federally-listed plant and animal species in accordance with the requirements of Section 7 of the Endangered Species Act (ESA; 16 U.S.C. 460 et seq., as amended). The species evaluated in this report include the clay phacelia (*Phacelia argillacea*), Deseret milk-vetch (*Astragalus desereticus*), Ute ladies'-tresses (*Spiranthes diluvialis*), Utah valvata snail (*Valvata utahensis*), June sucker (*Chasmistes liorus*), yellow-billed cuckoo (*Coccyzus americanus*), and Canada lynx (*Lynx canadensis*). Because the greater sage-grouse (*Centrocercus urophasianus*) and the pygmy rabbit (*Brachylagus idahoensis*) are currently under review by the U.S. Fish and Wildlife Service (USFWS) for ESA consideration, the Bureau of Land Management (BLM)–Salt Lake Field Office has also included an evaluation of these species in this report. This Biological Report includes species accounts, analysis of potential project-related impacts, and effects determinations for each species. This document is intended to determine whether the project meets the threshold for evaluation by the USFWS.

1.2 PROJECT DESCRIPTION

Overview

The Project consists of five major components including: (1) a 500kV transmission line from the existing Mona Substation to the future Limber Substation (includes an interconnection with the proposed Mona Annex Substation); (2) a 345kV transmission line from the proposed Limber Substation to the existing Oquirrh Substation; (3) a 345kV transmission line from the future Limber Substation to the existing Terminal Substation; and (4) two new substations. These components are described below and illustrated in Figure 1.

1. A 500kV transmission line is proposed from the existing Mona Substation, near the community of Mona in Juab County, Utah, to the proposed Limber Substation located in the Tooele Valley west of South Mountain (Figure 1). This is referred to as the Mona-Limber segment. Initially energized at 345kV, the line would be upgraded to 500kV at some time in the future.
2. A double-circuit 345kV transmission line is proposed between the proposed Limber Substation and the existing Oquirrh Substation located in West Jordan, Utah (Figure 1). This is referred to as the Limber-Oquirrh segment.
3. A double-circuit 345kV transmission line is proposed between the proposed Limber Substation and the existing Terminal Substation located in Salt Lake City, Utah (Figure 1). This is referred to as the Limber-Terminal segment.
4. One new substation (Mona Annex substation) would be constructed near the existing Mona Substation. A second new substation would be constructed at the northern edge of Rush Valley west of South Mountain (Limber substation).



Legend

- | | |
|----------------------------|-----------------|
| Project Study Area | Railroad |
| Proposed Substation Site | Pipeline |
| Proposed Transmission Line | Major Road |
| Link Tag | County Boundary |

SOURCES: County Boundary, Utah AGRC 2004; Transmission Lines and Substations, PacifiCorp
 P:\GIS\Projects\PacifiCorp\moquirrh\mxd\MoQuirrh_Bio_Study_Area090109.mxd

Figure 1

Project Area

Project Purpose and Need

Rocky Mountain Power (RMP) has determined a need for the Project based on its obligations as a publicly regulated electric utility to provide safe, reliable, and cost-effective electric transmission service to its retail customers and other users of the transmission system. RMP is obligated under the Federal Energy and Regulatory Commission (FERC) Orders 888 and 889 to expand or upgrade its transmission system pursuant to the Open Access Transmission Tariff to accommodate requests for transmission services.

Through the course of meeting its business and regulatory obligations, RMP has substantiated the need for the Project based on (1) population growth and current and projected electrical demands in northern Utah, (2) existing generation resources and the capacity of existing transmission infrastructure to meet these demands, (3) projected generation and the capacity of the existing transmission system to accommodate the increased capacity for facilities planned or under construction, and (4) reliability issues associated with the operation of the existing transmission system.

Population Growth, Current and Projected Electrical Demand

Northern Utah represents one of the fastest growing areas within the state and constitutes one of the major growth areas in the region. The population in the area, served by RMP, is currently estimated at 2,095,403 and represents approximately 80 percent of electrical demand in the State of Utah. The population is expected to increase to approximately 2,855,894 by 2020.

Existing Generation Resources and Transmission Capacity

The majority of the electricity serving the northern Utah area is provided by RMP generation facilities in Carbon, Juab, and Emery Counties and is delivered on existing transmission lines from the south. These transmission lines are also used to meet other RMP transmission commitments required for Arizona, Nevada, and northern Utah. As northern Utah's electrical usage grows, existing transmission lines do not have sufficient capacity to serve this projected load and ensure an adequate and reliable electric supply.

Projected Generation Resources and Transmission Capacity

RMP projections indicate the need for approximately 250 megawatts of additional power each year to support anticipated growth in northern Utah, and additional transmission lines will be critical to ensure delivery of additional load to this area. The new 500/345kV transmission line interconnection between the existing Mona, Oquirrh, and Terminal substations is required by 2012 to ensure adequate capacity.

Reliability

Reliability and operational flexibility is obtained through alternative transmission paths. These alternative paths allow for the shifting of load sources during planned or unplanned outages (generation or transmission). During times when one transmission line must be taken out-of-service for maintenance needs, the loss of an additional line would create a double-line outage condition. The Western Electricity Coordinating Council, in conjunction with the National Electric Reliability Council, has established System Planning and Operating Criteria that all Transmission Providers with the Western Interconnection must follow when planning and operating their transmission systems. These criteria require that Transmission Providers must evaluate potential normal and abnormal operating conditions and plan for these same conditions when performing transmission planning studies for future system conditions.

Project Components

Cumulatively, the project involves construction of two substations and approximately 67 miles of 500kV transmission line and 75 miles of double-circuit 345kV transmission line. The substations and three transmission line segments are described below. Typical design characteristics of the 500kV and 345kV transmission lines are presented in Table 2.

Mona to Limber Transmission Line

The Mona to Limber 500kV Transmission Line is approximately 66.8 miles long and would connect the existing Mona Substation with the proposed Limber Substation. Generally, the route originates at the Mona Substation, heads northwest across the Long Ridge Mountains into the south end of the Goshen Valley, continues north through the Goshen Valley and along the foothills of the Tintic Mountains, runs northwest through the Cedar Valley to the western Rush Valley, and then north to the future Limber Substation (Figure 1). Table 2 identifies the typical design characteristics for a 500kV transmission line.

Limber to Oquirrh Transmission Line

The Limber to Oquirrh 345kV Transmission Line is approximately 30.3 miles long and would connect the proposed Limber Substation with the existing Oquirrh Substation. Generally, the route originates at the Limber Substation, heads east along the northern edge of South Mountain, turns northeast across the foothills south and east of Tooele, heads east across the Oquirrh Mountains, and into the existing Oquirrh Substation (Figure 1). Table 2 identifies the typical design characteristics for a 345kV transmission line.

Limber to Terminal Transmission Line

The Limber to Terminal 345kV Transmission Line is approximately 45.1 miles long and would connect the proposed Limber Substation with the existing Terminal Substation. Generally, the route originates at the Limber Substation, heads north along the foothills of the Stansbury Mountains, then east parallel to and south of Interstate 80 to Lake Point, follows the southern edge of the Kennecott tailing pond, and into the existing Terminal Substation (Figure 1). Table 2 identifies the typical design characteristics for a 345kV transmission line.

Mona Annex and Limber Substations

Potential locations for the future Mona Annex and Limber Substations have been identified and analyzed in the EIS. The substation sites are approximately 370 acres each, including the substation footprint and a buffer to account for transmission line facilities entering and exiting the substation. The Mona Annex Substation would be a 500/345/138kV substation with a footprint of approximately 203 acres. The Mona Annex site is located on private land (77 percent) and BLM land (23 percent) in Juab County, approximately 3 miles southwest of the town of Mona. The future Mona Annex Substation would be placed in-service when the Mona to Limber transmission line is converted from 345kV to 500kV. The Limber Substation would be a 500/345/138kV substation with a footprint of approximately 155 acres. The site is located on private land in Tooele County, approximately 1 mile southwest of the Tooele Army Depot.

**TABLE 2
TYPICAL DESIGN CHARACTERISTICS OF THE 500/345KV TRANSMISSION LINES**

Feature	Description	
	500kV Lattice	345kV Lattice
Approximate length (miles)	67	75
Type of structure	Self-supporting steel lattice	Self-supporting steel lattice
Structure height (feet)	170 to 200	125 to 150
Span length (feet)	1,000 to 1,300	650 to 750
Number of structures per mile	4 to 5	7 to 8
Right-of-way width (feet)	300	150
Temporary Disturbance		
Structure work area	300 x 200 feet per structure	150 x 200 feet per structure
Wire-pulling sites	300 x 700 feet per 2 miles	150 x 700 feet per 2 miles
Wire-tensioning sites	300 x 700 feet per 2 miles	150 x 700 feet per 2 miles
Wire-splicing sites	100 x 100 feet per 2 miles	100 x 100 feet per 2 miles
Construction yards	Approximately one 12-acre site for every 30 miles on private land (location to be determined)	
Concrete batch plant	One 2-acre batch plant between Mona and Limber substations	
Permanent Disturbance		
Structure base (width)	40 to 45 feet (tangent) 50 to 80 feet (dead end)	17 feet (tangent) 30 feet (dead end)
Communication Regenerator station	One 100 x 100 foot site between the Mona and Limber substations	
Access Roads		
New roads required	Approximately 1.1 to 2.5 miles of new road per mile of transmission line where new roads are required.	
New spur roads required	Approximately 0.2 to 0.3 mile of new spur roads per mile of transmission line	Approximately 0.3 to 0.5 mile of new spur roads per mile of transmission line
Improve existing roads	Existing roads would be improved to a minimum of 14 feet wide.	
Electrical Properties		
Nominal voltage	500kV AC line-to-line	345kV AC line-to-line
Capacity	1,500 MW per circuit	750 MW per circuit
Circuit configuration	Double-circuit with six phases per structure, three subconductors per phase	Double-circuit with six phases per structure, two subconductors per phase
Conductor size	1,949.6 kcmil ACSR	1,272 kcmil ACSR
Minimum ground clearance for conductor	35 feet minimum	30 feet minimum
NOTE: Kcmil = Thousand circular mil ACSR = Aluminum conductor steel reinforced		

1.3 CONSULTATION ACTIVITIES

The BLM-Salt Lake Field Office initiated informal consultation in February 2008 by requesting the USFWS to provide a list of threatened, endangered, proposed, and candidate species that may be present in the project area. The USFWS directed the BLM to obtain a species list from the Region 6 website. The species list on USFWS website is organized by county and identifies the threatened, endangered, proposed, or candidate species that may occur in each county in Utah (USFWS 2007a). A list of species that potentially occur in the four counties in which the Project is located (Juab, Tooele, Salt Lake, and Utah) was obtained from the website in August 2008. The list included a total of nine species.

In March 2009, the USFWS published revised species lists for Utah Counties (USFWS 2009). The slender moonwort (*Botrychium lineare*) was eliminated from the Salt Lake County list as a result of the USFWS decision to remove it from candidate species list (72 FR 69034). Therefore, the slender moonwort is not evaluated in this document. The bonytail (*Gila elegans*), Colorado pikeminnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and razorback sucker (*Xyrauchen texanus*) were added to several county lists (including Utah County) due to concerns over potential downstream effects of de-watering activities in the extreme southern portion of the county (Laura Romin, USFWS-Utah Field Office, personal communication). Since the Project does not involve de-watering activities and would not adversely affect water resources in the Colorado River drainage system, these four fish species are not evaluated in this document. The species evaluated in this document are listed in Table 1.

1.4 DATA COLLECTION

Information on federally listed species in the study area was obtained from a variety of sources. The scientific literature was a primary source of information, including species-specific recovery plans and conservation assessments, Utah Division of Wildlife Resources (UDWR) species accounts and distribution maps (UDWR 2009a, 2009b, 2009c), UDWR publications (Franklin 2005, Bosworth 2003, Parrish et al. 2002, Oliver and Bosworth 1999), and BLM Resource Management Plans (BLM 1990, BLM 1988).

Geographic Information System (GIS) locality data files were obtained from the Utah Natural Heritage Program (UDWR 2008c). These GIS files provided spatially explicit information on reported occurrences of sensitive species for the entire study area. Sources of information on bird species observed in the study area included UDWR Utah Bird Sightings (UDWR 2008a), annual North American Breeding Bird Survey (USGS 2008), Great Salt Lake Audubon (GSLA 2008), and Utah Birds Bird Sightings and Reports (Utah Birds 2008). Additionally, technical reports and National Environmental Policy Act (NEPA) documents were also utilized as supplemental data sources. Field reconnaissance was conducted in December 2007 and August 2008 to evaluate the project area and to determine whether suitable habitat for any federally listed species occurs within this area. Species-specific surveys were conducted for Ute ladies'-tresses, greater sage-grouse, and pygmy rabbits in spring and summer 2009 to support the conclusions presented in this document.

2.0 ENVIRONMENTAL SETTING

2.1 REGIONAL CHARACTERISTICS

The Project is located within the Basin and Range ecoregion, which is characterized by broad desert valleys bordered by narrow, north-south trending mountain ranges. The study corridors contain characteristic Basin and Range physiography, including low elevation desert valleys (i.e., Rush Valley) bounded by north-south trending mountain ranges (i.e., Oquirrh Mountains). The Great Salt Lake, located along the northern edge of the project area, represents the other significant landscape feature that occurs within the study corridors. Elevations along the corridors vary from approximately 4,200 feet above mean sea level (msl) in the valleys to over 10,600 feet msl in the Oquirrh Mountains.

The study corridors support diverse biotic communities as a result of 1) elevation and precipitation gradients, 2) the Great Salt Lake and associated wetland communities, and 3) alkaline soil conditions in lower elevation valleys. Primary habitat types in the study corridors include desert shrub, grassland, and sagebrush at lower elevations, pinyon-juniper on valley slopes, and mountain shrub and forest communities at higher elevations. Halophytic desert shrub communities occur in alkaline basins throughout the study corridors. Wetlands occur in Rush Valley and the southern edge of the Great Salt Lake, while riparian communities occur along a few small streams and a few small springs. Perennial waters in the study corridors include the Great Salt Lake, two small reservoirs, and two creeks.

2.2 PROJECT AREA

The project area contains characteristic Basin and Range physiography, including several wide, arid valleys (Goshen Valley, Cedar Valley, Tooele Valley, and Rush Valley) bounded by relatively small, north-south trending mountain ranges (Oquirrh, Stansbury, and East Tintic mountains). Elevations in the project area range from 4,200 feet above msl in the valley bottoms to over 10,600 feet msl in the Oquirrh Mountains. Topography and elevation greatly influence precipitation patterns in the study area. Data from the Western Regional Climate Center (WRCC 2008) indicate average annual precipitation rates vary from approximately 10 inches in Rush Valley to over 22 inches in the Oquirrh Mountains.

Aquatic habitats within the project area are limited. Settlement Canyon Reservoir supports rainbow trout, brook trout (*Salvelinus fontinalis*), and brown trout (*Salmo trutta*). There are several small creeks in the study area that flow from the mountains to the valley floors. These are generally ephemeral in nature and only support flows during precipitation events and spring runoff. Most have either been diverted for agricultural purposes or disappear once they reach the valley floors as a result of infiltration and evaporation. Table 3 presents a summary of the creeks crossed by the Project.

Creek Name	Status at Crossing	Fisheries at Crossing¹
Clover Creek	Ephemeral	Does not support fish at crossing
Faust Creek	Ephemeral	Does not support fish at crossing
Hickman Creek	Ephemeral	Does not support fish at crossing
North Willow Creek	Ephemeral	Does not support fish at crossing
Settlement Canyon Creek	Perennial	Supports rainbow trout and Utah chub
South Willow Creek	Ephemeral	Does not support fish at crossing

¹ Fisheries information based upon data received from Chris Crockett, Fisheries Biologist, UDWR- Central Region.

Vegetation in the project area is typical of the Basin and Range ecoregion. The distribution of vegetative communities is correlated with soil moisture and soil salinity. Vegetation mapping of the study area was based upon land cover data obtained from the Southwest Regional Gap Analysis Project (Lowry et. al 2005) and the National Wetlands Inventory (USFWS 2008).

Wetland and riparian communities occur at the north end of Tooele Valley and in Rush Valley west of the Army Depot. Wetland communities include vegetated and non-vegetated mineral flats, wet meadows, and emergent marshes. The location and extent of these communities is primarily determined by local soil and hydrological conditions. Primary species in the vegetated mineral flats include black greasewood (*Sarcobatus vermiculatus*), pickleweed (*Allenrolfea occidentalis*), inland saltgrass (*Distichlis spicata*), Utah samphire (*Sarcocornia utahensis*), and creeping wild rye (*Leymus triticoides*). Wet meadows are dominated by hydrophytic species such as inland saltgrass (*Distichlis spicata*), Baltic rush (*Juncus balticus*), and foxtail barley (*Hordeum jubatum*). Typical species in emergent marshes include bulrush (*Scirpus* spp.), cattail (*Typha* spp.), canarygrass (*Phalaris* spp.), and various rushes (*Juncus* spp.).

Riparian communities occur along small creeks and springs, with the specific community type and species composition dependent on elevation and hydrological characteristics. Generally, the riparian habitats occur as narrow bands (10-20 feet wide) immediately adjacent to the waterway and do not support well-developed riparian vegetation. Typical species in lower elevation shrub riparian habitats include tamarisk (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), willow (*Salix* spp.), and red osier dogwood (*Cornus stolonifera*). Tamarisk and Russian olive riparian communities occur along Faust Creek and willow-dominated riparian communities occur along Pine Creek. Typical species in higher elevation, forest riparian communities include box elder (*Acer negundo*), bigtooth maple (*Acer grandidentatum*), water birch (*Betula occidentalis*), narrowleaf cottonwood (*Populus angustifolia*), and Engelmann spruce (*Picea engelmannii*). Box elder-dominated communities occur along Settlement Creek. Bigtooth maple-cottonwood riparian habitats occur along Middle Creek.

Arid, saline habitats at the lowest elevations in valley bottoms support playas and salt desert shrub communities. Playas are sparsely vegetated and extremely alkaline, and support halophytic species such as inland saltgrass, sickle saltbush (*Atriplex falcata*), pickleweed, spiny hopsage (*Grayia spinosa*), alkligrasses (*Puccinellia distans* and *P. nuttalliana*), and basin wildrye (*Leymus cinereus*). Salt desert shrub occurs in flood-prone alkaline soils on stream terraces and playa margins, and is often ecotonal with salt desert shrub. This community is dominated by black greasewood (*Sarcobatus vermiculatus*) with co-dominant species including Gardner saltbush (*Atriplex gardneri*), shadscale saltbush (*Atriplex confertifolia*), winterfat (*Krascheninnikovia lanata*), rubber rabbitbrush (*Ericameria nauseosa*), bottlebrush squirreltail (*Elymus elymoides*), seepweed (*Suaeda torreyana*), and gray molly (*Kochia americana*).

Slightly higher elevations in the valleys support sagebrush and grassland communities. Big sagebrush habitats occur on deep, well-drained, non-alkaline soils and are dominated by basin big sagebrush (*Artemisia tridentata* ssp. *tridentata*) and Wyoming big sagebrush (*Artemisia tridentata* ssp. *wyomingensis*). Mixed sagebrush occurs on shallow, rocky, non-saline soils at low and middle elevations. Dominant species include black sagebrush (*Artemisia nova*), low rabbitbrush (*Chrysothamnus viscidiflorus*), rubber rabbitbrush, mountain big sagebrush (*Artemisia tridentata* ssp. *vaseyana*), and horsebrush (*Tetradymia* spp.). Primary grassland species include Indian ricegrass (*Achnatherum hymenoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), slender wheatgrass (*Elymus trachycaulus*), western wheatgrass

(*Pascopyrum smithii*), Sandberg bluegrass (*Poa secunda*), bottlebrush squirreltail (*Elymus elymoides*), and needle and thread (*Hesperostipa comata*).

Juniper communities occur on xeric hills and valley slopes and are dominated by Utah juniper (*Juniperus osteosperma*). Primary understory species include mountain big sagebrush, antelope bitterbrush (*Purshia tridentata*), cliffrose (*Purshia mexicana*), rubber rabbitbrush, wax-leaf currant (*Ribes* spp.), and mountain mahogany (*Cercocarpus* spp.).

Mountain shrub occurs on dry foothills and mountain slopes in the Oquirrh Mountains. Dominant species include Gambel oak (*Quercus gambelii*), serviceberry (*Amelanchier alnifolia* and *A. utahensis*), antelope bitterbrush, cliffrose, chokecherry (*Prunus virginiana*), mountain big sagebrush, and mountain mahogany.

Mixed conifer forest occurs on xeric sites at higher elevations in the Oquirrh Mountains. Dominant species include Douglas-fir (*Pseudotsuga menziesii*), white fir (*Abies concolor*), and mountain lover (*Paxistima myrsinites*). Spruce-fir forest and deciduous forest communities occur on mesic sites at higher elevations in the Oquirrh Mountains. Engelmann spruce and subalpine fir (*Abies lasiocarpa*) are the dominant tree species in spruce-fir forests while aspen (*Populus tremuloides*), mountain snowberry (*Symphoricarpos oreophilus*), ninebark (*Physocarpus alternans*), and hawthorn (*Crataegus rivularis*) are the primary species in the deciduous forest communities.

3.0 SPECIES ACCOUNTS AND DETERMINATIONS OF EFFECT

This section presents information on species legal status, habitat requirements, distribution, occurrence in the project area, and a determination of potential adverse effects. The construction, operation, and maintenance of the proposed transmission lines and substations would result in both direct and indirect adverse effects on biological resources. Potential direct effects include:

- behavioral disturbance and displacement of wildlife during construction, inspection, and maintenance activities (temporary but long-term);
- habitat loss and fragmentation and long-term displacement wildlife (permanent);
- establishment/spread of noxious weeds (permanent);
- mortality due to crushing burrows, nests or animals with limited mobility (temporary);
- initiation of human-caused wildfires (temporary but long-term);
- mortality associated with collisions with structures and/or conductors (permanent);
- increased predation due to raptor and raven perching on transmission line structures (permanent); and
- behavioral disturbance and habitat abandonment due to the presence of vertical structures (permanent).

The primary indirect effects are associated with the construction of permanent access roads, which could be used by the general public to access currently inaccessible habitats. Human activity and vehicle noise could result in displacement, abandonment of habitat, behavioral disruption, and additional stress during critical periods. New access into previously inaccessible habitats may also increase displacement of wildlife and mortality via legal hunting and poaching. Finally, public use of access roads could facilitate the spread of noxious weeds and increase the risk of human-caused wildfires. These indirect effects would all be permanent.

3.1 CLAY PHACELIA

Status

The clay phacelia (*Phacelia argillacea*) was listed as an endangered species under the ESA on September 28, 1978 (43 FR 44810). A recovery plan for the clay phacelia was completed in 1982 (USFWS 1982). No critical habitat has been designated for this species.

Species Range and Habitat Requirements

The clay phacelia is member of the waterleaf family with hairy, simple to branching stems that are 5 to 15 inches tall. It has a scorpion tale-like inflorescence that produces blue flowers from June to August. The clay phacelia is a narrow endemic that is only known to occur in the Spanish Fork Canyon in Utah County (Franklin 2005). There are two extant populations: one in the vicinity of Tucker, Utah, and the other near Mill Fork, Utah. The Tucker site is a private preserve that was purchased by The Nature Conservancy specifically to protect the clay phacelia. A survey of historical habitat southeast of Soldier Summit failed to find a population in that area (Harper and Armstrong 1992). The Uinta National Forest has initiated a clay phacelia reintroduction program, but this program has not yet resulted in the establishment of any additional populations (Denise Van Keuren, Forest Ecologist–Uinta National Forest, personal communication).

The clay phacelia grows on steep hillsides with fine textured soil and fragmented shale derived from the Green River Formation (Callister and Van Pelt 1992, Harper and Armstrong 1992). The existing populations are located in sparse pinyon-juniper and mountain brush communities at elevations between 6,030 and 6,170 feet above msl.

Primary Threats

Historic human activities, including construction of a railroad, have adversely modified potential habitat for the clay phacelia. Grazing by domestic livestock and native ungulates, as well as the spread of invasive, non-native plant species, have been identified as the primary threats to extant populations of the clay phacelia (Callister and Van Pelt 1992).

Occurrence in Project Area and Effects Determination

The clay phacelia is a narrow endemic plant that is only known to occur in the Spanish Fork Canyon. The project area is located outside the known range of the clay phacelia and does not contain suitable habitat for this species. The Project would have **no effect** on the clay phacelia.

3.2 DESERET MILK-VETCH

Status

The Deseret milk-vetch (*Astragalus desereticus*) was listed as a threatened species without critical habitat under the ESA on October 20, 1999 (64 FR 56590). There is no species recovery plan, but the USFWS, UDWR, Utah Department of Transportation, and Utah School and Institutional Trust Lands Administration have cooperatively developed a Conservation Agreement for the Deseret milk-vetch. The Agreement formalizes measures that are implemented by UDWR, including an annual monitoring program and the acquisition of additional habitat on private lands, in an effort to conserve the species.

In July 2005, a lawsuit was filed that challenged the USFWS for failing to designate critical habitat. A settlement agreement reached in response to the lawsuit required the USFWS to submit a new critical habitat determination for the Deseret milk-vetch by January 19, 2007. On January 25, 2007, the USFWS announced its intention to remove the Deseret milk-vetch from the List of Endangered and Threatened Plants because threats to the species are 1) not as significant as earlier believed and 2) are managed such that the species is not likely to become in danger of extinction throughout all or a significant portion of its range in the foreseeable future (72 FR 3379). This announcement also included the determination that the designation of critical habitat for the Deseret milk-vetch is not prudent because it would not be beneficial to the species.

On April 18, 2007, the USFWS announced the initiation of a 5-year review of the Deseret milk-vetch to evaluate the best scientific and commercial data available to ensure that the classification of this species as threatened is warranted (72 FR 19549).

Species Range and Habitat Requirements

The Deseret milk-vetch is a perennial, herbaceous plant in the legume family. It is approximately 2-6 inches tall with compound leaves and whitish flowers except for pinkish wings and a lilac keel-tip. The Deseret milk-vetch was thought to be extinct until a population was discovered in 1981. The species is a narrow endemic that only occurs on steep, sandy south and west facing slopes within the Moroni Formation (ash-flow tuff) at elevations between 5,400 and 5,600 feet msl (Franklin 2005). The current known range of the Deseret milk-vetch is limited to the Thistle Creek valley east of Birdseye, Utah. This population occupies approximately 345 acres across an area that is approximately 1 mile long by 1/3 mile wide. This habitat includes 230 acres in the Birdseye Unit of the Northwest Manti Wildlife Management Area (owned by the UDWR), 25 acres of land owned by the Utah Department of Transportation, and 90 acres of privately-owned lands. The population was estimated at 10,000 individuals in 1991, although data from monitoring plots on the Northwest Manti Wildlife Management Area indicated a 31 percent population increase between 2000 and 2005 (72 FR 3379).

Primary Threats

The Deseret milk-vetch was listed as threatened due to small population size, restricted distribution, residential development and highway expansion, cattle grazing (including effects associated with erosion and trampling), impacts to pollinator habitat, and a lack of protection under State or local laws (64 FR 56590). As previously noted, the January 25, 2007 announcement suggested that the species threats are not as significant as previously believed (72 FR 3379).

Occurrence in Project Area and Effects Determination

The Deseret milk-vetch is a narrow endemic that is only known to occur on steep, sandy bluffs in the Thistle Creek watershed. The project area is located outside the known range of the Deseret milk-vetch and does not contain suitable habitat for this species. The Deseret milk-vetch does not occur in the project area and the Project would have **no effect** on the Deseret milk-vetch.

3.3 UTE LADIES'-TRESSES

Status

The Ute ladies'-tresses (*Spiranthes diluvialis*) was listed as a threatened species under the ESA on January 17, 1992 (57 FR 2048). Critical habitat was not designated for the species at the time of listing. A draft recovery plan was completed in 1995 (USFWS 1995a), but has not been finalized and currently remains in draft form. The USFWS received a petition to delist the Ute ladies'-tresses on May 10, 1996, and subsequently sent a response to the petitioner on June 10, 1996, that explained the agency's inability to act upon the petition due to the low priorities assigned to delisting petitions in the 1996 Listing Priority Guidance (61 FR 24722).

On October 12, 2004, the USFWS announced a 90-day finding that it was initiating a five-year status review to determine whether delisting was warranted (69 FR 60605). A range-wide status review of the Ute ladies'-tresses was completed in 2005 (Fertig et al. 2005). This report included data on the distribution, population ecology, status, and threats to the Ute ladies'-tresses and was prepared to help the USFWS ascertain whether a change in listing status was appropriate.

Species Range and Habitat Requirements

The Ute ladies'-tresses is a perennial herb that is a member of the Orchid family. The species has erect, glandular stems and a spike-like inflorescence with numerous small white or ivory-colored flowers arranged in a gradual spiral. The Ute ladies'-tresses is currently known to occur in nine western states, with populations generally located in north-central Colorado, eastern Idaho, southwestern Montana, western Nebraska, southeastern Nevada, northern and south-central Utah, north-central Washington, and southeastern Wyoming (Fertig et al. 2005).

In Utah, extant populations are known to occur in Daggett, Duchesne, Garfield, Uintah, Utah, and Wayne counties while historical records are known from Salt Lake, Tooele, and Weber counties. These populations were dispersed across ten watersheds (Duchesne, Escalante, Fremont, Jordan, Lower Green, Lower Weber, Southern Great Salt Lake Desert, Spanish Fork, Upper Green-Flaming Gorge Reservoir, and Utah Lake). Since 1992, one historical location in Tooele County has been relocated and several new sites have been documented that have expanded the known range of Ute ladies'-tresses into Wasatch County and the Ashley-Brush, Provo, and Strawberry watersheds (Fertig et al. 2005).

The Ute ladies'-tresses is endemic to moist soils in wet meadows near springs, lakes, or perennial streams at elevations between 4,300 and 6,850 feet msl (USFWS 1995a). Most occupied habitats are relatively open where vegetation cover was not overly dense or heavily grazed. Populations in Utah occur along perennial streams (9 sites), larger river (8 sites), and springs or sub-irrigated meadows (11 sites). Recent surveys have expanded the habitat types known to be occupied by the Ute ladies'-tresses to include seasonally-flooded river terraces, irrigation canals, gravel pits, sub-irrigated meadows, abandoned stream channels, and lakeshores (Fertig et al. 2005). These studies have also expanded the species elevational range to between 720 and 7,000 feet msl and indicated that the Ute ladies'-tresses does not grow on alkaline soils (Fertig et al. 2005).

Primary Threats

Primary threats to the Ute ladies'-tresses include habitat loss and modification due to urban development, stream channelization, and water diversions, small population sizes, and competition from non-native plants (57 FR 2053).

Occurrence in Project Area and Effects Determination

Several populations of Ute ladies'-tresses have been recently confirmed in the general vicinity of the Project (Fertig et al. 2005). The general location, habitat characteristics, and year of most recent observation are summarized in Table 4. The extant populations in proximity to the project area generally occur in mesic habitats associated with sub-irrigated meadows and perennial streams. Although the project area is located within the general range of the Ute ladies'-tresses, there are no records of the species in the project area (Fertig et al. 2005; UDWR 2009c).

Location	Watershed	Habitat Description	Most recent Observation
Utah County; "Powell Slough"	Utah Lake	Sub-irrigated wet meadow at edge of hay field at 4,490 msl	1994
Utah County; Utah Lake Vineyard	Utah Lake	Sub-irrigated wetland associated with formerly mined peatland at 4,510 msl	2000
Utah County; American Fork Mill Pond	Utah Lake	Spring-fed and irrigated canal banks & marsh at 4,548 msl	1998
Utah County; Lehi wetlands	Utah Lake	Sub-irrigated wet meadow near hummocky fen at 4,495 msl	2000
Utah County; American Fork horse pasture	Utah Lake	Sub-irrigated wet meadow at 4,550 msl	2000
Utah County; Hobbles Creek	Utah Lake	Sub-irrigated <i>Carex nebrascensis</i> - <i>Juncus balticus</i> meadow at 4,500 msl	2004
Utah County; lower Diamond Fork	Spanish Fork	Wet meadows on low floodplains of perennial stream at 5,080 msl	2004
Utah County; middle Diamond Fork	Spanish Fork	Wet meadows in floodplain of perennial stream	2004
Utah County; upper Diamond Fork	Spanish Fork	Floodplain wetlands along perennial stream at 5,460 msl	2004
Utah County; lower Spanish Fork	Spanish Fork	Wet meadows on low floodplains at 4,875 msl	2001
Utah County; upper Spanish Fork	Spanish Fork	Wet meadows on low floodplains at 4,925 msl	2001
Utah County; Soldier Creek	Spanish Fork	Early seral willow/poplar riparian habitat along small perennial stream at 5,300 msl	2001
Tooele County; Willow Springs Station near Callao	Great Salt Lake	Wet meadow irrigated by freshwater springs at 4,325 msl	1994

Source: Fertig et al. 2005

The project area does not contain suitable habitat for the Ute ladies'-tresses. The small ephemeral and perennial waterways that are crossed by the proposed transmission lines do not support mesic floodplain habitats required by the species. Wet meadow and wetland habitats in

the project area have alkaline soils and support halophytic vegetation communities, which do not represent suitable habitat for the Ute ladies'-tresses. Ground surveys were completed for special status plants and noxious weeds along the proposed transmission line routes and substation sites in July 2009. No Ute ladies'-tresses or suitable habitat for the species were found within the survey area during these surveys. The Ute ladies'-tresses does not occur in the project area and the Project would have **no effect** on the Ute ladies'-tresses.

3.4 UTAH (DESERT) VALVATA SNAIL

Status

The Utah (desert) valvata snail (*Valvata utahensis*) was listed as endangered on December 14, 1992 (57 FR 59244). No critical habitat was designated at the time of listing. A recovery plan was completed for five federally-listed snails, including the Utah valvata in 1995 (USFWS 1995b). In response to a petition to delist the Utah valvata, the USFWS issued a 90-Day Finding notice in 2007 that indicated there was substantial information that delisting the Utah valvata may be warranted (72 FR 31264). This finding also noted that the USFWS was initiating a status review that would be conducted concurrent with the five-year status review that had been initiated on April 11, 2006 (71 FR 18345).

Distribution and Habitat Requirements

The 1995 recovery plan described the distribution of the Utah valvata in the mainstem Snake River from River Mile (RM) 579 to RM 714 (USFWS 1995b). Recent surveys have indicated that the species is more widespread than thought at the time of listing, and the Utah valvata snail has been documented in discontinuous colonies along a 260-mile stretch of the Snake River in southern and eastern Idaho. The current range of the Utah valvata includes the mainstem Snake River from RM 582 to RM 837 as well as portions of Box Canyon Creek and the Big Wood River in southern Idaho (72 FR 31264). The recovery area for the Utah valvata includes the mainstem Snake River from RM 572 to RM 709 (USFWS 2005).

In the Snake River, the Utah valvata inhabits a diverse range of cool-water habitats, including shallow shorelines, deep pools, reservoirs, and perennial flowing waters associated with large spring complexes. While large populations in Lake Walcott and American Falls Reservoir indicate the Utah valvata inhabits slow-moving deep water habitats, the species does not occur in fast-moving currents or still water habitats (USFWS 2005). This species appears to prefer well-oxygenated areas of non-reducing calcareous mud or mud-sand substrate among beds of submergent aquatic vegetation. The Utah valvata feeds on plant material, periphyton, and diatoms, and is often associated with floating plants such as *Chara* spp. (USFWS 1995b).

The Utah valvata was known to have historically occurred in Utah Lake. The Utah Lake population, which was extirpated at the turn of the century, was the only known species locality in Utah (Oliver and Bosworth 1999). All other Utah localities for the species are based either on prehistoric material or misidentifications. The Utah valvata is currently considered extirpated in Utah (Oliver and Bosworth 1999).

Primary Threats

The primary threats to the Utah valvata snail include habitat modification and fragmentation resulting from the operation of hydropower dams, degraded water quality, water diversions, and introduced species (USFWS 2005).

Occurrence in Project Area and Effects Determination

The Utah valvata snail is extirpated in Utah (Oliver and Bosworth 1999). The project area is located outside the known range of the Utah valvata snail and does not contain suitable habitat for this species. The Utah valvata snail does not occur in the project area and the Project would have **no effect** on the Utah valvata snail.

3.5 JUNE SUCKER

Status

The June sucker (*Chasmistes liorus*) was listed as endangered on April 30, 1986 (51 FR 10851). The lower 4.9 miles of the main channel of the Provo River (from the confluence with Utah Lake upstream to the Tanner Race diversion) is designated Critical Habitat for the species. A species recovery plan was completed in 1999 (USFWS 1999). In 2001, an Environmental Assessment was completed for federal agency participation in the multi-agency June Sucker Recovery Implementation Program to implement recovery actions and facilitate the resolution of conflicts associated with June sucker recovery in Utah Lake drainage basin (66 FR 56840).

Distribution and Habitat Requirements

The June sucker is a narrow endemic that only occurs in Utah Lake. Prior to settlement of the Utah Valley, the species was known to spawn in several large tributaries of Utah Lake, including the Spanish Fork River, Hobble Creek, and the Provo River. These tributaries entered the lake through large delta's that created braided, slow, meandering channels. As a result of hydrological changes, the species is currently known to spawn only in the lower 3 miles of the Provo River from the confluence with Utah Lake upstream to the Geneva Road Diversion (Bosworth 2003).

Five refugia populations have been established outside of Utah Lake for the purposes of species conservation (USFWS 1999). These populations are located at the Springville Hatchery, Camp Creek Reservoir, Red Butte Reservoir, Ogden Nature Center, and Utah Fisheries Experiment Station. The project corridor does not contain suitable habitat for the June sucker, and the species does not occur in the project area.

Primary Threats

The primary threats to the June sucker include habitat alteration (water development, diversions and river channelization and loss of floodplains due to urban development), pollution and a decline in water quality, hybridization with other sucker species, and competition with and predation by introduced non-native fish species (USFWS 1999).

Occurrence in Project Area and Effects Determination

The June sucker is a narrow endemic that is only known to occur in Utah Lake and the lower Provo River in Utah County. The project area is located outside the known range of the June sucker and does not contain suitable habitat for this species. The June sucker does not occur in the project area and the Project would have **no effect** on the June sucker.

3.6 YELLOW-BILLED CUCKOO

Status

The western Distinct Population Segment of the yellow-billed cuckoo (*Coccyzus americanus*) was designated as a candidate for federal listing on October 30, 2001 (66 FR 38611). The species has been assigned a Listing Priority Number of 3 due to imminent threats of a high magnitude.

Distribution and Habitat Requirements

Historic accounts indicate that the yellow-billed cuckoo was widespread and locally common in California and Arizona; locally common in a few river reaches in New Mexico; locally common in Oregon and Washington; generally local and uncommon in scattered drainages of the arid and semiarid portions of western Colorado, western Wyoming, Idaho, Nevada, and Utah; and probably uncommon and local in British Columbia (USFWS 2007b).

Historically, the yellow-billed cuckoo was uncommon in Utah with the only known specimens obtained from Salt Lake County in 1989 and 1913 and Washington County in 1939, and sites near Hurricane in 1932, Salt Lake City in 1946, Bountiful in 1955, and Capitol Reef National Park in 1980 (Parrish et al. 2002). The only three breeding records in Utah within the last 10 years include the Provo River, Moab Sloughs, and Ouray National Wildlife Refuge (Parrish et al. 2002). Recent avian surveys of riparian habitats within the historic range in the Salt Lake Valley recorded three cuckoos in 7,000 survey hours (USFWS 2007b).

The yellow-billed cuckoo is a riparian obligate species that requires large tracts of mature cottonwood/willow forest with a dense sub-canopy for breeding (Parrish et al. 2002). The current species distribution in Utah is not well known, but it is considered to be an extremely rare breeder in suitable riparian habitats throughout the state.

Primary Threats

The primary threats to this species include habitat loss, cattle grazing, and pesticide application (USFWS 2007b). Biologists estimate that more than 90 percent of yellow-billed cuckoo riparian habitat in the West has been lost or degraded. Principal causes of riparian habitat losses include development, grazing and other agricultural activities, stream channelization and stabilization, and changes in watershed hydrology associated with dams. Suitable breeding habitats have also been substantially reduced in quantity and quality by groundwater pumping and the replacement of native vegetative communities by tamarisk. Where riparian habitat borders agricultural lands, pesticide use may affect cuckoos by reducing the prey base or by poisoning nestlings (USFWS 2007b).

Occurrence in Project Area and Effects Determination

The project area is located within the known range of the yellow-billed cuckoo. However, the area does not contain suitable riparian habitat (mature cottonwood/willow forest with a dense sub-canopy) that is necessary to support a breeding population. There have been no reported observations of the yellow-billed cuckoo within the project area (GSLA 2008, UDWR 2008a, USGS 2008, Utah Birds 2008). There is a small potential for transient individuals to occasionally occur in the project area during seasonal movements, but the area does not support resident yellow-billed cuckoos. The Project would have **no effect** on the yellow-billed cuckoo.

3.7 CANADA LYNX

Status

The Canada lynx (*Lynx canadensis*) was listed as threatened in the contiguous United States on March 24, 2000 (65 FR 16052). In response to a memorandum opinion and order of the United States District Court for the District of Columbia, the USFWS issued a Notice of Remanded Determination of Status in 2003 (68 FR 40076) that clarified and supported the original listing of the Canada lynx as a threatened species. The USFWS initiated a five-year status review on April 18, 2007 (72 FR 19549). On November 9, 2006, the USFWS designated 1,841 square miles of critical habitat for the Canada lynx in Minnesota, Montana, and Washington (71 FR 66008). On February 25, 2009, an additional 40,913 square miles of critical habitat were designated in Idaho, Maine, Minnesota, Montana, Washington, and Wyoming (74 FR 8616).

Distribution and Habitat Requirements

The Canada lynx is a highly specialized predator of snowshoe hare (*Lepus americanus*), and both species are strongly associated with boreal coniferous forests. The distribution of lynx in the contiguous United States is generally restricted to southern extensions of boreal forest that occur in Maine, Minnesota, and northern portions of the Cascade and Rocky Mountain ranges (Ruediger et al. 2000). Lynx habitat consists of a matrix of mature spruce-fir forests (denning habitat) and early successional forests (foraging habitat). The limiting factor for Canada lynx is prey abundance, which is often determined by the availability of snowshoe hare winter habitat (Ruediger et al. 2000).

Canada lynx home range sizes vary in relation to prey abundance, and average between 15 and 25 square miles (Ruediger et al. 2000). Lynx utilize travel corridors in closed canopy forests to move between den sites and foraging habitats, and movements of >600 miles have been documented during periods of prey scarcity (Ruediger et al. 2000).

Primary Threats

The USFWS concluded that the primary threats to the Canada lynx include 1) inadequate regulatory mechanisms, 2) habitat loss due to development, timber harvesting, and fire suppression, and 3) natural rarity at the southern edge of the species range (65 FR 16052).

Occurrence in Project Area and Effects Determination

Although it is hypothesized that the Canada lynx historically occupied the northern and central mountains of Utah, there are few data to substantiate the species historical range in the State (Bosworth 2003). There are ten verified records of lynx in Utah since 1916, nearly all from the Uinta Mountains along the Wyoming border (McKay 1991; McKelvey *et al.* 2000). The USFWS concluded Utah does not support a resident lynx population because there is no evidence of reproduction and suitable habitat is far from source populations (68 FR 40076). No critical habitat has been designated in Utah.

Canada lynx are not known to occur within the project area. There are no observations or reports of lynx in the area and it does not contain suitable habitat. The Canada lynx does not occur in the study area and the Project would have **no effect** on the Canada lynx.

3.8 GREATER SAGE-GROUSE

Status

On February 26, 2008, the USFWS initiated a status review to determine whether the greater sage-grouse (*Centrocercus urophasianus*) warrants protection under the ESA (73 FR 10218). This status review is ongoing. The species is classified as sensitive by the BLM and UDWR.

Distribution and Habitat Requirements

The greater sage-grouse is a sagebrush obligate species that depends on high quality sagebrush vegetation in all seasons (Connelly et al. 2004). Sage-grouse typically utilize several seasonal habitats including breeding and nesting habitat in the spring and early summer, brood-rearing habitat in the summer and fall, and winter habitat.

Male sage-grouse perform elaborate breeding displays on traditional strutting grounds ("leks"). A lek is an open area located within relatively dense stands of sagebrush, and generally represents the center of a population's distribution. Female sage grouse nest in sagebrush habitat near the lek and utilize mesic meadows for brood-rearing. Fall habitats include sagebrush, upland meadows, riparian areas, and irrigated pastures, while winter habitat generally consists of mature sagebrush communities on exposed windswept ridges.

Primary Threats

Sagebrush eradication and intensive use of lands by domestic livestock have reduced quantity and quality of greater sage-grouse habitat in Utah. Specifically, indiscriminate spraying of sagebrush, cropland conversion, and over-grazing of mountain meadows have resulted in a 50 percent decline in sage-grouse populations in Utah (UDWR 2002).

Occurrence in Project Area and Project Impacts

Sagebrush habitats occur throughout the project area, and the UDWR has delineated crucial brooding/winter habitat for greater sage-grouse in portions of the Rush, Tooele, and Tintic Valleys (UDWR 2008b). Greater sage-grouse populations in the study area have declined over the past several decades due to the degradation of sagebrush habitats as a result of wildfire, agricultural activities, invasive plants, water diversions, and long-term drought (UDWR 2002). The current quality of greater sage-grouse habitat in the Rush Valley is poor and the species is rarely observed in the project area (Ashley Green, UDWR Regional Habitat Manager, personal communication; Tom Becker, UDWR Wildlife Biologist, personal communication; UDWR 2008b). There are no known leks in the area.

Aerial lek surveys were conducted in April 2009 along portions of the proposed transmission lines (1 mile either side of centerline) that cross crucial sage-grouse habitat. No greater sage grouse or sage grouse leks were observed during aerial surveys. Additionally, no sign (birds, carcasses, pellets, etc.) was observed in the project area during ground-based field surveys conducted in July 2009.

Although the greater sage-grouse may occur in the project area, habitat quality in the area is poor and there are no active leks or high quality nesting habitat in the area. The Project is not likely to result in any adverse impacts to the greater sage-grouse or sage grouse habitat.

3.9 PYGMY RABBIT

Status

The Columbia Basin Distinct Population Segment of pygmy rabbit (*Brachylagus idahoensis*) in Washington State was listed as endangered on March 5, 2003 (68 FR 10388). On January 8, 2008, the USFWS issued a 90-day finding that indicated the pygmy rabbit may warrant federal protection and initiated a 12-month status review (73 FR 1312). The status review is ongoing. The species is currently classified as sensitive by the BLM and UDWR.

Distribution and Habitat Requirements

The pygmy rabbit is a Great Basin endemic that is generally restricted to mature sagebrush habitats with deep friable soils. The pygmy rabbit is a sagebrush obligate species that relies on sagebrush habitats in all seasons (Gahr 1993, Green and Flinders 1980, Katzner and Parker 1997, Weiss and Verts 1984). As the pygmy rabbit excavates burrow systems, soil depth and texture are important features for suitable habitat (Weiss and Verts 1984). While some studies have suggested that pygmy rabbit habitat use is associated with specific physiographic features, such as riparian areas (Himes and Drohan 2007), sagebrush vegetation and deep, friable soils are the primary factors that determine pygmy rabbit distribution and habitat selection. The species is patchily distributed across northern and western Utah (Bosworth 2003). The project is within the historic species range in Utah.

Primary Threats

Similar to the greater sage-grouse, the large-scale loss and fragmentation of native sagebrush habitats has played a primary role in the decline of the pygmy rabbit.

Occurrence in Project Area and Project Impacts

Suitable habitat for the pygmy rabbit within the project area is limited by the general poor quality of sagebrush communities and the absence of large tracts of tall, mature sagebrush plants with deep, friable soils. The UDWR database (UDWR 2008) does not include any observations of the pygmy rabbit in the project area, and the BLM and UDWR wildlife biologists are not aware of any recent sightings in the area (Ashley Green, UDWR Regional Habitat Manager, personal communication; Tom Becker, UDWR Wildlife Biologist, personal communication).

Pygmy rabbit surveys were conducted in July 2009 following the methodology outlined by Ulmschneider (2004). These surveys were completed within the proposed rights-of-way along those portions of the transmission lines that cross crucial greater sage-grouse habitat. No individual pygmy rabbits, burrows, or other sign were observed during these surveys. It was concluded that the area surveyed did not contain suitable habitat for the pygmy rabbit, and the species is unlikely to occur in the area.

The quality of pygmy rabbit habitat in the project area is generally poor due to the absence of dense, mature stands of sagebrush on deep, friable soils. Wildfire, water diversions, long-term drought, and agricultural activities have also contributed to the decline of sagebrush habitats in this area. No individual pygmy rabbits or pygmy rabbit sign were observed during surveys, and the species is unlikely to occur in the area given current habitat conditions. The Project is not likely to result in any adverse impacts to the pygmy rabbit or pygmy rabbit habitat.

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Appendix F – Visual Resources Supporting Data

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APPENDIX F – VISUAL RESOURCES SUPPORTING DATA

F.1 Affected Environment



Figure F-1: Class A Scenic Quality (Mountains in Background)



Figure F-2: Class A Scenic Quality



Figure F-3: Class B Scenic Quality



Figure F-4: Class B Scenic Quality



Figure F-5: Class B Scenic Quality (Irrigated Agriculture)



Figure F-6: Class C Scenic Quality



Figure F-7: Class C Scenic Quality (Dryland Agricultural)



Figure F-8: Class C Scenic Quality



Figure F-9: Residential Image Type



Figure F-10: Residential Image Type



Figure F-11: Residential Image Type



Figure F-12: Residential Image Type



Figure F-13: Residential Image Type



Figure F-14: Commercial Image Type



Figure F-15: Commercial Image Type



Figure F-16: Industrial/Military Image Type



Figure F-17: Industrial/Military Image Type



Figure F-18: Industrial/Military Image Type



Figure F-19: Institutional Image Type



Figure F-20: Developed Park Image Type

TABLE F-1a SCENIC QUALITY RATING CRITERIA	
Landform	Topography becomes more interesting as it gets steeper, more massive, or more severely or universally sculptured. Outstanding landforms may be monumental, such as in the Grand Canyon in Arizona or the Rocky Mountains of the western United States. Alternatively, landforms may be intricate and subtle, such as certain badlands, pinnacles, arches, and other formations.
Vegetation	Primary consideration is given to the variety of patterns, forms, and textures created by plant life. Short-lived displays should be considered when they are known to be recurring or spectacular, such as the color change displayed by contiguous groves of western aspen trees or eastern maple trees. Smaller scale vegetation features may add striking and intriguing detail to the landscape.
Water	Water can add movement, serenity, and strong lighting contrasts to a scene. The degree to which water features have the capacity to unify, diversify, or dominate the scene is the primary consideration.
Color	Overall colors are observed for the basic components of the landscape, such as soil, rocks, and vegetation as they appear during seasons or periods of high use. Key factors to use when rating “color” are variety, contrast, and harmony.
Adjacent Scenery	Under consideration is the degree to which scenery outside the unit being rated enhances the overall impression of the scenery within the unit. The distance over which adjacent scenery will influence a unit will normally range from 0 to 5 miles, depending upon the relief of the topography, the vegetation cover, sun angles, and viewer orientation. This component is generally applied to units that would normally rate very low in score, but the influence of the adjacent unit enhances the visual quality, thereby raising the rating score.
Scarcity	This component provides an opportunity to elevate the importance of one or of all scenic features within one physiographic region that appear to be unique or relatively rare within the surroundings.
Intactness	Evidence exists of discordant elements or deviations from the existing landscape character; thereby altering, diminishing, or minimizing the indigenous aesthetic appeal for which the said landscape would primarily have been valued as a scenic resource. This component is also used to describe the condition of the ecosystem.
Cultural Modifications	Of primary concern are the impacts of man-made changes on the visual quality of the characteristic landscape. Cultural modifications to landform, water, and vegetation, as well as the addition of structures to the landscape, may all detract from the scenery by presenting negative intrusions to the viewer. Conversely, these additions or modifications to the landscape might actually complement or improve the scenic quality of a unit.
Ephemeral & Non - Visual Conditions	This component considers short-lived but recurrent visual effects, such as wildlife sightings, and non-visual effects, such as the sound of running water, which are experientially related to the landscape being viewed.

TABLE F-1b												
SCENIC QUALITY RATING UNITS (SQRUs)												
SQRU #	Unit Name	Landform (5-1)	Vegetation (5-1)	Water (5-0)	Color (5-1)	Adjacent Scenery (5-0)	Scarcity (5-0)	Intactness (5-1)	Cultural Modifications (2-4)	Ephemeral & Non-Visual Conditions (5-1)	TOTAL SCORE	Rating Class (A=25 or more, B=18-24 C = 17 or less)
1	Sanctuary Basin	1	1	2	2	2	4	2	-1	1	14	C
2	Salt Lake Shoreline	1	1	5	2	2	5	2	-1	1	18	B
3	Northeast Oquirrh Foothills	3	2	1	2	3	3	2	-1	2	17	C
4	North Oquirrh Mountains	5	3	0	3	3	4	4	1	3	26	A
5	Northeast Oquirrh Mountains	4	3	0	2	2	3	2	-3	1	14	C
6	Yellow Fork Foothills	4	3	0	2	3	3	3	0	2	20	B
7	Middle Oquirrh Mountains	5	2	0	2	2	3	3	0	2	19	B
8	Traverse Mountain	4	2	0	2	1	3	2	-2	2	14	C
9	South Oquirrh Mountains	4	2	0	2	3	3	2	-3	1	14	C
10	Southwest Oquirrh Mountains	4	2	0	2	3	3	2	-1	2	17	C
11	Rush Valley	1	2	0	2	2	2	2	-2	2	11	C
12	Thorpe Hills	3	2	0	2	3	3	3	0	2	18	B
13	Greeley/Wanlass Hills	3	2	0	2	2	2	2	-2	2	13	C
14	Pinyon Peak Mountains	4	2	0	2	2	2	2	-3	2	13	C
15	East Tintics	4	3	0	3	3	3	3	-2	2	19	B
16	East Tintic Peaks	5	4	0	3	3	4	4	0	2	25	A
17	Long Ridge-Middle Ridge	3	2	0	2	2	2	2	-2	2	13	C
18	Tintic Valley	1	2	0	2	3	2	2	0	2	14	C
19	West Tintics	3	3	0	3	3	3	3	0	2	20	B
20	Sharpes Valley	2	3	1	2	3	4	2	3	3	23	B
21	Southwest Oquirrh Foothills	3	2	0	2	2	2	2	-3	2	12	C
22	North Rush Alluvial Fan	2	2	0	2	3	3	2	-2	2	14	C
23	Onaqui-Rush Valley	1	3	1	2	2	3	2	-1	1	14	C
24	Slate Rock-Stansbury Mountains	3	3	0	3	3	3	3	0	2	20	B
25	East-Central Stansbury Mountains	4	3	0	3	3	3	3	0	2	21	B
26	Central Stansbury Mountains	4	3	0	3	3	3	4	1	3	24	B
27	Northeast Stansbury Mountains	4	3	0	3	3	3	3	0	2	21	B
28	Northeast Stansbury Front Foothills	3	2	1	2	3	3	2	-1	2	17	C
29	Northwest Shorelines Salt Desert	1	1	3	2	3	3	2	0	1	16	C
30	Northwest Oquirrh Mountains	4	3	0	3	3	3	2	-2	2	18	B
31	North Willow Canyon	4	4	0	3	4	4	4	2	3	28	A
32	South Willow Canyon	4	4	0	3	4	4	4	2	3	28	A
33	Goshen Valley Irrigated Agriculture	2	3	0	3	3	4	4	3	1	23	B
34	Rush Valley Irrigated Agriculture	2	2	0	3	3	4	4	3	1	22	B
35	N. Tooele Valley Irrigated Agriculture	2	2	0	3	3	4	4	3	1	22	B

TABLE F-1c							
SCENIC QUALITY CLASSES CROSSED BY ALTERNATIVE							
*All Alternative Cross Class C landscapes, except as noted below							
Alternative	SQ Class A			SQ Class B			
	Link	Milepost		Link	Milepost		
		From	To		From	To	
Mona to Limber							
A1	-	-	-	105	3.9	4.3	
A2	-	-	-	105	3.9	4.3	
B1	-	-	-	85	5.7	5.8	
				95	0.0	0.1	
				140	1.4	2.1	
					4.3	7.5	
					8.3	10.8	
0.5	0.9						
B2	-	-	-	85	5.7	5.8	
				95	0.0	0.1	
				140	1.4	2.1	
					4.3	7.5	
					8.3	10.8	
0.5	0.9						
C1, C2	-	-	-	24	1.1	3.6	
				105	3.9	4.3	
Limber to Oquirrh							
D	190A	3.6	3.7	190	1.9	4.4	
				220	0.0	3.2	
				230	0.9	3.7	
				255	1.9	2.0	
E1	190	3.6	3.7	190	1.9	4.4	
	235	0.0	2.4	220	0.0	3.2	
				235	2.4	2.7	
E2	190	3.6	3.7	190	1.9	4.4	
	235	0.0	2.4	220	0.0	3.2	
				235	2.4	2.7	
				255	1.9	2.0	
F1	190	3.6	3.7	190	1.9	4.4	
	210	0.0	1.8	210	1.9	2.8	
	215	2.9	6.3	215	0.0	2.9	
F2	190	3.6	3.7	190	1.9	4.4	
	210	0.0	1.8	210	1.9	2.8	
	215	2.9	6.3	215	0.0	2.9	
G	370	0.3	0.8	255	1.9	2.0	
		1.5	1.6				
	374	0.2	1.0		353	1.1	1.4
						1.6	1.7
						2.0	2.6
					354	1.9	2.1
					356	0.0	2.3
365	0.0	0.2					
376	6.9	7.7					

TABLE F-1c						
SCENIC QUALITY CLASSES CROSSED BY ALTERNATIVE						
*All Alternative Cross Class C landscapes, except as noted below						
Alternative	SQ Class A			SQ Class B		
	Link	Milepost		Link	Milepost	
		From	To		From	To
Limber to Terminal						
H	370	0.3	0.8	353	1.1	1.4
		1.5	1.6		1.6	1.7
	374	0.2	1.0		2.0	2.6
				354	1.9	2.1
				356	0.0	2.3
				365	0.0	0.2
I	370	0.3	0.8	-	-	-
		1.5	1.6	-	-	-

TABLE F-2					
VIEWER SENSITIVITY LEVEL SUMMARY					
	View Duration (L-Long, M-Moderate, S-Short)	Use Volume (H-High, M-Moderate, L-Low)	Aesthetic Concern (H-High, M-Moderate, L-Low)	Designated Scenic/ Historic	Overall Sensitivity (H-High, M-Moderate, L-Low)
Sensitive Viewers					
All Residences	L	L	H	-	H
Travel Routes					
Interstate					
I-80	S	H	L-M	-	M
I-15	S	H	L-M	-	M
United States Highway					
U.S. 6	M	L	L-H	-	M
State Route (SR)					
SR 36	M	L-H	L-H	-	M
SR 48 (New Bingham Highway)	M	L-H	L-M	-	M
SR 67	M	L	L-M	-	M
SR 68	M	L-H	L-M	-	M
SR 71 (Herriman Highway)	M	M	L-M		M
SR 73	M	M	M-H	-	M
SR 91	M	M	M		M
SR 111	M	M-H	L	-	M
SR 112	M	M	L	-	M
SR 138	M	L-M	L	-	M
SR 154	M	H	L	-	M
SR 172	M	H	L	-	M
SR 173	M	M	L	-	M
SR 199	M	L	M-H	-	M
SR 201	M	H	L	-	M
SR 202	M	L-M	L	-	M
Federal Aid Route					
2030, 2036, 2140, 2172, 2242, 2250, 2290, 2358, 2370, 2386	M	H	L-M	-	M

TABLE F-2 VIEWER SENSITIVITY LEVEL SUMMARY					
	View Duration (L-Long, M-Moderate, S-Short)	Use Volume (H-High, M-Moderate, L-Low)	Aesthetic Concern (H-High, M-Moderate, L-Low)	Designated Scenic/ Historic	Overall Sensitivity (H-High, M-Moderate, L-Low)
2694, 2700	M-L	L	L	-	L
Designated Scenic Routes					
Middle Canyon Road State Scenic Backway (Middle Canyon Overpass Tooele County Scenic Byway)	M-L	L	H	X	H
Pony Express State Scenic Backway/BLM Backcountry Byway	M-L	L	H	X	H
Railroad Bed Road Tooele County Scenic Byway	M-L	L	H	X	H
South Willow Canyon Tooele County Scenic Byway	M-L	L	H	X	H
North Willow Canyon/Davenport Canyon Tooele County Scenic Byway	M-L	L	H	X	H
Little Moab Recreation Destination Route	M-L	L	H	-	H
Recreation Destination Routes					
Box Elder Canyon	M-L	L-M	H	-	H
Little Moab Recreation Destination Route	M-L	L-M	H	-	H
Oak Canyon	M-L	L-M	H	-	H
Rose Canyon/Yellow Fork Canyon	M-L	L-M	H	-	H
Settlement Canyon Road	M-L	L-M	H	-	H
Stansbury Island Recreation Destination Route	M-L	L-M	M	-	M
Uinta NF Recreation Destination Route	M-L	L-M	H	-	H
Parks, Recreation and Preservation Areas, and Cemeteries					
National and Regional Trails					
California National Historic Trail	L	L	H	X	H
Pony Express National Historic Trail	L	L	H	X	H
BLM & USFS Recreation Sites					
Boy Scout Campground (USFS)	L	M	H	-	H
Cottonwood Campground (USFS)	L	M	H	-	H

TABLE F-2 VIEWER SENSITIVITY LEVEL SUMMARY					
	View Duration (L-Long, M-Moderate, S-Short)	Use Volume (H-High, M-Moderate, L-Low)	Aesthetic Concern (H-High, M-Moderate, L-Low)	Designated Scenic/ Historic	Overall Sensitivity (H-High, M-Moderate, L-Low)
Fivemile Pass Rockcrawling Sites/ Fivemile Pass OHV/Large Group Camping Area (BLM) (Constrictor Canyon, Rattlesnake Canyon) (BLM)	L	M	M-H	-	M
Intake Campground (USFS)	L	M	H	-	H
State Recreation Sites					
Great Salt Lake Marina State Park	L	M	M-H	-	H
Burraston Ponds Wildlife Management Area	L	L-M	M-H	-	H
Nephi Wildlife Management Area	L	L	M-H	-	M
Little Moab OHV Area (SITLA)	M-L	L-M	M	-	M
County Parks & Trails					
<i>Tooele – Existing Trails</i>					
Mid Valley Trail	L	L	H	-	M
Smelter Road Trail	L	L	H	-	M
Copper Pit Overlook Trail	L	L	M	-	M
Left Hand Fork Trail	L	L	H	-	M
Dark Trail Loop	L	L	H	-	M
<i>Tooele – Planned Trails</i>					
Benson Grist Mill Loop Trail	L	L	H	-	M
Carr Fork Trail	L	L	H	-	M
Camp Wapiti (Settlement Canyon Recreation Area)	L	L	M		M
Copper Pit Overlook Trail	L	L	M	-	M
Jacob City Hike	L	L	H	-	M
Legion Park Campground (Settlement Canyon Recreation Area)	L	L	H	-	M
Mormon Trail Loop	L	L	H	-	M
Oquirrh Mountains Limited Use Trail	L	L	H	-	M
Rush Valley Tour Trail	L	L	H	-	M
Soldier Canyon Hike	L	L	H	-	M
South Mountain Loop Trail	L	L	H	-	M
Stansbury Front Trail	L	L	H	-	M
Timpie Valley Trail	L	L	H	-	M
Tooele Valley Overlook/ Smelter Road Trail	L	L	H	-	M

TABLE F-2 VIEWER SENSITIVITY LEVEL SUMMARY					
	View Duration (L-Long, M-Moderate, S-Short)	Use Volume (H-High, M-Moderate, L-Low)	Aesthetic Concern (H-High, M-Moderate, L-Low)	Designated Scenic/ Historic	Overall Sensitivity (H-High, M-Moderate, L-Low)
Salt Lake County					
Magna Fitness & Recreation Center & Pool	M-L	M	M	-	M
Yellow Fork Canyon Regional Park (Trailhead)	L	M	H	-	H
Other Special Use Areas					
West Ajax Underground Store Roadside Historical Marker	L	L	H	X	M
Bonneville Seabase	L	M	M	-	M
Burrison Ponds WMA	L	L	H	-	M
Butterfield Pass Viewing Area	L	L	H	-	M
Copper Club Golf Course	L	M	L-M	-	M
E. T. Benson Grist Mill Historical Site	L	L	H	X	M
Glenmoor Golf Course	L	M	M-H	-	H
Grantsville Reservoir Camping Area	L	L	H	-	M
Grantsville Fort Historical Marker	L	L	H	X	M
Historic Cemeteries and Cemeteries (Eureka, Mercur, Fairfield)	L	L	H	X	M
I-80 Great Salt Lake Viewing Area	L	M-H	L-M	-	M
Lee Creek Natural Area (Parking Area)	L	L	H	-	M
Lee Kay Center & Wildlife Conservation & Training Area Wildlife Management Area	L	M	M-H	-	H
Mona Reservoir (Parking Lot)	L	M	M		M
Overlake Golf Course	L	M	M-H	-	H
Oquirrh Hills Golf Course	L	M	H	-	H
Stansbury Park Golf Course	L	M	H	-	H
Steptoe, Daughters of Utah Pioneers, Pony Express Station Historical Markers	L	L	H	X	M
Wingpoint Golf Course	L	M	L	-	L
Local Parks					
Alex Baker Memorial Baseball Park (Stockton)				-	

TABLE F-2 VIEWER SENSITIVITY LEVEL SUMMARY					
	View Duration (L-Long, M-Moderate, S-Short)	Use Volume (H-High, M-Moderate, L-Low)	Aesthetic Concern (H-High, M-Moderate, L-Low)	Designated Scenic/ Historic	Overall Sensitivity (H-High, M-Moderate, L-Low)
Centennial Park and Recreation Complex (West Valley)	M-L	M	L-M	-	M
Elton Park (Tooele)	L	L	M-H	-	H
Highland Park (Tooele)	L	L	L-M	-	M

F.2 Environmental Consequences

F.2.1 Impact Methodology

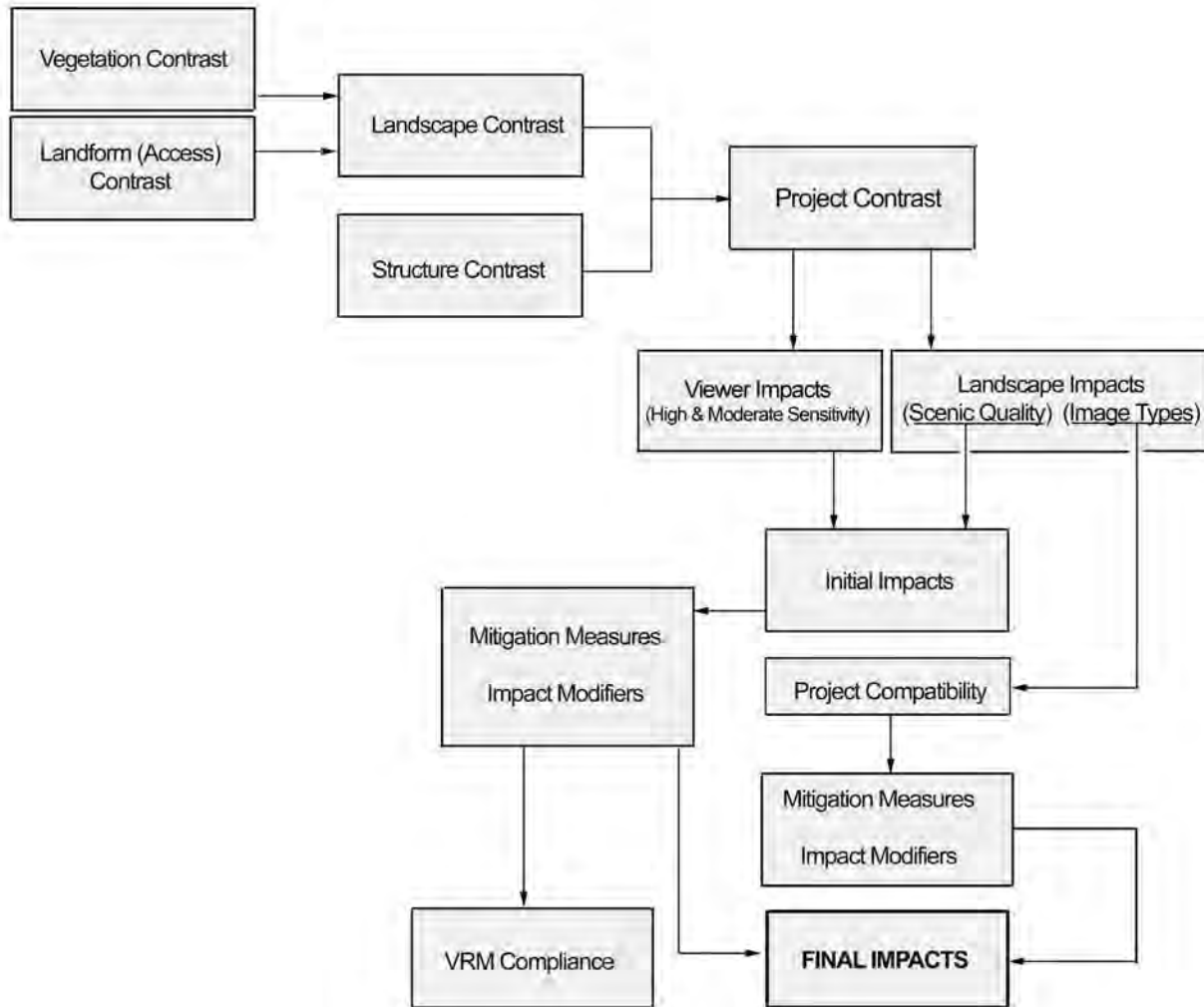


Figure F-21: Visual Impact Assessment Flow Chart

F.2.1.1 Contrast

The visual contrast assessment is performed by comparing visual elements (form, line, color, and texture) of the existing landscape with the visual elements associated with the proposed project, including new transmission structures and lines, clearing of the right-of-way, and substation components. In this regard, landform, vegetation, and structural elements of the landscape were evaluated in conjunction with the proposed transmission line right-of-ways and substation areas and assigned degrees of change/contrast, ranging from strong to strong/moderate, moderate, moderate/weak, weak, or none, as defined below.

- Strong – contrast demands attention and strongly dominates the landscape
- Strong/Moderate – contrast begins to demand attention and is still moderately dominant in the landscape
- Moderate – contrast attracts attention but is co-dominant in the landscape
- Moderate/Weak – contrast begins to attract attention and is moderately subordinate in the landscape
- Weak – contrast can be seen but is subordinate in the landscape









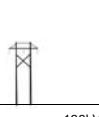
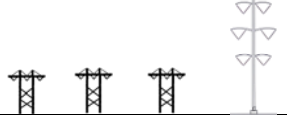
Project contrasts for the Project are derived from existing vegetation, slope, and utility infrastructure occurring in the study area and along the assumed centerline. Contrast is expressed in terms of changes to the landscape (landscape contrast) and the addition of structures to the landscape (structure contrast). Landscape and structure contrasts were combined into a project contrast model that is used to estimate and classify visual impacts, and to quantify total impacts (miles of high impact, moderate impact, and low impact) for the alternatives being assessed in this document.

Landscape contrast is derived by combining access levels with vegetation cover (Table F-3). An access model was developed for the Project that estimated the expected road construction. Access levels are needed to estimate the amount of road construction necessary as a result of building the transmission line. Access levels (1, 2, or 3) were assigned along the Project centerline for the purposes of impact modeling for a number of resources (see Chapter 2 for detailed information on access levels). Moderate landscape contrast would occur where the transmission lines cross areas of overstory vegetation where clearing would be necessary above the height of 15 feet (Group 2 vegetation component), and where new access road construction is necessary (Access Level 3). Strong landscape contrast would not occur, because the project calls for the preservation of ground plane vegetation that would mitigate the visual effects of land scarring (cut and fill areas), except in the steepest of terrain and where viewed along a right-of-way axis.

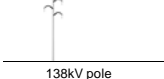
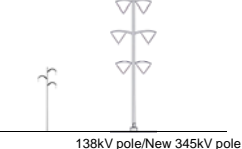

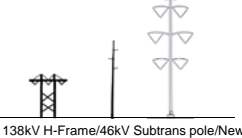
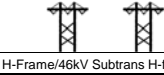
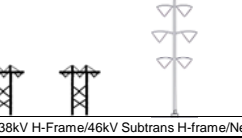

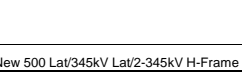
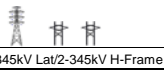
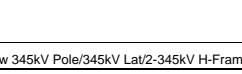
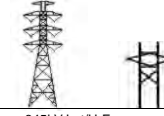
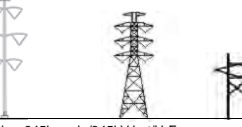
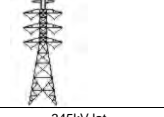
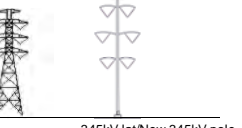
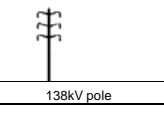
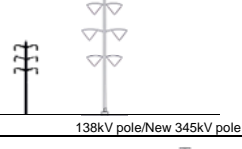
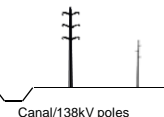
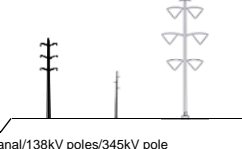
TABLE F-3 LANDSCAPE CONTRAST MATRIX				
		Access Level		
		1	2	3
Vegetation Component	<i>Group 1:</i> agriculture, barren, disturbed, invasive grassland, grassland, wetlands, open water, desert scrub, greasewood, big sagebrush, mixed sagebrush, mountain shrub	W	W/M	W/M
	<i>Group 2:</i> deciduous forest, mixed conifer forest, pinyon-juniper, spruce-fir forest, hybrid oak stand	W	W/M	M
NOTES: M = Moderate W/M=Weak/Moderate W = Weak				

Structure contrasts are determined based on the visual characteristics of the proposed structures compared to the visual characteristics of the existing corridor. Strong structure contrasts would result from the introduction of transmission line structures in areas where none are currently present, and weak structure contrasts would result from the introduction of transmission line structures where similar ones already exist (Table F-4).

**TABLE F-4
STRUCTURE CONTRAST**

Existing Corridor	Proposed Corridor	Context	Form/ Line	Dominance	Contrast Level
1 No Existing Structures	 New 345kV pole	Various	S	S	S
2 No Existing Structures	 New 500kV lat	Various	S	S	S
3 No Existing Structures	 New 345kV lat	Oquirrh Mountains	S	S	S
4 46kV Subtrans	 46kV Subtrans/New 500kV lat	Mountain Shrub/PJ Foothills, Developed Agriculture	S	S	S
5 46kV Subtrans	 46kV Subtrans/New 345kV pole	Mud Flat Wetlands, Sagebrush/Grassland Plains, Developed Industrial/Agriculture	W/M	S	S
6 46kV Subtrans	 46kV Subtrans/New 500kV lat	Mud Flat Wetlands, Sagebrush/Grassland Plains, Developed Industrial/Agriculture	S	S	S
7 46kV Subtrans	 46kV Subtrans/New 345kV pole	Mountain Shrub/PJ Foothills, Developed Agriculture	M/S	S	S
8 138kV H-frame	 138kV H-frame/New 500kV lat	Rolling Sagebrush/ Grassland Foothills, Salt Lake Wetlands, Mountain Shrub/Deciduous Forest Mountains	M/S	S	M/S
9 138kV H-frame	 138kV H-frame/New 345kV pole	Rolling Sagebrush/ Grassland Foothills, Salt Lake Wetlands, Mountain Shrub/Deciduous Forest Mountains	M	M/S	M/S
10 2- 138kV H-Frame/46kV Subtrans H-frame	 2- 138kV H-Frame/46kV Subtrans H/New 345kV pole	Rolling Sagebrush/ Grassland/PJ Foothills, Industrial	M	M/S	M

**TABLE F-4
STRUCTURE CONTRAST**

Existing Corridor	Proposed Corridor	Context	Form/Line	Dominance	Contrast Level
 <p>138kV pole</p>	 <p>138kV pole/New 345kV pole</p>	Developed Commerical/Industrial, Desert Scrub Plains, Disturbed Cheat Plain	M	M/S	M
 <p>138kV H-Frame/46kV Subtrans pole</p>	 <p>138kV H-Frame/46kV Subtrans pole/New 345kV pole</p>	Mountain Shrub/ Grassland Foothill, Developed Agriculture/ Industrial	M/S	M/S	M
 <p>138kV H-Frame/46kV Subtrans H-frame</p>	 <p>138kV H-Frame/46kV Subtrans H-frame/New 345kV pole</p>	Rolling Sagebrush/ Grassland/PJ/Mountain Shrub Foothills	S	S	M
 <p>345kV Lat/2-345kV H-Frame</p>	 <p>New 500 Lat/345kV Lat/2-345kV H-Frame (1500' Offset)</p>	Rolling Sagebrush/ Grassland/PJ Foothills	M/S	M/S	M/S
 <p>345kV Lat/2-345kV H-Frame</p>	 <p>New 345kV Pole/345kV Lat/2-345kV H-Frame (1500' Offset)</p>	Rolling Sagebrush/ Grassland/PJ Foothills	M/S	M/S	M/S
 <p>345kV Lat/H-Frame</p>	 <p>New 345kV pole/345kV Lat/H-Frame</p>	Rolling Sagebrush/ Grassland/PJ Foothills	M/S	W	W/M
 <p>345kV lat</p>	 <p>345kV lat/New 345kV pole</p>	Developed Commerical/Industrial, Disturbed Cheat Plain	M/S	W	W/M
 <p>138kV pole</p>	 <p>138kV pole/New 345kV pole</p>	Developed Commerical/Industrial, Disturbed Cheat Plain	W/M	W/M	W/M
 <p>Canal/138kV poles</p>	 <p>Canal/138kV poles/345kV pole</p>	Developed Industrial, Disturbed Cheat Plain	W/M	M	W/M

Notes

- S= Strong
- M/S= Moderate/Strong
- M= Moderate
- W/M= Weak/Moderate
- W= Weak

Combining the landscape contrast with the structure contrast results in overall project contrast on which the visual impacts are based (Table F-5). The contrast model provided the foundation for impact assessment of the Project, in accordance with the VRM system and established methodology as described below.

TABLE F-5 PROJECT CONTRAST MATRIX				
		Landscape Contrast		
		W	M/W	M
Structure Contrast	W	W	W	M/W
	M/W	M/W	M/W	M
	M	M	M	M
	M/S	M/S	M/S	S
	S	M/S	S	S

NOTES: S = Strong M/S=Moderate/Strong M = Moderate M/W= Moderate/Weak W = Weak

F.2.1.2 Viewer Impacts

Viewer impacts were initially determined by employing a geographic information system (GIS) model that combined viewpoint buffers (distance zones) and project contrast with sensitivity, or by combining project contrast with scenic quality or image type. The resulting analysis provided data on potential Project perception and distance (immediate foreground, foreground, middle ground, high sensitivity, moderate sensitivity, etc.) that was then combined with project contrast to determine initial impacts. Actual visibility was verified in the field, and adjustments were made to initial impacts to determine final viewer impact levels. Selective mitigation measures were also employed, reducing initial impacts (see below).

Impacts were also assessed on views from future residential areas and planned trails. Future viewers were based on inventory data where approved residential development or planned recreational elements (e.g., trails) were documented. A total of four models were used to estimate viewer initial impacts (Tables F-6 through F-9).

TABLE F-6 HIGH SENSITIVITY VIEWER INITIAL IMPACT MATRIX						
		Project Contrast				
		Strong	Moderate/Strong	Moderate	Moderate/Weak	Weak
Distance/Visibility Threshold	Immediate Foreground (0–0.25 mile 345kV) (0–0.5 mile 500kV)	High	High	Mod/High	Moderate	Moderate
	Foreground (0.25–0.5 mile 345kV) (0.5–1 mile 500kV)	High	Mod/High	Moderate	Moderate	Mod/Low
	Middleground (0.5–1 mile 345kV) (1–2 miles 500kV)	Mod/High	Moderate	Moderate	Mod/Low	Low
	Background (1–2 miles 345kV) (2–3 miles 500kV)	Moderate	Moderate	Mod/Low	Low	Low
	Seldom Seen (Beyond 2 miles 345kV) (Beyond 3 miles 500kV)	Moderate	Mod/Low	Low	Low	Low

TABLE F-7 MODERATE SENSITIVITY VIEWER INITIAL IMPACT MATRIX						
		Project Contrast				
		Strong	Moderate/Strong	Moderate	Moderate/Weak	Weak
Distance/Visibility Threshold	Immediate Foreground (0–0.25 mile 345kV) (0–0.5 mile 500kV)	High	Mod/High	Moderate	Moderate	Mod/Low
	Foreground (0.25–0.5 mile 345kV) (0.5–1 mile 500kV)	Mod/High	Moderate	Moderate	Mod/Low	Low
	Middleground (0.5–1 mile 345kV) (1–2 miles 500kV)	Moderate	Moderate	Mod/Low	Low	Low
	Background (1–2 miles 345kV) (2–3 miles 500kV)	Moderate	Mod/Low	Low	Low	Low
	Seldom Seen (Beyond 2 miles 345kV) (Beyond 3 miles 500kV)	Mod/Low	Low	Low	Low	Low

TABLE F-8 FUTURE APPROVED HIGH SENSITIVITY VIEWER INITIAL IMPACT MATRIX						
		Project Contrast				
		Strong	Strong/Moderate	Moderate	Moderate/Weak	Weak
Distance/Visibility Threshold	Immediate Foreground (0–0.25 mile 345kV) (0–0.5 mile 500kV)	Mod/High	Moderate	Moderate	Mod/Low	Low
	Foreground (0.25–0.5 mile 345kV) (0.5–1 mile 500kV)	Moderate	Moderate	Mod/Low	Low	Low
	Middleground (0.5–1 mile 345kV) (1–2 miles 500kV)	Moderate	Mod/Low	Low	Low	Low
	Background (1–2 miles 345kV) (2–3 miles 500kV)	Mod/Low	Low	Low	Low	Low
	Seldom Seen (Beyond 2 miles 345kV) (Beyond 3 miles 500kV)	Low	Low	Low	Low	Low

TABLE F-9 FUTURE APPROVED MODERATE SENSITIVITY VIEWER INITIAL IMPACT MATRIX						
		Project Contrast				
		Strong	Strong/Moderate	Moderate	Moderate/Weak	Weak
Distance/Visibility Threshold	Immediate Foreground (0–0.25 mile 345kV) (0–0.5 mile 500kV)	Moderate	Mod/Low	Low	Low	Low
	Foreground (0.25–0.5 mile 345kV) (0.5–1 mile 500kV)	Mod/Low	Low	Low	Low	Low
	Middleground (0.5–1 mile 345kV) (1–2 miles 500kV)	Low	Low	Low	Low	Low
	Background (1–2 miles 345kV) (2–3 miles 500kV)	Low	Low	Low	Low	Low
	Seldom Seen (Beyond 2 miles 345kV) (Beyond 3 miles 500kV)	Low	Low	Low	Low	Low

An example of viewer impact analysis is as follows: After employing the sensitivity analysis as described in Chapter 3.2.7 (an assessment of viewing duration, viewer attitudes toward change, use volumes of visually sensitive areas), it was determined that the Pony Express National Historic Trail has a high sensitivity level (refer to Table F-2). To determine initial impacts of the transmission lines to the high sensitivity trail user views, project contrast is modeled (for viewer impacts and scenic quality impacts) by combining landscape contrast (refer to Table F-3) and structure contrast (refer to Table F-4).

Landscape contrast is modeled by assessing the vegetation component group (Group 1 – low growing shrubs or groundcover, or Group 2 – vegetation over 15 feet, also see biological resources) crossed by the centerline and which access level (refer to Chapter 2, Table 2-7) would be used for the transmission line segment. For this example, the transmission centerline segment crosses mixed conifer forest and has an access level of 3 (build new road), yielding a moderate landscape contrast (refer to Table F-3).

Structure contrast is determined to be strong because there are no existing transmission lines being paralleled (refer to Table F-4). To determine project contrast, Table F-5 is used. The left column shows the various structure contrast levels and the top row shows the various landscape contrast levels. Taking the strong structure contrast (S), and combining it with the moderate landscape contrast level (M) yields an overall project contrast of strong (S) for that particular segment of the transmission line. Initial impacts are then determined by calculating how far the project is from the viewer (what distance zone the alternative transmission line segment is in), and comparing that distance with the project contrast using the appropriate (moderate or high sensitivity) impact matrix, in this case Table F-6: High Sensitivity Viewer Initial Impact Matrix.

Using GIS modeling, it is determined that a 500kV transmission line is 1.2 miles away from the trail; looking at the left column on Table F-6, the 500kV transmission line would be in the middleground (1 mile to 2 miles 500kV). Reading to the right to the appropriate project contrast column, in this case strong, indicates an initial impact of moderate-high for that segment of 500kV transmission line. Appropriate mitigation measures and appropriate impact modifiers are then identified (see below), field verification of impacts are conducted, and a final impact level (high, moderate, or low) is determined for that segment of transmission line (Table F-10).

TABLE F-10 VIEWER FINAL IMPACT MATRIX						
		Initial Impact Level				
		High (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Moderate/High (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Moderate (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Moderate/Low (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Low
Distance/Visibility Threshold	Immediate Foreground (0–0.25 mile 345kV) (0–0.5 mile 500kV)	High	Moderate	Low	Low	Low
	Foreground (0.25–0.5 mile 345kV) (0.5–1 mile 500kV)	Moderate	Moderate	Low	Low	Low
	Middleground (0.5–1 mile 345kV) (1–2 miles 500kV)	Moderate	Moderate	Low	Low	Low
	Background (Beyond 1–2 miles 345kV) (Beyond 2–3 miles 500kV)	Moderate	Moderate	Low	Low	Low


F.2.1.3 Scenic Quality and Image Type Impacts

Scenic quality impacts were determined by combining scenic quality classes (A, B, or C) in naturally dominated or agricultural landscapes with project contrast. Compatibility with the existing development character was derived by combining the image type with the proposed transmission lines.

To determine scenic quality impacts, project contrast was determined along the centerline of the Project (as described above). Tables F-11 through F-13 were used to determine scenic quality initial and final impacts and Project compatibility with existing development patterns (image types). Referring to the same segment as described above in viewer impact analysis, Table F-11 shows that the strong project contrast level (top row) combined with a scenic quality rating of Class C (left column) yields a moderate-high initial impact level on scenic quality. After employing appropriate mitigation measures (see below), final impacts on scenic quality could be reduced to a moderate level. High scenic quality impacts would remain in areas of Class A scenery.

TABLE F-11 SCENIC QUALITY INITIAL IMPACT MATRIX						
		Project Contrast				
		Strong	Strong/Moderate	Moderate	Moderate/Weak	Weak
Scenic Quality Rating	Class A	High	High	Moderate/High	Moderate	Moderate
	Class B	High	Moderate/High	Moderate	Moderate	Moderate/Low
	Class C	Moderate/High	Moderate	Moderate	Moderate/Low	Low

TABLE F-12 SCENIC QUALITY FINAL IMPACT MATRIX						
		Initial Impact Level				
		High (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Moderate/High (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Moderate (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Moderate/Low (Mitigation Measures 3, 4, 6, 8, 9, 10, 12, and/or 18)	Low
Scenic Quality Rating	Class A	High	Moderate	Low	Low	Low
	Class B	Moderate	Moderate	Low	Low	Low
	Class C	Moderate	Moderate	Low	Low	Low

TABLE F-13 IMAGE TYPE COMPATIBILITY MATRIX		
		Proposed Structures
		
		<i>345kV 150 feet</i>
		<i>500kV 250 feet</i>
Image Type		
Residential	Low Compatibility	Low Compatibility
Developed Parks	Low Compatibility	Low Compatibility
Commercial	Moderate Compatibility	Moderate-Low Compatibility
Industrial/Military	High Compatibility	High Compatibility
Institutional	Moderate Compatibility	Moderate-Low Compatibility

This exercise (scenic quality impact analysis and viewer impact analysis) is conducted for each project component (500kV and 345kV) to quantify total miles of high, moderate, and low impacts for each alternative. Impact tables are developed that quantify the highest impacts for each 0.1 mile segment of transmission line alternatives for comparative purposes (see example segment, Table F-14).

TABLE F-14
VISUAL IMPACT DATA TABLE SAMPLE (Pony Express National Historic Trail 500kV Crossing, Link 90 – Alternatives A1, A2, C1, & C2)

Link #	From Mile Post	To Mile Post	Distance	Project Contrast	High Sensitivity View	Moderate Sensitivity View	Image Type	Scenic Quality	Impacts					Final Impact Level
									Scenic Quality Initial Impact	Viewer Initial Impact	Image Type Impact	Impact Modifiers	Mitigation Measures	
90	2.4	2.7	0.3	S	FG	FG	N/A	C	HM	H	N/A	none	MM 6, MM10	M
90	2.7	3.7	1.0	S	IFG	IFG	N/A	C	HM	H	N/A	none	MM 6, MM 9, MM10	H
90	3.7	4.2	0.5	S	FG	FG	N/A	C	HM	H	N/A	none	MM 6, MM10	M

NOTES:
 S = Strong
 FG = Foreground
 IFG = Immediate Foreground
 M = Moderate
 HM = High-Moderate
 H = High

F.2.1.4 Mitigation Planning

Mitigation measures would be applied Project-wide (standard) and on a case-by-case (selective) basis, as described in Chapter 2. For visual resources, a total of eight selective mitigation measures are proposed for the Project (3, 4, 6, 8, 9, 10, 12, and 17). Mitigation measures were applied to all high, moderate-high, and moderate impacts to reduce initial impact levels where necessary and where appropriate.

Mitigation measures 4 and 12 would be applied where the transmission lines cross overstory vegetation (deciduous forest, mixed conifer forest, pinyon-juniper, spruce-fir forest, or hybrid oak stand). Selective mitigation measures 4 and 12 would reduce impacts by reducing vegetation contrast created as a result of overstory vegetation (tree) clearing and the hard visual line created by the cleared right-of-way/forest interface. Where an existing line is paralleled, mitigation measure 8 was applied to reduce impacts. Selective use of mitigation measure 8 would modify the standard tower spacing where feasible to better match that of the existing structures along the adjacent line. Where the line crosses a sensitive feature at a perpendicular or near perpendicular angle, mitigation measure 9 was applied to offset the proposed structure from a trail, road, scenic byway or other sensitive viewpoint, thereby reducing dominance of the transmission line structures in the viewshed. In areas of strong, moderate-strong, or moderate landscape contrast, mitigation measure 3 was applied to initial impacts. Selective use of mitigation measure 3 would reduce landform contrast created by new access roads, reducing project contrast in sloping areas where grading could expose underlying soils in cut and fill areas. Where structure contrast would be strong to moderate, mitigation measure 6 and mitigation measure 10 would be applied to reduce structure contrast by minimizing tower heights or using alternate finishes on the towers. Where the transmission lines cross slopes greater than 10 percent, mitigation measure 17 would be applied to minimize the landscape contrast created in areas of exposed soil and extensive cut and fill.

After application of mitigation measures and field observation of the site specific variations in viewing conditions (viewing position, adjacent landscape influence, viewing orientation, etc.), impacts along the assumed Project centerline were assigned a high, moderate, or low impact level. Final impacts are based on Tables F-10 and F-12 and these field observations. Impacts are generally reduced one level after implementation of mitigation measures: high to moderate, moderate-high to moderate, moderate to low, etc. Final impacts were then quantified for each alternative and summarized in Table F-15.

TABLE F-15 VISUAL IMPACT SUMMARY TABLE																
Alt. Route	Initial Residential Impacts (miles)			High Sensitivity Recreation/Road Initial Impacts(miles)			Moderate Sensitivity Recreation/Road Initial Impacts(miles)			Initial Scenic Quality/Image Type Impacts(miles)			Selective Mitigation Measures	Final Impacts		
	H-HM	M	ML-L	H-HM	M	ML-L	H-HM	M	ML-L	H-HM	M	ML-L		H	M	L
Mona To Limber																
A1	18.8	39.8	9.3	12.7	37.8	17.4	24.9	24.8	18.2	41.5	26.3	0.1	3, 4, 6, 9, 10, 12, 18	21.7	33.8	12.4
A2	17.0	42.8	9.6	12.7	36.3	20.4	24.9	30.0	14.5	39.9	29.2	0.3	3, 4, 6, 9, 10, 12, 18	22.7	29.8	16.9
B1	22.2	40.8	7.0	14.4	42.8	12.8	23.0	33.2	13.8	49.3	20.6	0.1	3, 4, 6, 8, 9, 10, 12, 18	18.4	38.5	13.1
B2	20.4	43.8	7.3	14.4	41.2	15.9	23.0	29.4	19.1	47.7	23.4	0.4	3, 4, 6, 8, 9, 10, 12, 18	19.3	37.0	15.2
C1	30.5	35.9	0.7	21.1	35.5	10.5	36.6	20.0	10.5	53.3	13.2	0.5	3, 4, 6, 9, 10, 12, 18	28.8	34.0	4.3
C2	28.7	38.9	0.8	21.1	34.0	13.4	36.6	16.2	15.6	51.7	16.0	0.7	3, 4, 6, 9, 10, 12, 18	29.7	32.5	6.2
Limber to Oquirrh																
D	6.9	12.4	11.4	4.1	9.8	16.8	6.3	8.9	15.5	14.2	9.5	7.0	3, 4, 6, 8, 9, 10, 12, 18	3.2	14.7	12.8
E1	7.0	10.7	13.4	4.1	8.5	18.5	7.3	9.4	14.4	15.2	8.9	7.0	3, 4, 6, 8, 9, 10, 12, 18	5.6	11.1	14.4
E2	6.9	11.1	13.1	4.1	6.8	20.2	6.3	9.5	15.3	13.5	10.9	6.7	3, 4, 6, 8, 9, 10, 12, 18	5.6	11.9	13.6
F1	9.2	13.8	6.3	13.6	7.8	7.9	19.7	2.9	6.7	19.0	7.7	2.6	3, 4, 6, 8, 9, 10, 12, 18	12.8	9.3	7.2
F2	9.2	14.1	6.3	13.6	7.8	8.2	20.0	2.9	6.7	19.0	8.0	2.5	3, 4, 6, 8, 9, 10, 12, 18	12.8	10.2	6.6
G	5.9	34.1	9.0	10.7	29.4	9.0	6.0	27.3	15.7	26.6	18.3	4.1	3, 6, 8, 9, 10, 18	3.0	27.7	18.3
Limber to Terminal																
H	4.4	29.3	11.7	14.3	21.6	9.5	7.5	23.6	14.3	20.3	16.6	8.5	3, 6, 8, 9, 10, 18	3.0	21.3	21.1
I	11.4	10.2	18.8	4.1	21.3	15.0	5.3	20.3	14.8	7.9	17.9	14.6	3, 6, 8, 9, 10, 18	2.2	17.9	20.3

TABLE F-16 VRM COMPLIANCE MATRIX						
VRM Class	Strong	Project Contrast				
		Moderate/ Strong	Moderate	Moderate/ Weak	Weak	
II	No	No	No	Yes	Yes	Yes
III	No	No	Yes	Yes	Yes	Yes
IV	Yes	Yes	Yes	Yes	Yes	Yes

**TABLE F-17
VISUAL SIMULATION SUMMARY**

Viewpoint (VP)	Location	Sensitivity	Landscape Setting	Alternative
VP 1	Mormon Trail Road (about 1.5-miles south of Box Elder Canyon Road)	Moderate (Travel Corridor, Planned County Trail)	Agricultural, Stansbury Mountains	<ul style="list-style-type: none"> ▪ Alternatives A (1 and 2), B (1 and 2), and C (1 and 2) ▪ Limber Substation Site
VP 2	South of Burraston Ponds	High (Residential), Moderate (Recreation)	Developed Agricultural Valley, Developed Utility Corridor, Undeveloped Foothills	<ul style="list-style-type: none"> ▪ Alternatives A (1 and 2), B (1 and 2), and C (1 and 2) ▪ Mona Annex Substation
VP 3	Faust Road, Pony Express Monument	High (Pony Express National Historic Trail)	Undeveloped Valley	<ul style="list-style-type: none"> ▪ Alternative B (1 and 2)
VP 4	SR 73 (FiveMile Pass OHV)	Moderate (Travel Corridor, Recreational)	Undeveloped Valley	<ul style="list-style-type: none"> ▪ Alternative B (1 and 2)
VP 5 A-Galvanized B-Corten	South Willow Canyon Scenic Byway (Stansbury Foothills)	High (Recreation, Designated Scenic Route)	Undeveloped Foothills, Class C Scenery, Tooele Valley Vista	<ul style="list-style-type: none"> ▪ Alternatives G and H
VP 6 A-Galvanized B-Corten	SR 36	High (Residential), Moderate (SR 36)	Developed, North Oquirrh Mountains Backdrop	<ul style="list-style-type: none"> ▪ Alternative I
VP 7	Lincoln, Pine Canyon Road	High (Residential)	Residential, Undeveloped, North Oquirrh Mountains (NOMA) Backdrop	<ul style="list-style-type: none"> ▪ Alternatives E (1 and 2)
VP 8 A-Galvanized B-Corten	Grantville (Intersection of Bluegrass Way & Clark St.)	High (Residential)	Residential, Undeveloped, Stansbury Mountains	<ul style="list-style-type: none"> ▪ Alternatives G & H
VP 9 A-Galvanized B-Corten C-Lattice	Tooele (West end of Cassidy Dr.)	High (Residential)	Residential, Undeveloped, North Oquirrh Mountains	<ul style="list-style-type: none"> ▪ Alternative D, E1, E2
VP 10 A-Galvanized B-Corten C-Lattice	Tooele (Middle Canyon Rd at Golf Course)	High (Residential)	Residential, Undeveloped, North Oquirrh Mountains	<ul style="list-style-type: none"> ▪ Alternatives D, E1, E2
VP 11 A-Galvanized B-Corten C-Lattice D-Mitigation Route, Corten	Tooele (Via La Cost & 1230E)	High (Residential)	Residential, Undeveloped, North Oquirrh Mountains	<ul style="list-style-type: none"> ▪ Alternatives D, E1, E2, F1, F2, G

Appendix G – Visual Simulations

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APPENDIX G – VISUAL SIMULATIONS

G.1 Introduction

Visual simulations were produced to show the range of potential impacts and associated contrasts caused by the presence of the various Project components in different landscape settings from sensitive viewpoints. Landscape settings include undeveloped valleys, agricultural landscapes, foothills, and mountainous areas. Eighteen simulations were developed at eleven viewpoints over the Project area. Table F-16 (Appendix F) summarizes the locations of the simulations and sensitivities of the viewpoints shown in this Appendix.

G.1.1 Viewpoint 1

This viewpoint was chosen to illustrate the effects of the future Limber Substation from nearby moderate sensitivity travelers using the Mormon Trail Road. From this point, views of the Project would be in the immediate foreground, set against the Stansbury Mountains in an area of strong project contrasts. The substation would be in the foreground, or about 0.5 mile from this viewpoint, with the 345kV Alternatives G or H crossing within the immediate foreground (<0.25 mile) to the southwest. This visual simulation shows strong contrast and high residual impact to views from the Mormon Trail Road.

G.1.2 Viewpoint 2

This viewpoint is located south of the Burraston Ponds WMA and 0.3 mile west of the closest residence to the future Mona Annex Substation, and represents typical views of the Project from the WMA (recreation area) and nearby residence. From this viewpoint, the Project would be located at a distance of approximately 0.85 mile, and would be viewed from within the context of existing transmission line infrastructure (345kV) already in place in the foreground, and would be set against the Long Ridge Mountains. Final impact represented in this viewpoint would be caused primarily by the cumulative impacts created by the additional 500kV and 345kV transmission lines and new substation (Alternatives A1 and A2, B1 and B2, and C1 and C2). This visual simulation shows strong contrast viewed at over one mile resulting in moderate residual impact.

G.1.3 Viewpoint 3

This viewpoint is located at the Pony Express Trail Marker located on Faust Road, east of Faust, and about 6.1 miles west of the SR 73 intersection. This viewpoint illustrates the Project Alternatives B1 and B2, where the long duration views would occur from high sensitivity viewers stopping at the marker. Views would be generally oriented toward the Project (north and northeast) from this location, in an area of strong contrast. The Project would be located in the middleground distance zone (1.6 miles). This visual simulation shows strong contrast viewed at over 1.5 miles resulting in moderate residual impact from this viewpoint.

G.1.4 Viewpoint 4

This viewpoint is located just north of the Fivemile Pass Recreation Area on SR 73, about 6.7 miles north of the Faust Road intersection, and would be in the immediate foreground view of moderate sensitivity for SR 73 southbound travelers in this simulation. Strong contrast would be viewed for a short duration in this area, and this simulation shows the visual changes created as a result of Alternatives B1 and B2. This visual simulation shows strong contrasts viewed in the immediate foreground resulting in high residual impact.

G.1.5 Viewpoint 5

Two simulations of Alternatives G and H are shown from this viewpoint, located on South Willow Canyon Tooele County Scenic Byway on the east side of the Stansbury Mountains - one with dull grey finish (Viewpoint 5a) 345kV single pole structures (Best Management Practice [BMP]), and one with self-weathering (corten) steel finish (Viewpoint 5b) mitigation measure applied to structures (selective mitigation measure 10). This viewpoint is located where viewers begin to see the vista overlooking Tooele Valley when traveling east out of the Stansbury Mountains from the Cottonwood Campground (Uinta-Wasatch-Cache National Forest). The view of the transmission lines in this simulation would be in the middleground for the 345kV alternatives. This visual simulation shows strong contrast in the foreground with selective mitigation measure 10 applied resulting in moderate residual impact.

G.1.6 Viewpoint 6

This viewpoint is located on SR-36, looking toward the North Oquirrh Mountains and Alternative G at a distance of 1.2 miles in the background viewing condition. This simulation represents moderate contrasts created by the Project from SR-36, a high volume road in the Project area. This visual simulation shows low residual impact resulting from moderate contrast viewed in the background.

G.1.7 Viewpoint 7

This viewpoint is located at the end of Pine Canyon Road, and represents typical views of the Project from residences located in Lincoln (east Tooele Valley) looking toward the NOMA and 345kV transmission line Alternatives E1 and E2. Strong to moderate/strong contrasts would be viewed in the background (1.6 miles) from these viewers. This visual simulation shows moderate-strong contrast in the background resulting in low residual impact.

G.1.8 Viewpoint 8

Two simulations are shown from this viewpoint, located on the west side of Grantsville at the intersection of Bluegrass Way and Clark Street. These simulations show dull galvanized (Viewpoint 8a) and self-weathering monopole structures (Viewpoint 8b) for Alternatives G and H. The simulation represents typical views west toward the Oquirrh Mountains from residences located on the west side of Grantville. The structures would be visible in the background at a distance of approximately 2.4 miles, and shows low residual impacts.

G.1.9 Viewpoint 9

Located at the west end of Cassidy Drive on the east bench of Tooele, three simulations are shown from this viewpoint. In addition to the dull galvanized (Viewpoint 9a) and self-weathering structures (Viewpoint 9b), lattice mitigation structures (Viewpoint 9c) are shown for Alternatives D, E1, and E2. The simulation represents typical views looking east toward the Oquirrh Mountains from residences located on the east Tooele Bench. The Project would be visible in the foreground at less than 0.5 mile, and the simulation shows moderate residual impacts with the implementation of the mitigation (lattice or self-weathering) structures.

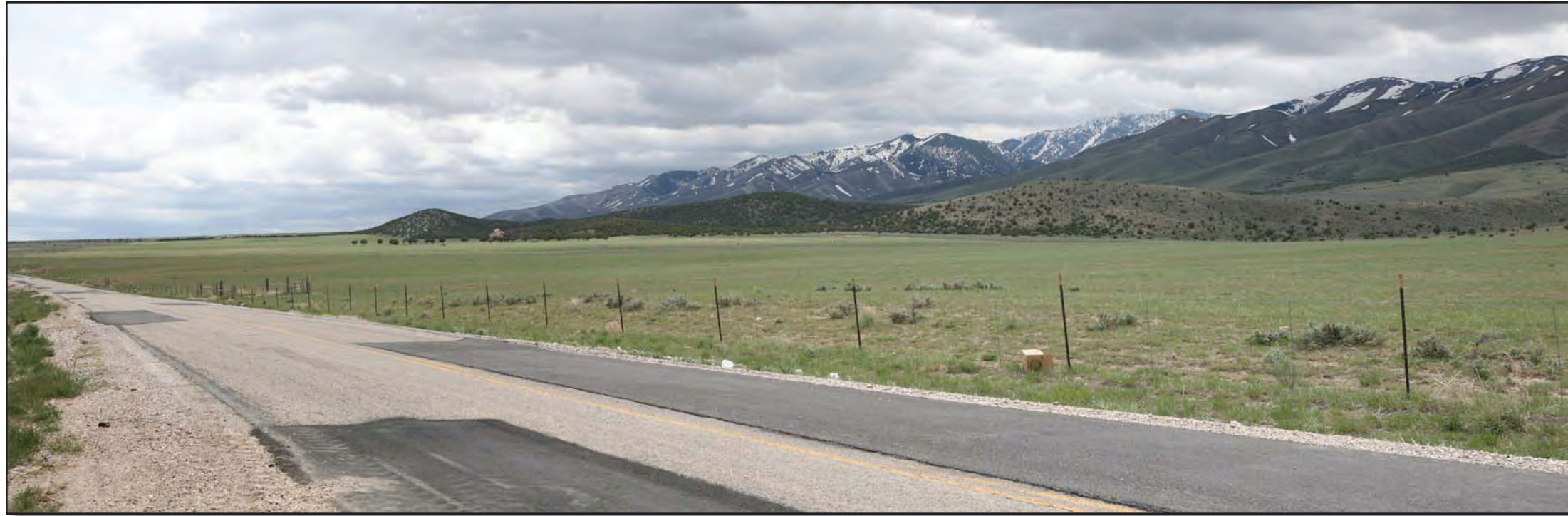
G.1.10 Viewpoint 10

This viewpoint is located on the east side of Tooele adjacent to the Oquirrh Hills Golf Course on Middle Canyon Road (east end of E. Vine Street), and shows views southeast toward the Tooele “T”. Three structure types used for Alternatives D, E1, and E2 are also shown from this viewpoint: dull galvanized (Viewpoint 10a), self-weathering monopole structures (Viewpoint 10b), and lattice structures (Viewpoint 10c). The Project is shown at approximately 1.2 miles in the direction of the “T”, and represents typical views of the “T” in the context of the Proposed Action, and shows low residual impacts.

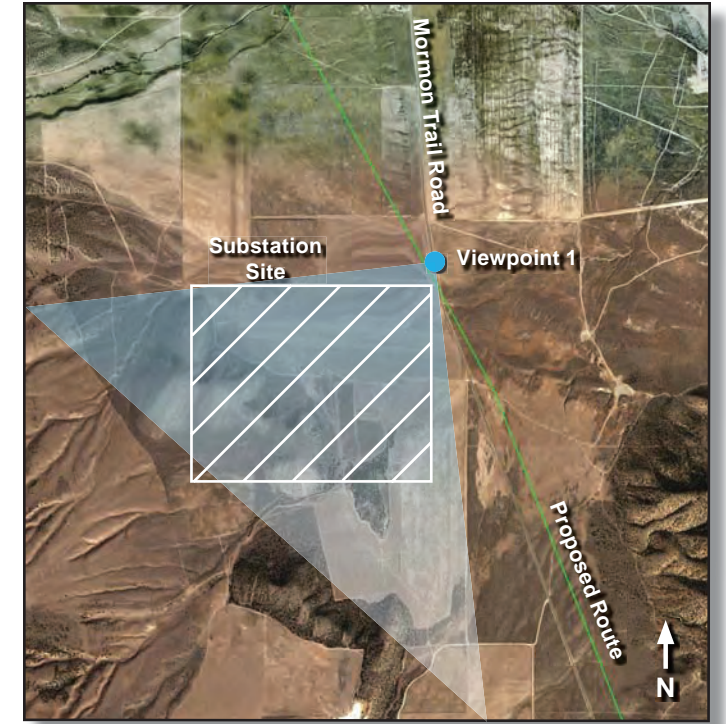
G.1.11 Viewpoint 11

This viewpoint is also located on the east bench of Tooele, at the intersection of Via La Costa and 1230 East, and represents typical views south from east bench residences. The simulations show dull galvanized (Viewpoint 11a), self-weathering monopole (Viewpoint 11b), and lattice (Viewpoint 11c) structures options for Alternatives D, E1, E2, F1, and F2 at a distance of approximately 1.2 miles. Also shown in Alternative D from this viewpoint is a mitigation alignment (Viewpoint 11d) routed farther to the south and constructed with self-weathering monopole towers. These simulations represent moderate visual impacts after mitigation measures are implemented.

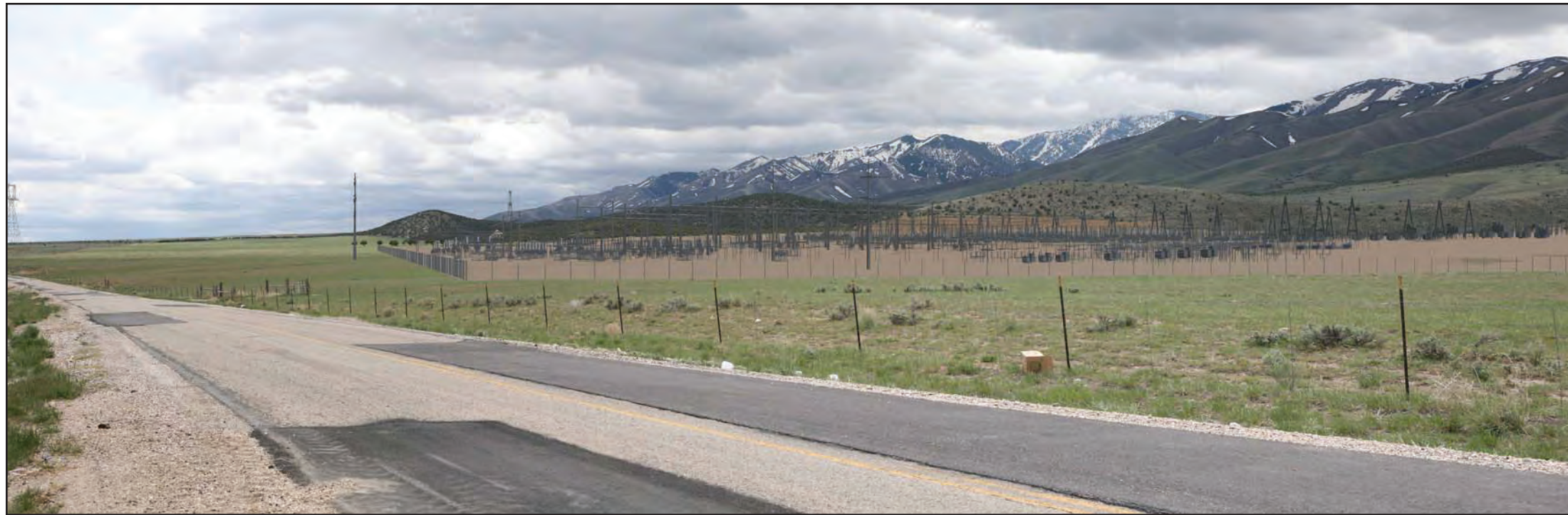
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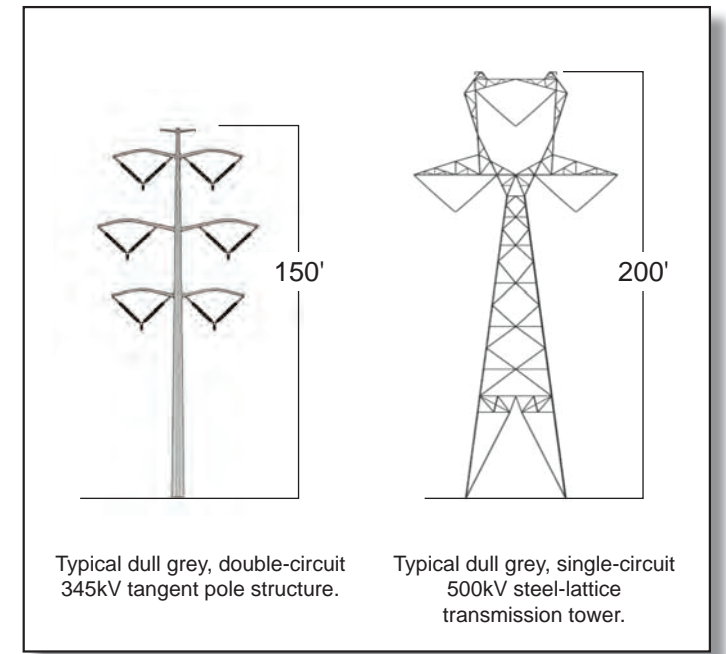
Existing Condition – Viewing south from the Mormon Trail Road



View Location: 1.5 miles south of Box Elder Canyon Road on Mormon Trail Road.



Simulation Condition – Proposed Limber Substation, Proposed 500kV and 345kV transmission line along Mormon Trail Road
Alternatives A1, A2 – BLM's Preferred Alternative on Federal Lands/Environmentally Preferred Alternative/
Proponent's Proposed Action, B1 & B2, C1 & C2
Alternative G
Alternative H – Environmentally Preferred Alternative/Proponent's Proposed Action



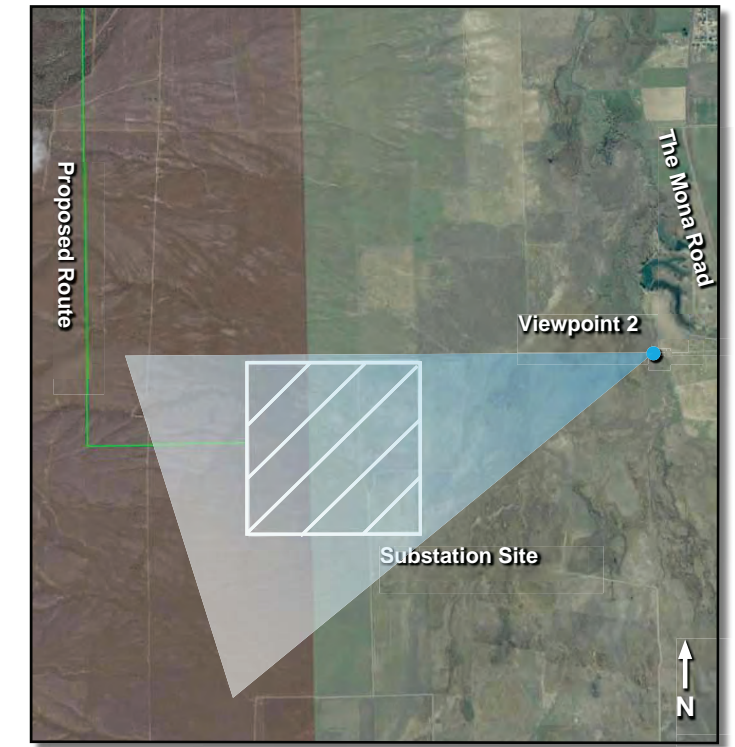
Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 1

Photo Date: 05-14-08 Time: 1:18 p.m.
 Substation model used in this simulation should be considered typical and does not represent final design. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



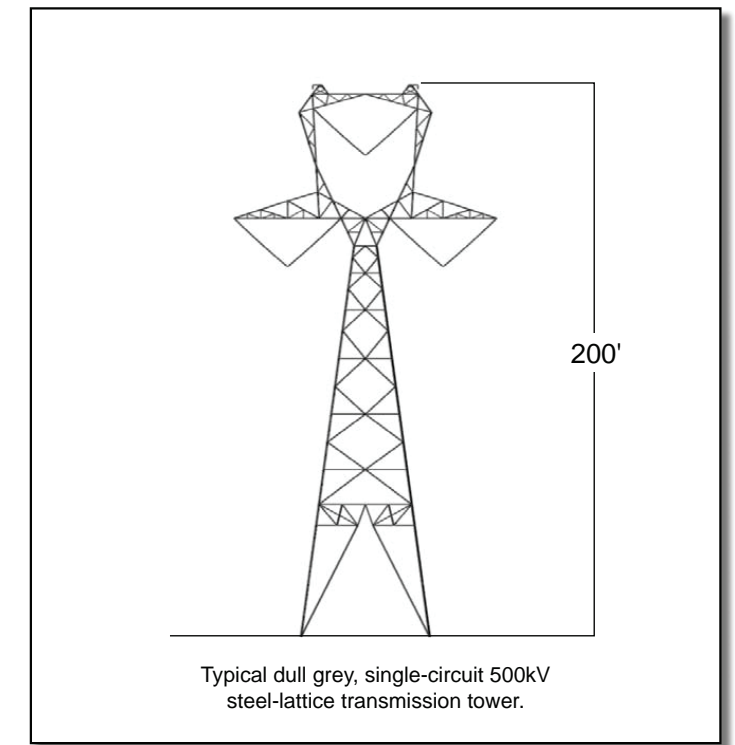
Existing Condition – Viewing west to southwest toward the Long Ridge Mountains



View Location: 0.2 mile southwest of Burraston Pond's Wildlife Management Area.



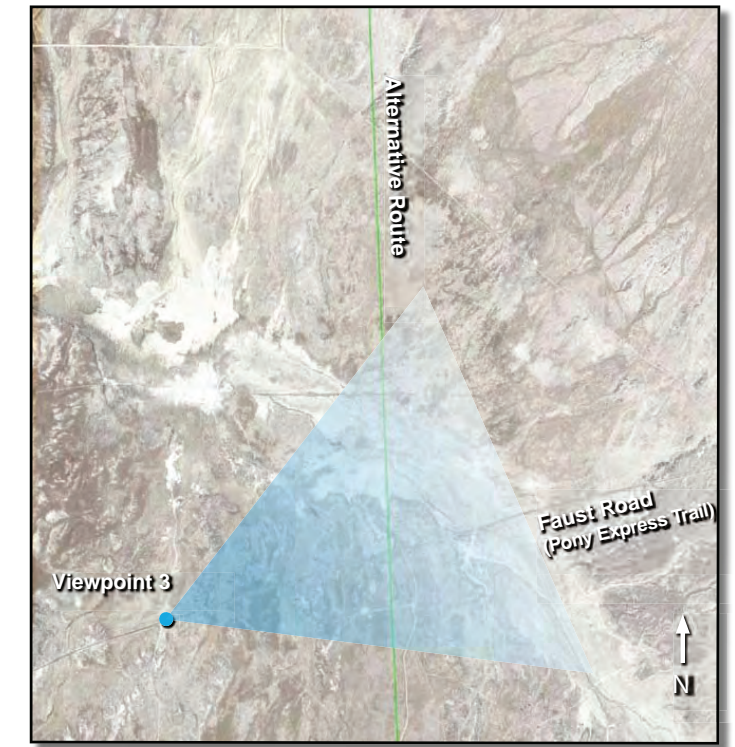
**Simulated Condition – Proposed Mona Annex Substation and Proposed 500kV transmission line
 Alternatives A1, A2 – BLM's Preferred Alternative on Federal Lands/Environmentally Preferred Alternative/
 Proponent's Proposed Action, B1 & B2, C1 & C2**



Typical dull grey, single-circuit 500kV steel-lattice transmission tower.



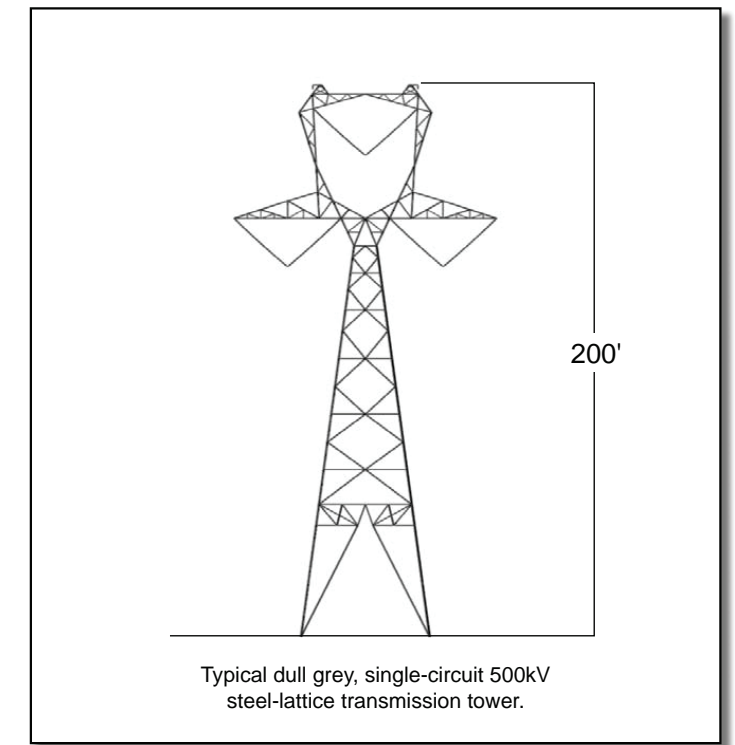
Existing Condition – Viewing northeast from the Pony Express Trail at the Faust Road Station Marker



View Location: 5.5 miles east of Faust on Faust Road.



**Simulated Condition – Typical 500kV transmission line
Alternatives B1 & B2**



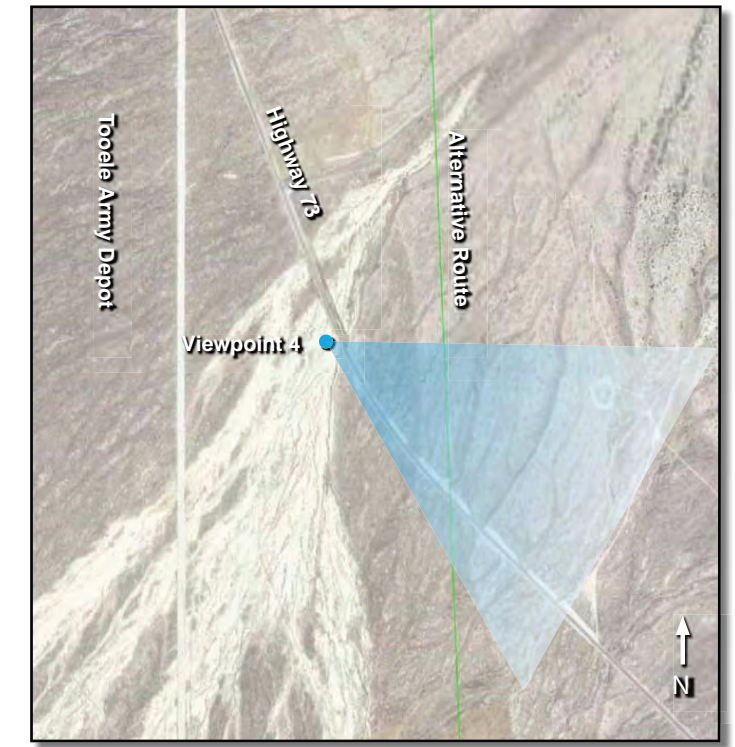
Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 3

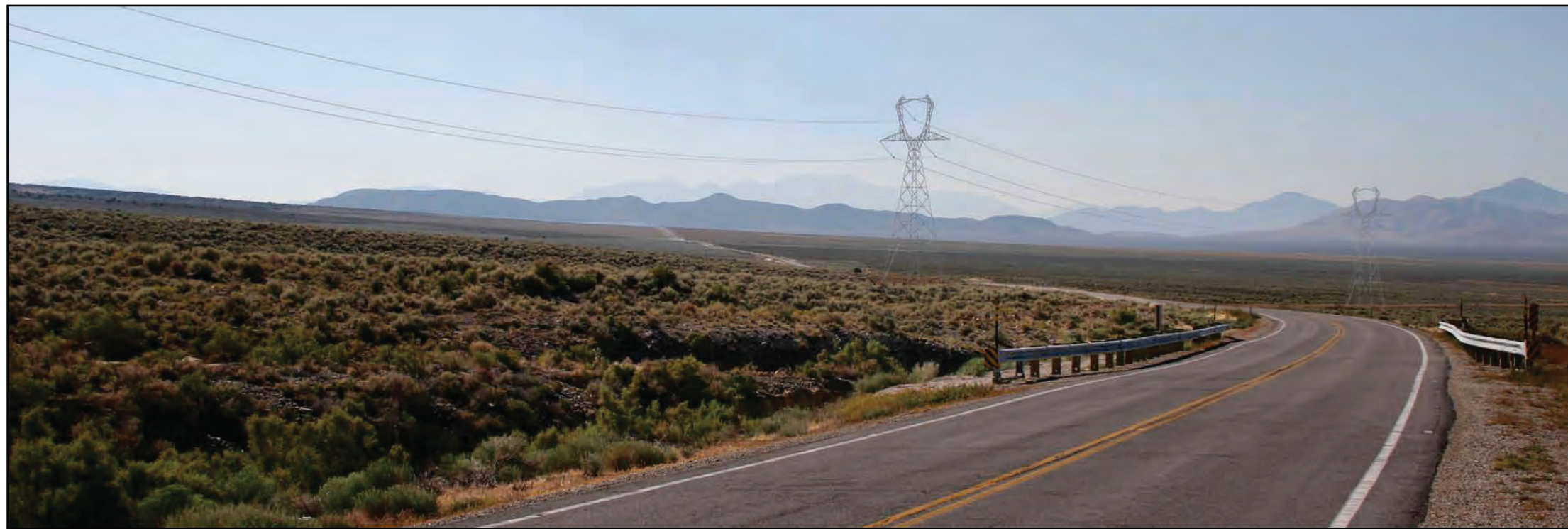
Photo Date: 08-12-08 Time: 10:16 a.m.
Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



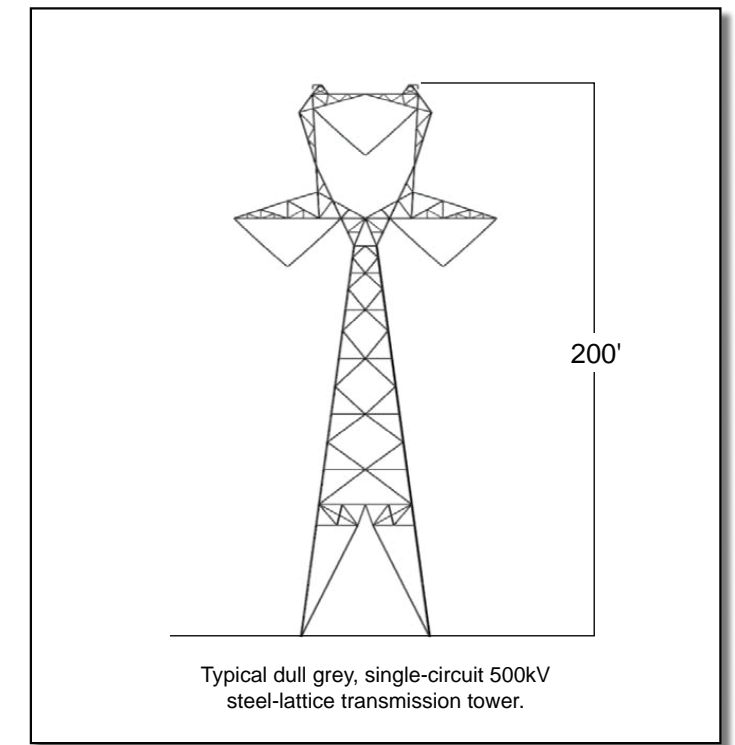
Existing Condition – Viewing south from SR 73 near the Fivemile Pass Recreation Area



View Location: SR 73 near the Fivemile Pass Recreation Area, 2 miles south of Ophir Canyon Road.

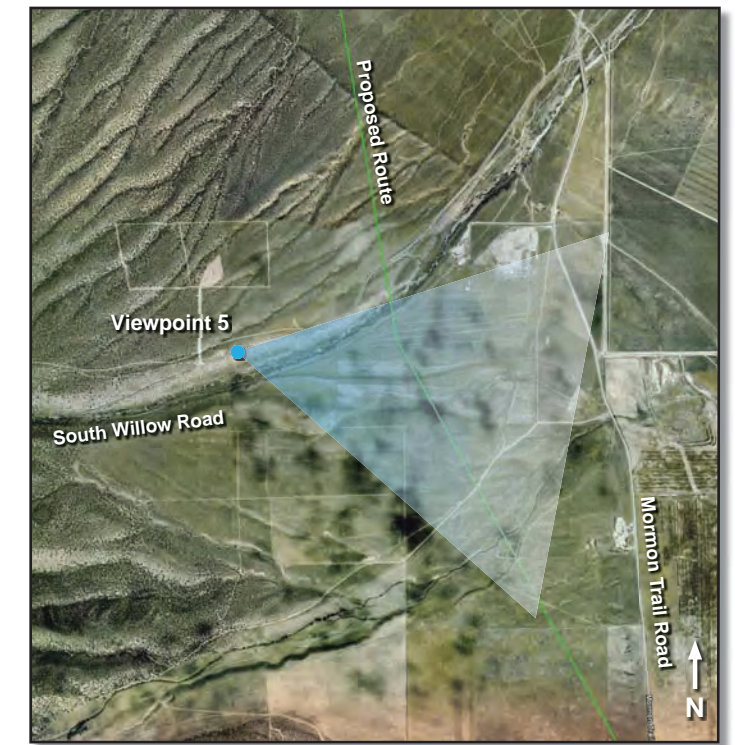


Simulated Condition – Typical 500kV transmission line along SR 73 Alternatives B1 & B2





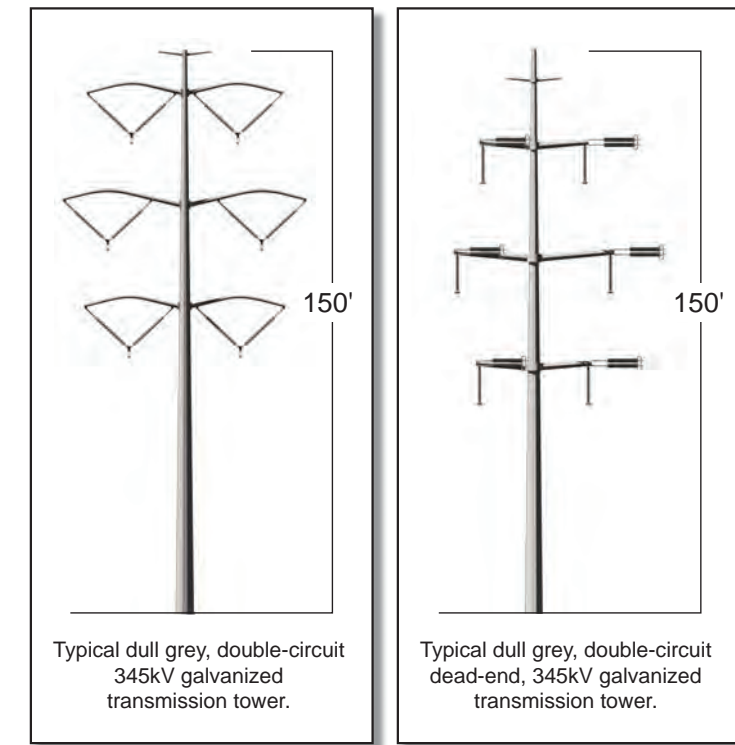
Existing Condition – Viewing east toward the Oquirrh Mountains and Tooele Valley from South Willow Canyon Scenic Byway



View Location: Viewing east from South Willow Road 1.75 miles west of Mormon Trail Road.



**Simulated Condition – Proposed 345kV transmission line along the Mormon Trail Road (Standard Mitigation applied)
Alternative G
Alternative H – Environmentally Preferred Alternative/Proponent's Proposed Action**

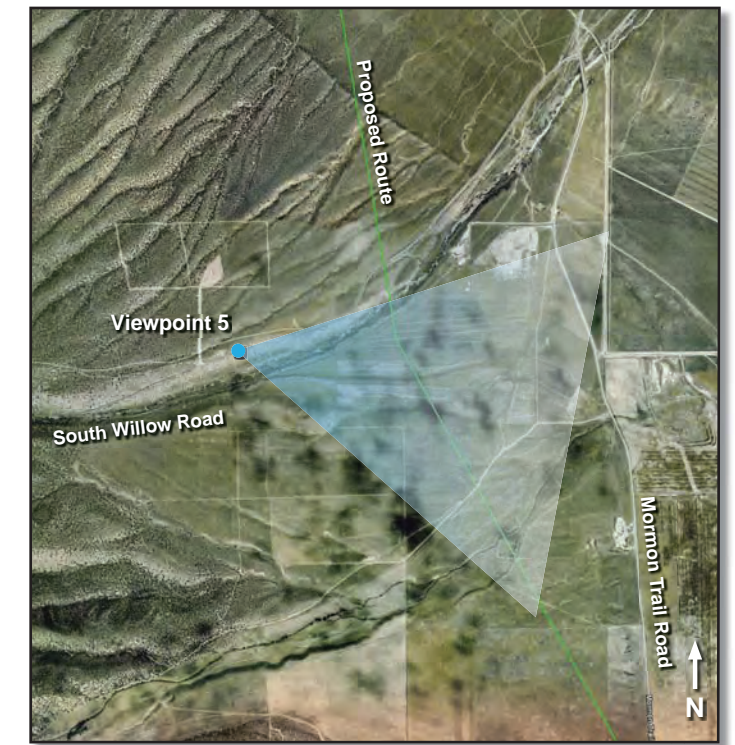


**Mona to Oquirrh Transmission Corridor Project FEIS
Viewpoint 5A**

Photo Date: 05-14-08 Time: 1:32 p.m.
Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



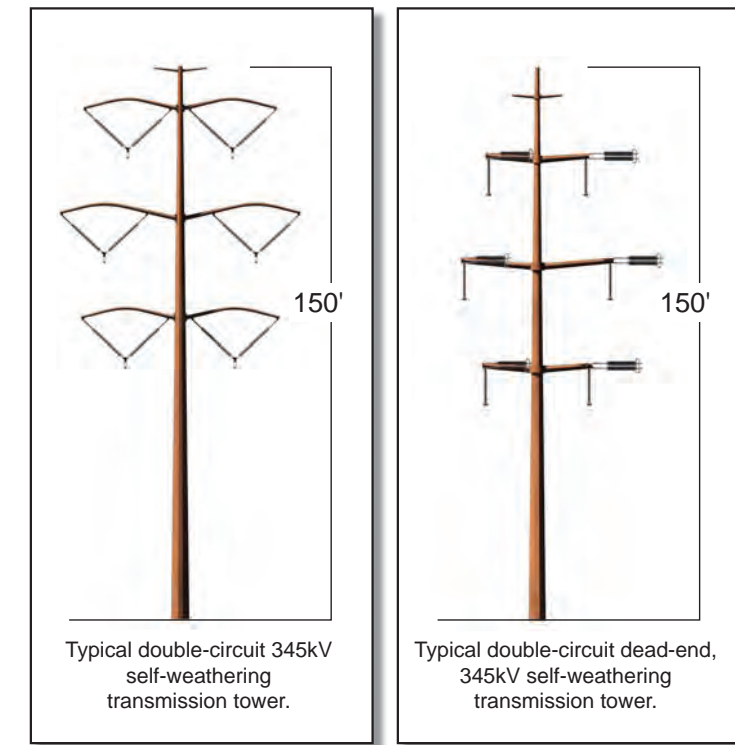
Existing Condition – Viewing east toward the Oquirrh Mountains and Tooele Valley from South Willow Canyon Scenic Byway



View Location: Viewing east from South Willow Road 1.75 miles west of Mormon Trail Road.



**Simulated Condition – Proposed 345kV transmission line along the Mormon Trail Road (Selective Mitigation #10 applied)
Alternative G
Alternative H – Environmentally Preferred Alternative/Proponent's Proposed Action**



**Mona to Oquirrh Transmission Corridor Project FEIS
Viewpoint 5B**

Photo Date: 05-14-08 Time: 1:32 p.m.
Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



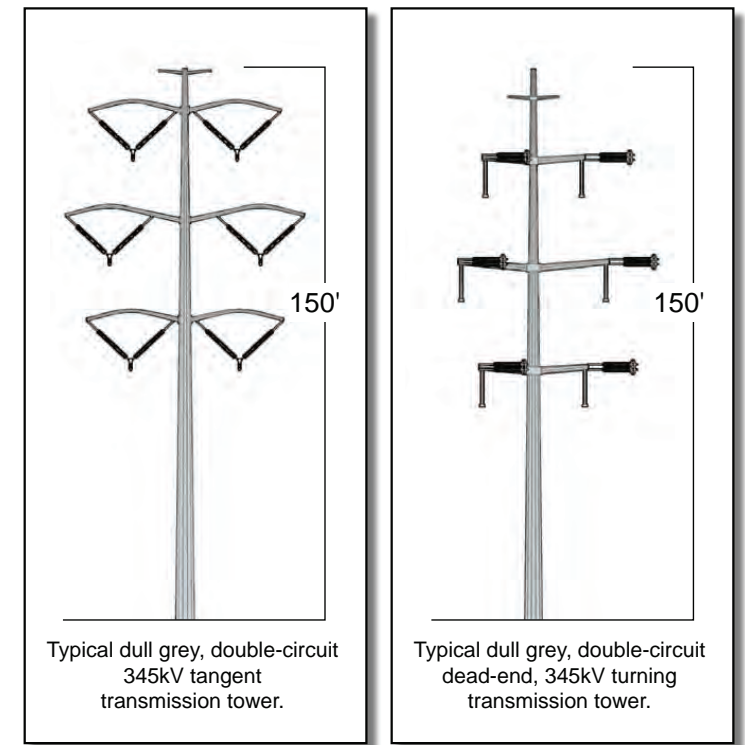
Existing Condition – Viewing east toward the Oquirrh foothills from SR 36



View Location: SR 36 just south of Sunset Road.



**Simulated Condition – Typical 345kV transmission line along the Oquirrh foothills
Alternative I**



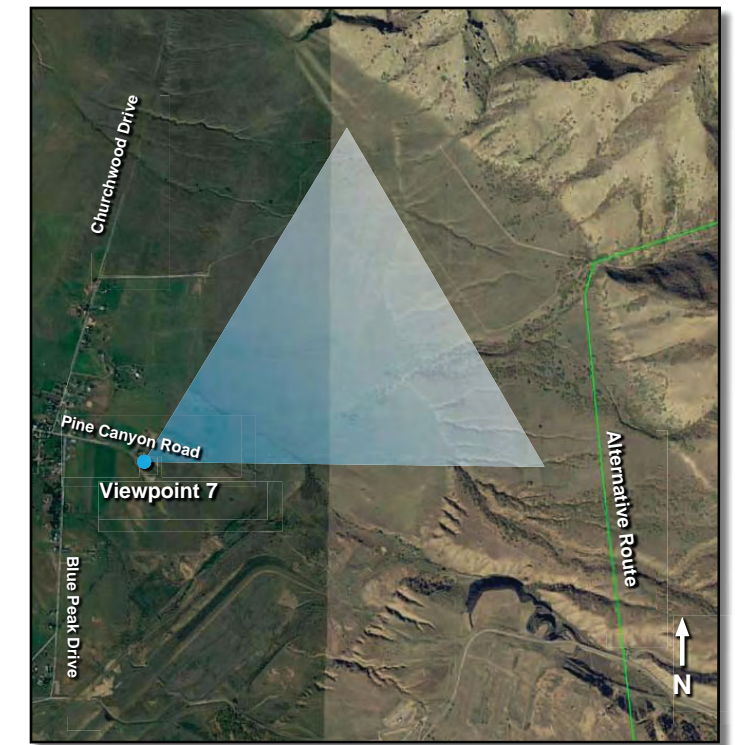
Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 6

Photo Date: 05-14-08 Time: 5:01 p.m.
Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



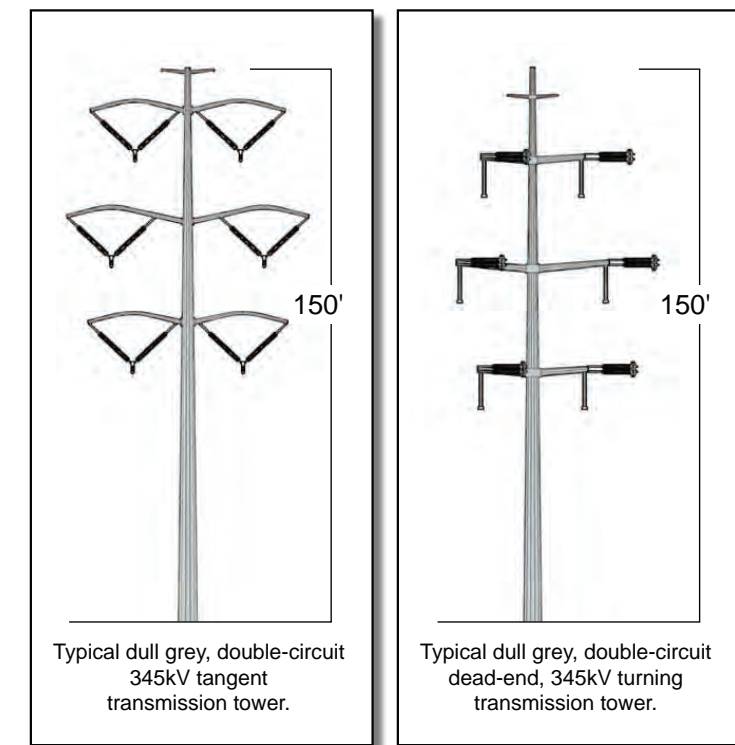
Existing Condition – Viewing east toward the North Oquirrh Management Area (NOMA)



View Location: East end of Pine Canyon Road.

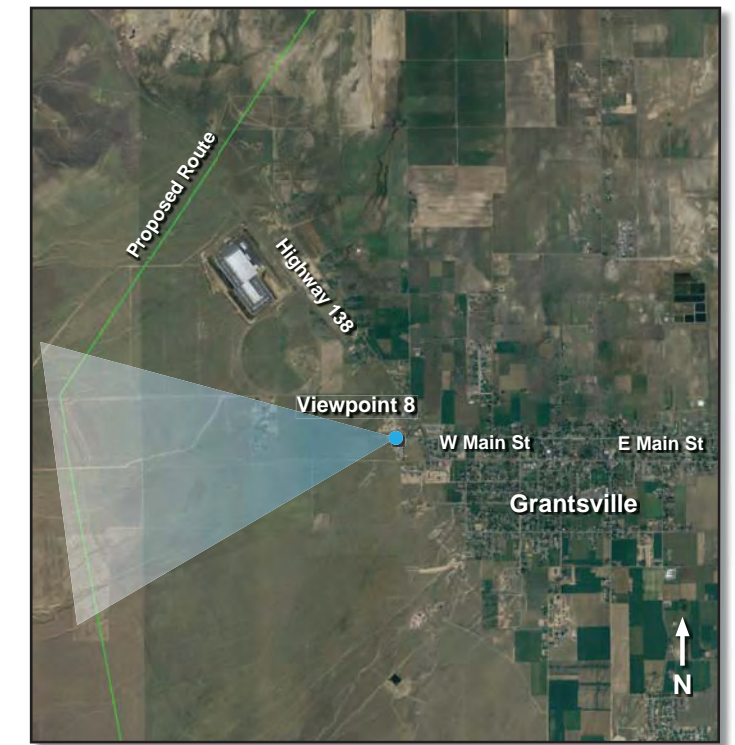


**Simulated Condition – Typical 345kV transmission line crossing the NOMA
Alternatives E1 & E2 – Proponent's Proposed Action**





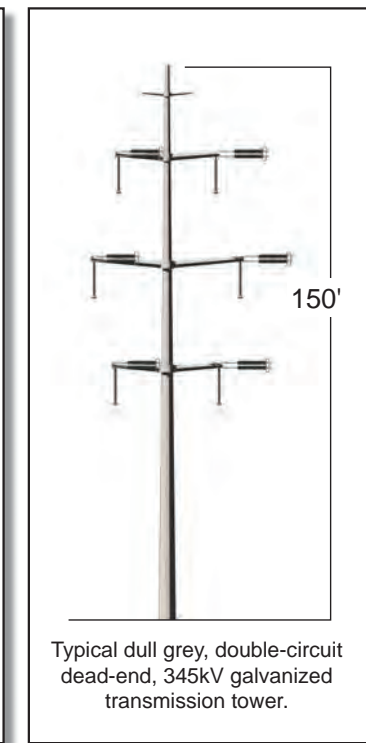
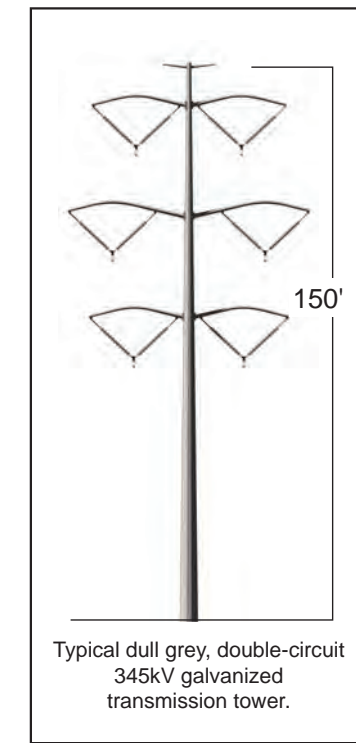
Existing Condition – Viewing west toward the Stansbury Mountains



View Location: Intersection of Bluegrass Way and Clark Street, Grantsville.

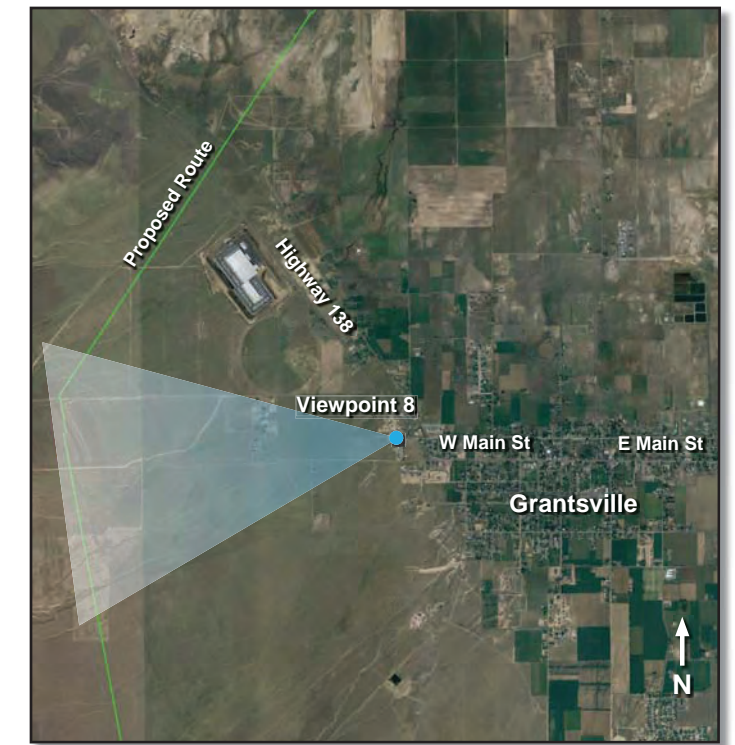


Simulated Condition – Proposed 345kV transmission line (Standard Mitigation applied)
 Alternative G
 Alternative H – Environmentally Preferred Alternative/Proponent's Proposed Action





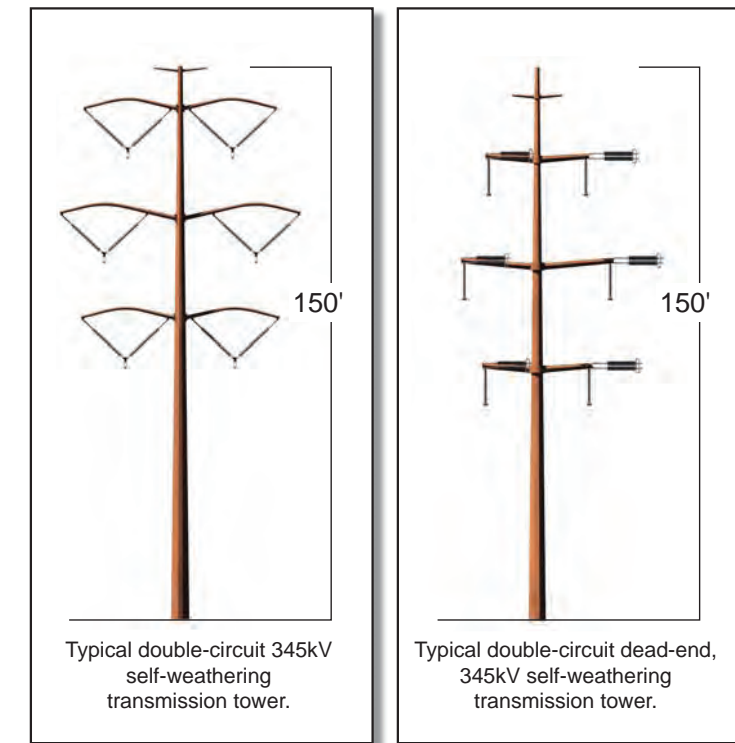
Existing Condition – Viewing west toward the Stansbury Mountains



View Location: Intersection of Bluegrass Way and Clark Street, Grantsville.

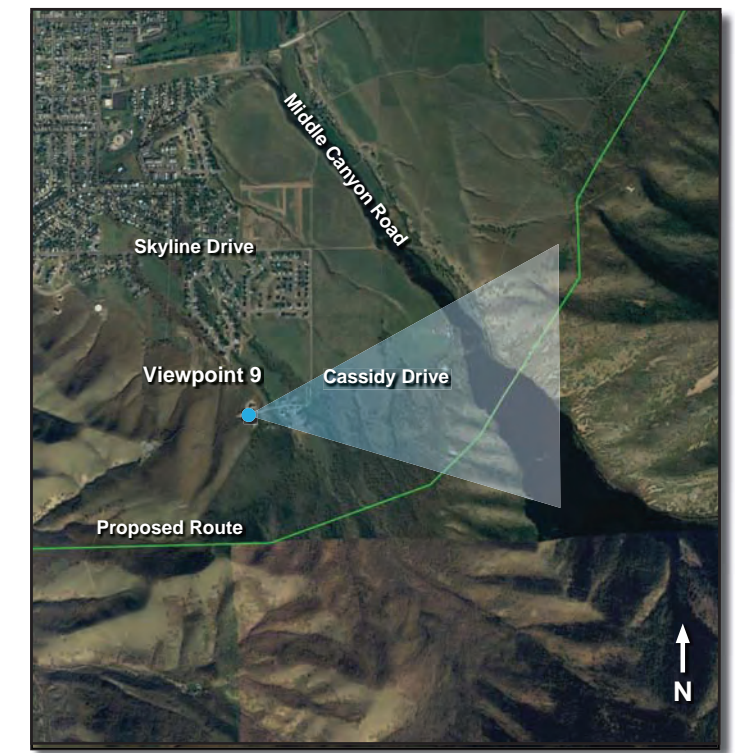


Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #10 applied)
 Alternative G
 Alternative H – Environmentally Preferred Alternative/Proponent's Proposed Action





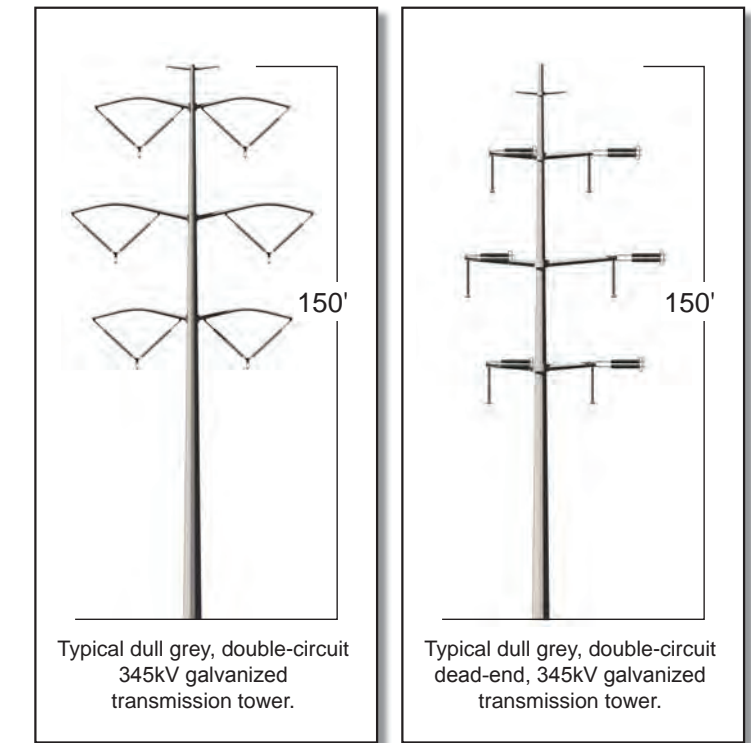
Existing Condition – Viewing east towards Middle Canyon and Oquirrh Mountains



View Location: West end of Cassidy Drive, Tooele.



**Simulated Condition – Proposed 345kV transmission line (Standard Mitigation applied)
 Alternative D – BLM's Preferred Alternative on Federal Lands/Environmentally Preferred Alternative
 Alternatives E1 & E2 – Proponent's Proposed Action**



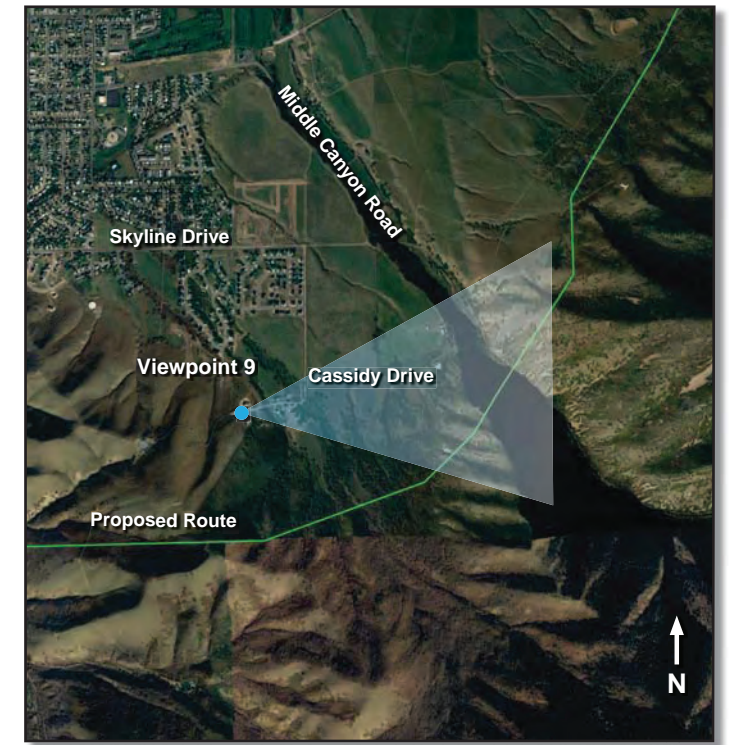
Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 9A

Photo Date: 09-08-09 Time: 12:16 p.m.
 Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



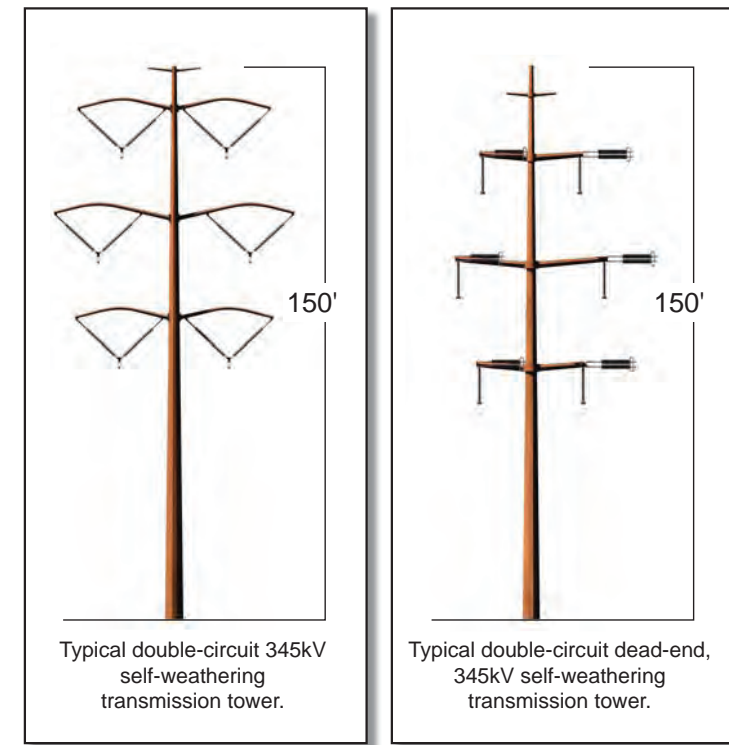
Existing Condition – Viewing east towards Middle Canyon and Oquirrh Mountains



View Location: West end of Cassidy Drive, Tooele.



**Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #10 applied)
Alternative D – BLM’s Preferred Alternative on Federal Lands/Environmentally Preferred Alternative
Alternatives E1 & E2 – Proponent’s Proposed Action**



Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 9B

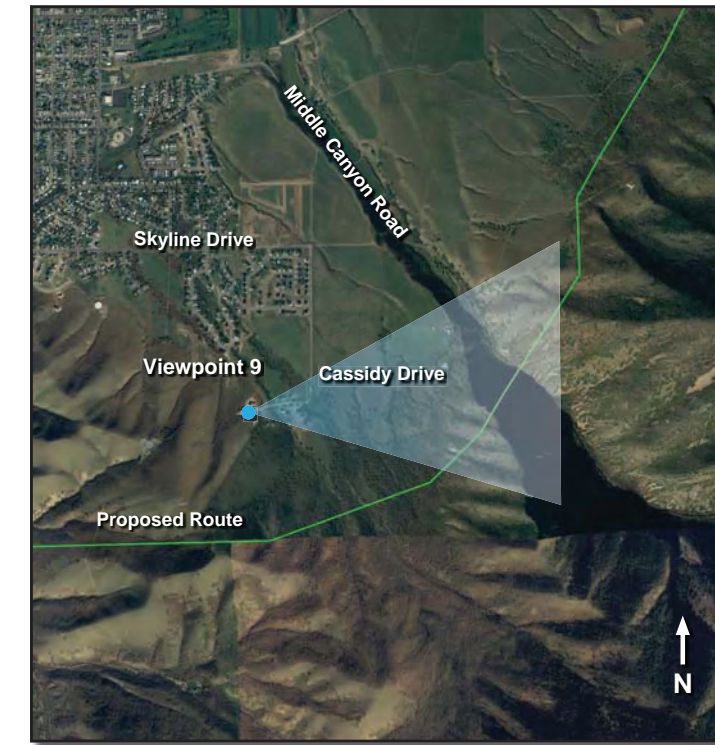
Photo Date: 09-08-09 Time: 12:16 p.m.

Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.

April 2010



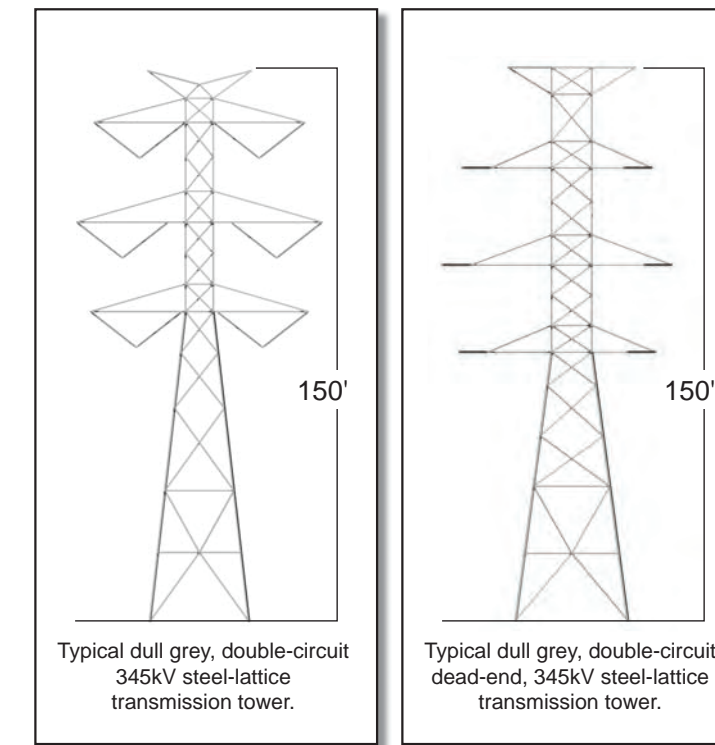
Existing Condition – Viewing east towards Middle Canyon and Oquirrh Mountains



View Location: West end of Cassidy Drive, Tooele.



**Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #6 applied)
Alternative D – BLM's Preferred Alternative on Federal Lands/Environmentally Preferred Alternative
Alternatives E1 & E2 – Proponent's Proposed Action**



Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 9C

Photo Date: 09-08-09 Time: 12:16 p.m.
Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



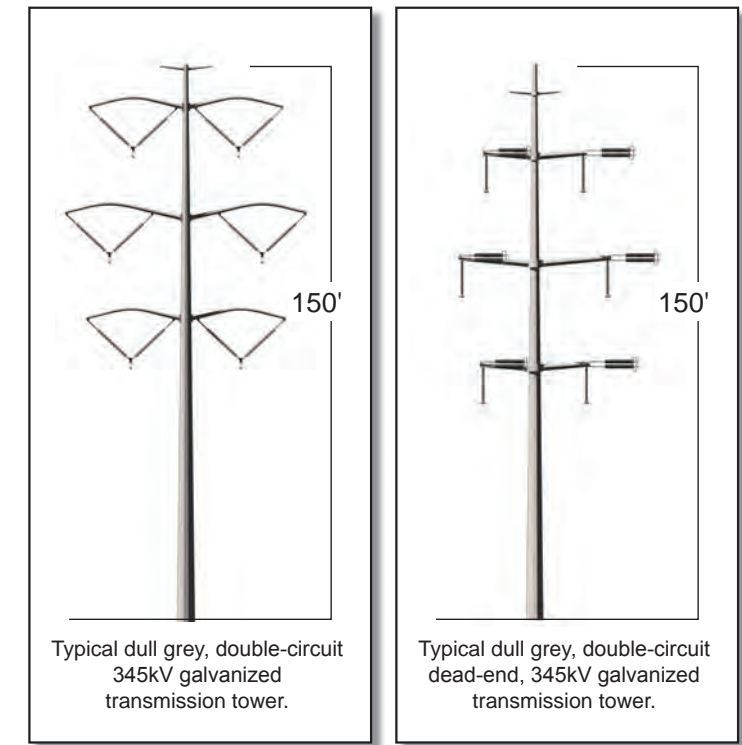
Existing Condition – Viewing east, southeast towards Middle Canyon and the Oquirrh Mountains



View Location: Middle Canyon Road at Oquirrh Hills Golf Course.



**Simulated Condition – Proposed 345kV transmission line (Standard Mitigation applied)
Alternative D – BLM's Preferred Alternative on Federal Lands/Environmentally Preferred Alternative
Alternatives E1 & E2 – Proponent's Proposed Action**



Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 10A

Photo Date: 09-08-09 Time: 12:47 p.m.

Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



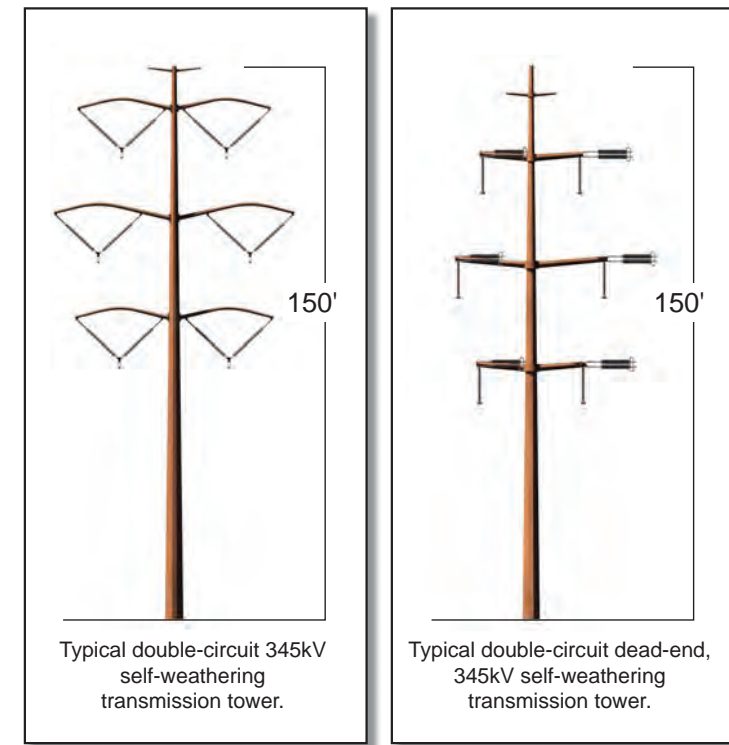
Existing Condition – Viewing east, southeast towards Middle Canyon and the Oquirrh Mountains



View Location: Middle Canyon Road at Oquirrh Hills Golf Course.



**Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #10 applied)
Alternative D – BLM’s Preferred Alternative on Federal Lands/Environmentally Preferred Alternative
Alternatives E1 & E2 – Proponent's Proposed Action**



Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 10B

Photo Date: 09-08-09 Time: 12:47 p.m.

Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



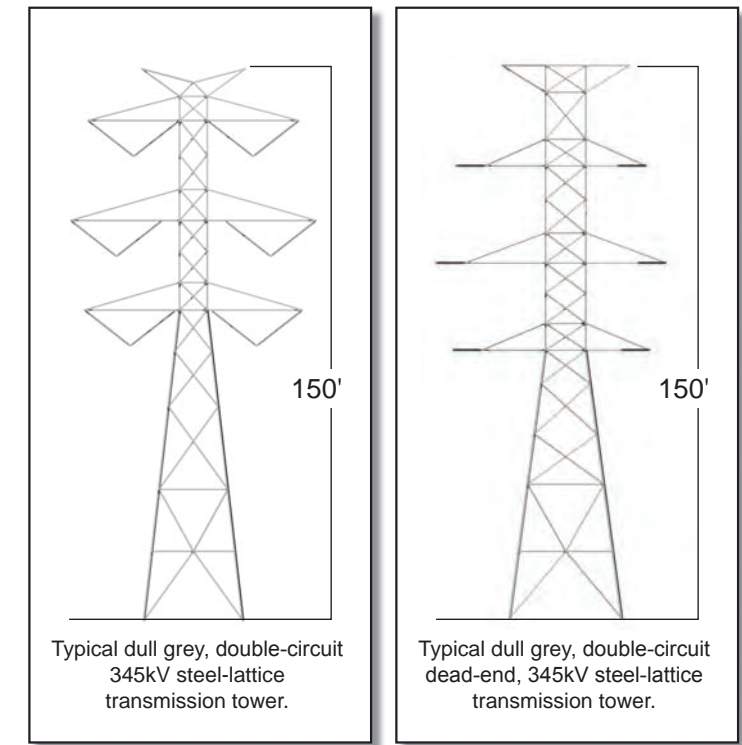
Existing Condition – Viewing east, southeast towards Middle Canyon and the Oquirrh Mountains



View Location: Middle Canyon Road at Oquirrh Hills Golf Course.



**Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #6 applied)
Alternative D – BLM's Preferred Alternative on Federal Lands/Environmentally Preferred Alternative
Alternatives E1 & E2 – Proponent's Proposed Action**



Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 10C

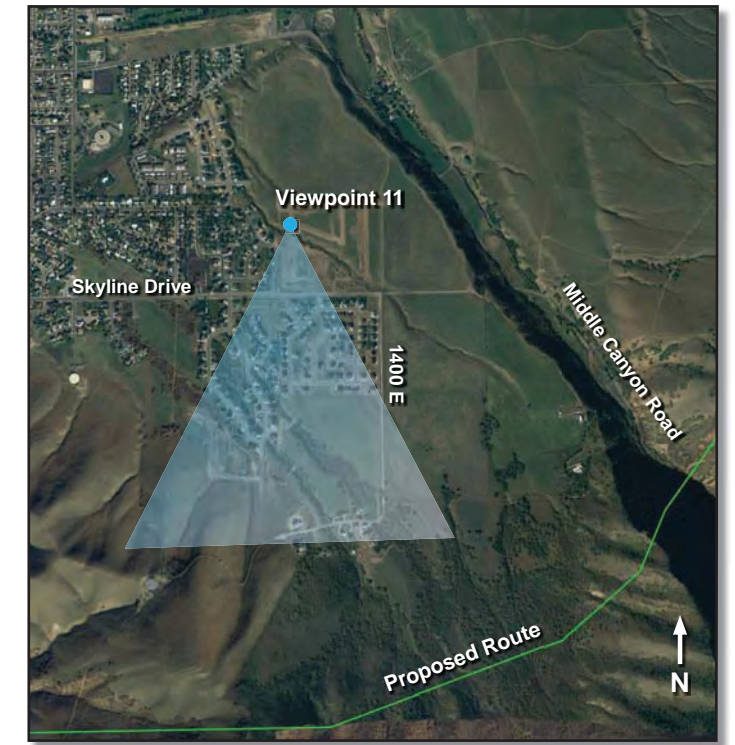
Photo Date: 09-08-09 Time: 12:47 p.m.

Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.

April 2010



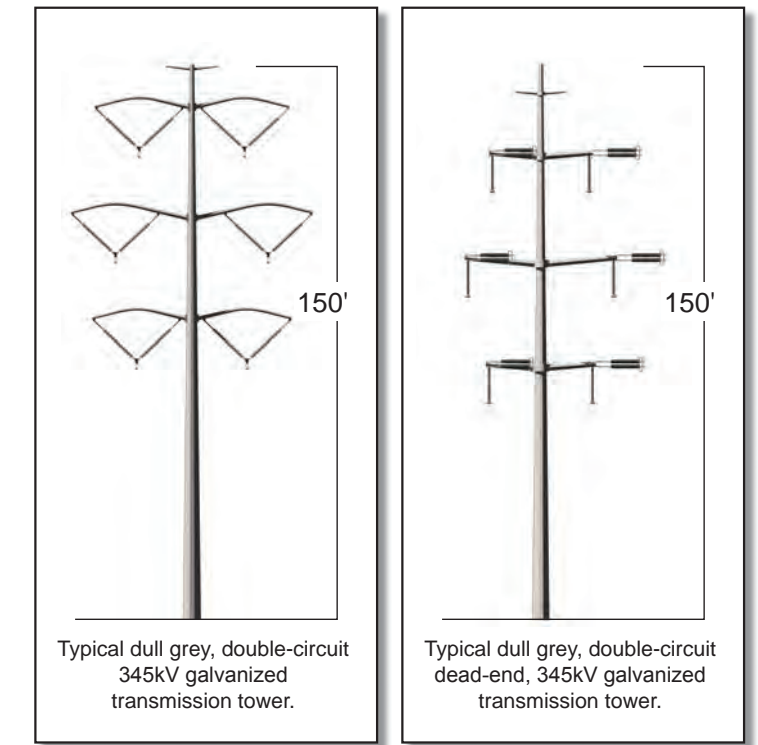
Existing Condition – Viewing south towards the Oquirrh Mountains



View Location: Intersection of Via La Costa and 1230E, Tooele.

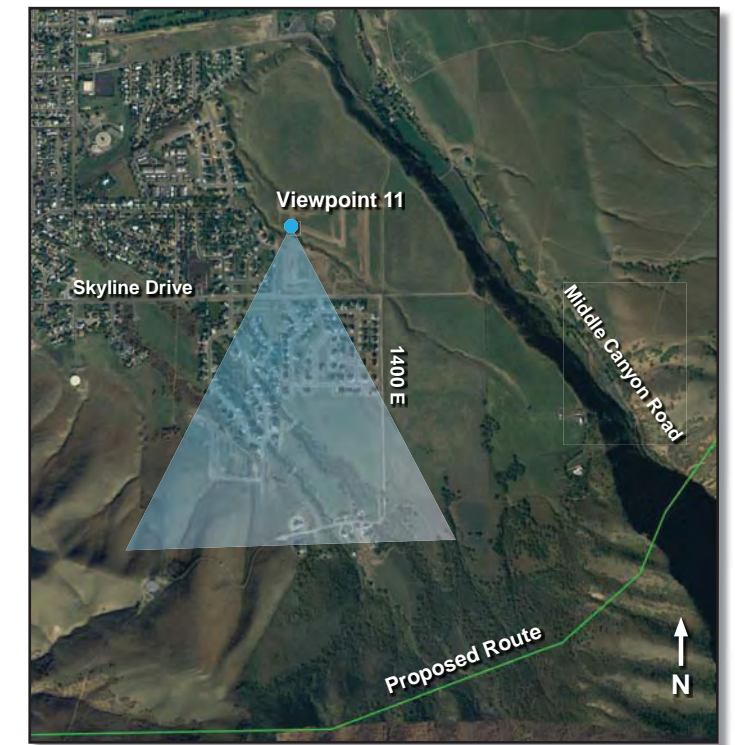


**Simulated Condition – Proposed 345kV transmission line (standard mitigation applied)
Alternatives E1 & E2 – Proponent’s Proposed Action, F1 & F2**





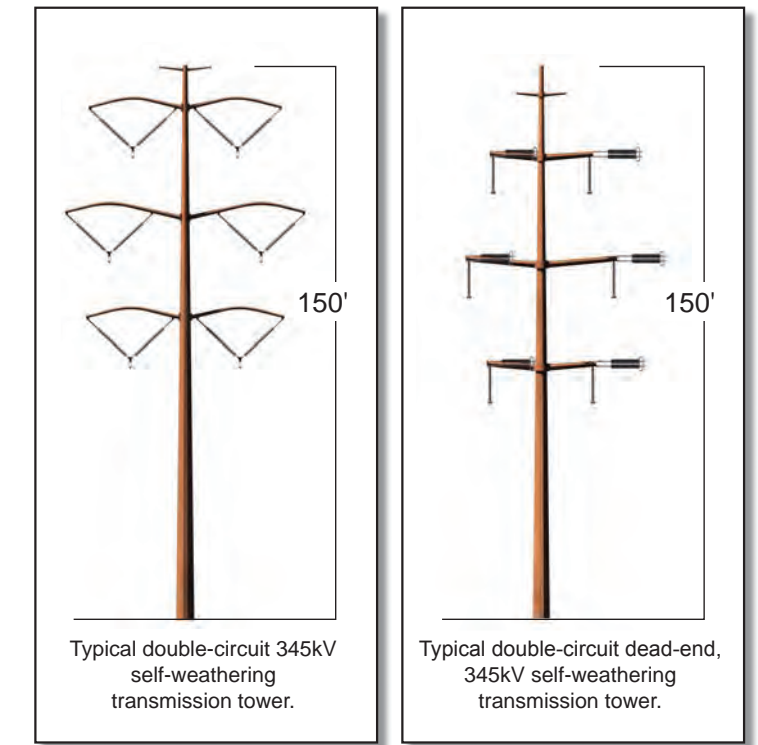
Existing Condition – Viewing south towards the Oquirrh Mountains



View Location: Intersection of Via La Costa and 1230E, Tooele.



**Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #10 applied)
Alternatives E1 & E2 – Proponent’s Proposed Action, F1 & F2**



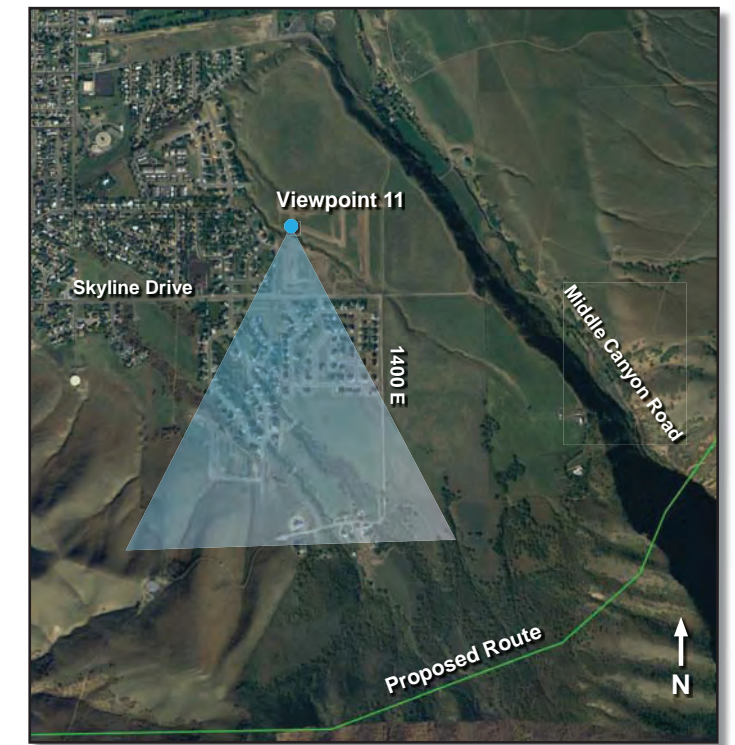
Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 11B

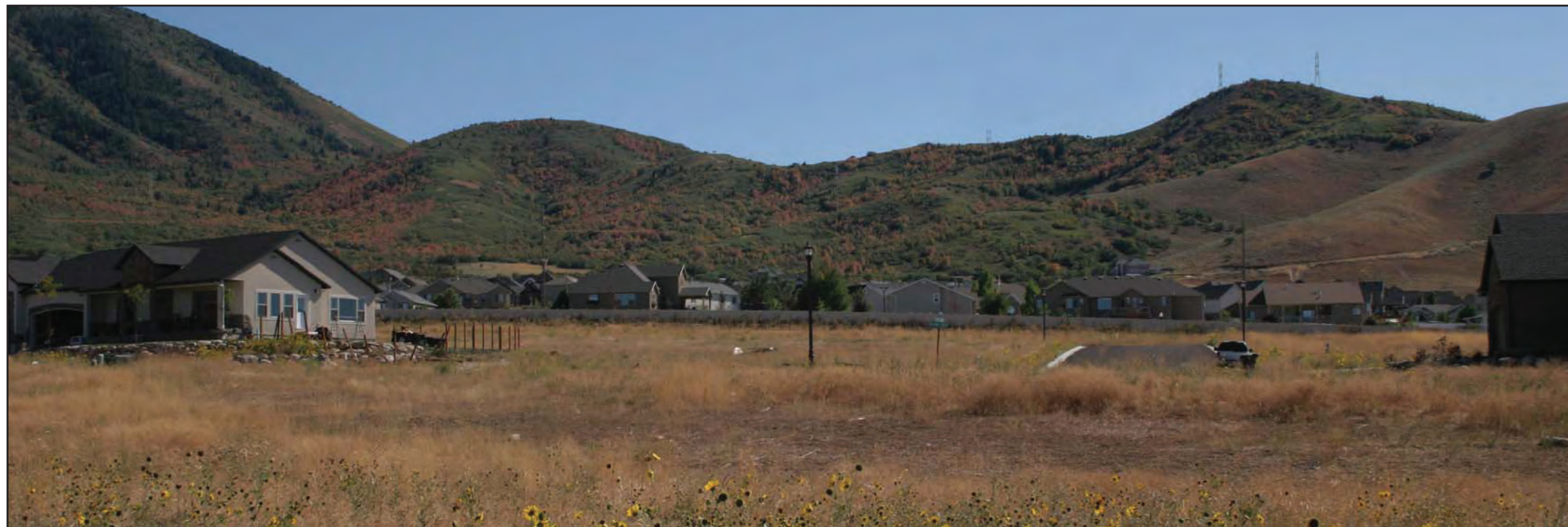
Photo Date: 09-08-09 Time: 12:16 p.m.
Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.



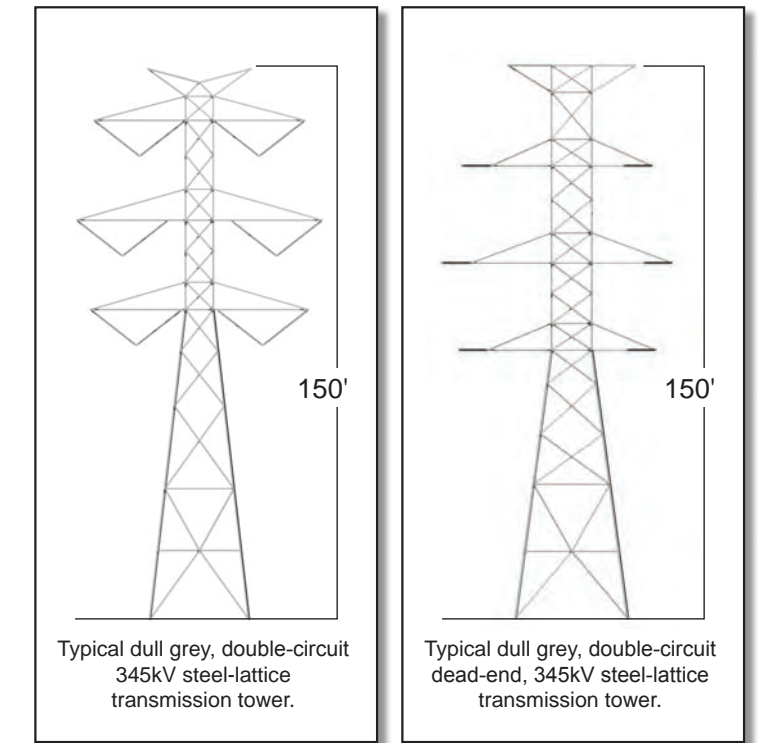
Existing Condition – Viewing south towards the Oquirrh Mountains



View Location: Intersection of Via La Costa and 1230E, Tooele.



**Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #6 applied)
Alternatives E1 & E2 – Proponent’s Proposed Action, F1 & F2**





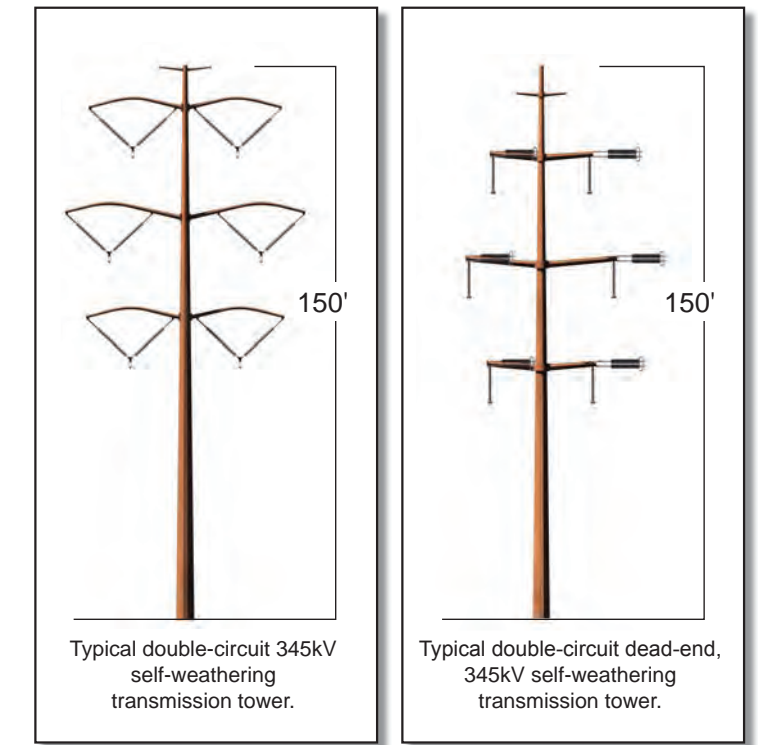
Existing Condition – Viewing south towards the Oquirrh Mountains



View Location: Intersection of Via La Costa and 1230E, Tooele.



**Simulated Condition – Proposed 345kV transmission line (Selective Mitigation #10 and Alternative Mitigation Alignment [Link 190A] applied)
Alternative D – BLM’s Preferred Alternative on Federal Lands/Environmentally Preferred Alternative**



Mona to Oquirrh Transmission Corridor Project FEIS

Viewpoint 11D

Photo Date: 09-08-09 Time: 12:16 p.m.
Structure models that were used in the simulations were created using diagrams provided by Rocky Mountain Power. This simulation represents a schematic concept design that will be refined and finalized. Actual final structure sizes, heights, materials, and conductor sag will vary on a case-by-case basis.

**Appendix H – Public Comments on the
Draft EIS and Draft Plan Amendment**

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APPENDIX H – PUBLIC COMMENTS ON THE DRAFT EIS AND DRAFT PLAN AMENDMENT

H.1 Introduction and Background

Appendix H contains the comments received by the BLM regarding the Draft EIS for the Mona to Oquirrh Transmission Corridor Project and Draft Pony Express RMP Amendment, and the BLM's responses to those comments.

The NOA for the Draft EIS and Draft Pony Express RMP Amendment was published for public review and comment in the *Federal Register* on May 15, 2009 (Volume 74, Number 93, pages 22925 and 22960) and initiated a 90-day public comment period that closed August 12, 2009. The availability of the Draft EIS, deadline for public comments, and locations, dates, and times of public meetings on the Draft EIS were announced in paid newspaper legal notices, paid newspaper advertisements, and project newsletters that were mailed to affected property owners, agencies, and stakeholders. Fifty-two hard copies and approximately 200 electronic copies of the Draft EIS were sent to federal, state, and local government agencies; institutions; organizations; and individuals for review and comment.

During the 90-day comment period, the BLM conducted three open-house meetings to provide the public with an opportunity to view informational displays on the project, discuss the project individually with BLM staff and representatives, and to provide comments on the Draft EIS. The public open houses were held on three consecutive days from June 23 through June 25, 2009. The open houses were held in Tooele, Magna, and Nephi, Utah, respectively. A total of 178 people attended the public open houses. The majority of the attendees (165) attended the meeting in Tooele, Utah, and were individuals residing in the Tooele Valley, Utah.

H.2 General Summary of Comments

During the 90-day comment period, 235 submittals offering comments on the Draft EIS were received from various federal, state, and local agencies; various special interest groups; and public citizens, including 112 emails, 2 faxes, 42 letters, 59 comment forms with comments submitted at the public open house meetings, and 20 comment forms with comments mailed to the BLM. A list of agencies, organizations, and individuals who commented on the Draft EIS is presented in Table H-1.

In compliance with the requirements of CEQ regulations for implementing NEPA, all substantive comments received were assessed and a response provided. Of the 235 comment submittals received, 70 comments received in 40 comment submittals were identified as substantive according to BLM guidelines (BLM's NEPA Handbook, H-1790-1, January 2008). The handbook defines substantive comments as doing one or more of the following:

- Question, with reasonable basis, the accuracy of information in the EIS
- Question, with reasonable basis, the adequacy of, methodology for, or assumptions used for the environmental analysis
- Present new information relevant to the analysis
- Present reasonable alternatives other than those analyzed in the EIS
- Cause changes or revisions in one or more of the alternatives

TABLE H-1 GUIDE TO AGENCIES, ORGANIZATIONS, AND INDIVIDUALS WHO PROVIDED WRITTEN COMMENTS ON DRAFT EIS		
Submittal Number	Name/Affiliation	Issues Associated with Comment(s)
Federal Agencies		
1	Sheila Lopez, Master Planner, Tooele Army Depot	Alternatives identification and analysis
2	Larry Svoboda, Director, NEPA Program, Environmental Protection Agency, Region 8	Adequacy of the Draft EIS, biological resources, water resources, alternatives identification and analysis, air quality, health and safety
State Agencies		
3	John Harja, Director, Office of the Governor Public Land Policy Coordination Office	Adequacy of Draft EIS, alternatives identification and analysis
Local Agencies		
4	Nicole Cline, Economic Development Director and Grant Administrator, Tooele County	Alternatives identification and analysis
5	Jeremy Nielson, Deputy City Engineer, South Jordan City	Land use and recreation
6	Lee Colvin, Director, Salt Lake County Real Estate Division, Salt Lake County	Land use and recreation
7	Colleen Johnson, J. Bruce Clegg, and Jerry Hurst, Tooele County Commissioners	Land use and recreation
8	Tom Burdett, Director of Development, West Jordan City	Alternatives identification and analysis
9	Colleen Johnson, J. Bruce Clegg, and Jerry Hurst, Tooele County Commissioners	Alternatives identification and analysis
Special Interest Groups		
10	Randy Cassidy, Ensign Group	Alternatives identification and analysis
11	T. Michael Smith, Oregon-California Trails Association	Other (cultural resources)
12	Linda Turner, Oregon-California Trails Association	Other (cultural resources)
13	Stan L. Albrecht, President, Utah State University	Land use and recreation, other (socioeconomics)
14	Jesse Fairbanks, Assistant Property Manager, Farmland Reserve	Adequacy of the Draft EIS, Alternatives identification and analysis, land use and recreation, health and safety, other (socioeconomics, visual resources)
15	Chris Robinson, Salt Pointe Land Company	Land use and recreation
16	Tiffany Bartz, Southwestern Field Attorney, Southern Utah Wilderness Alliance	Land use and recreation, Alternatives identification and analysis
17	Brandon Smith, Project Manager, Rocky Mountain Power	Alternatives identification and analysis
18	Duronda Smith, Manager – Discontinued Operations, Atlantic Richfield Company	Alternatives identification and analysis
19	Clayton Walker, Vice President, Projects and Value Generation, Kennecott Utah Copper	Land use and recreation
20	Gary S. Straquadine, PhD, Dean and Executive Director, Utah State University, Tooele Regional Campus	Land use and recreation
21	Robyn MacDuff, Director, Raptor Inventory Nest Survey Project	Biological resources
22	Brad Pratt, Tooele Concerned Citizens Group	Alternatives identification and analysis
Individuals		
23	Pete Grimm, Analine Management	Alternatives identification and analysis, other (socioeconomics)

24	John Hansen	Alternatives identification and analysis, biological resources, other (visual resources, socioeconomics, earth resources), health and safety
25	Peter Ventura	Alternatives identification and analysis, other (visual resources)
26	J. Mark Jacob	Land use and recreation, alternatives identification and analysis
27	Name not submitted	Alternatives identification and analysis
28	Kelley R. Anderson	Alternatives identification and analysis
29	Andrea Cahoon	Land use and recreation, health and safety
30	Howard Yerke	Alternatives identification and analysis
31	Tony Flippo	Alternatives identification and analysis
32	Peter Ventura	Alternatives identification and analysis
33	Randy Christensen	Adequacy of the Draft EIS, health and safety, other (earth resources)
34	George Robinson	Health and safety
35	Martin Kogut	Adequacy of the Draft EIS, alternatives identification and analysis
36	Eric McGuire	Health and safety
37	Bill Lawrence	Other (visual resources)
38	Kaye Pratt	Other (visual resources), water resources, adequacy of the Draft EIS, health and safety, land use and recreation
39	Dan and Amy Olson	Adequacy of the Draft EIS
40	Jim Webber	Health and safety

Comments that are not considered substantive include:

- Comments in favor of or against the proposed action or alternatives without reasoning that meet the BLM’s definition of substantive comments
- Comments that only agree or disagree with BLM policy or resource decisions without justification or supporting data that meet the BLM’s definition of substantive
- Comments that do not pertain to the Project area or Project
- Comments that take the form of vague, open-ended questions

Submittals containing substantive comments on the Draft EIS are reproduced in full and presented at the end of this appendix—categorized by federal agencies, state agencies, local agencies, special interest groups, and individuals. Each substantive comment within a submittal is bracketed in the left margin and labeled with a letter, which corresponds with the BLM’s response on the right side of the page. Comments received on the Draft EIS fall into the following categories:

- Alternatives identification and analysis
- Land use and recreation resources
- Health and safety
- Adequacy of the Draft EIS
- Biological resources
- Air Quality
- Water resources
- Other

H.2.1 Issues and Key Comments

Table H-2 indicates the number of substantive comments received (70 comments received in 40 comment submittals) by issue. The final column indicates the percentage of comments for each issue in relation to the total number of substantive comments received.

TABLE H-2 COMMENTS BY ISSUE		
Issue	Number of Comments	Percent of Total
Alternatives identification and analysis	22	31
Land use and recreation resources	12	17
Health and safety	9	13
Adequacy of the Draft EIS	7	10
Biological resources	4	6
Air Quality	4	4
Water resources	2	3
Other	10	10
Total	70	100

Provided below is a summary description of the comments on these issues.

H.2.1.1 Alternative Identification and Analysis

The majority of comments (31 percent) were received from respondents residing in Tooele County opposing the Proponent’s Proposed Action and the BLM’s Preferred Alternative and suggesting adjustments through Tooele Valley. The Mayor of Tooele City Corporation submitted to the Proponent a written comment at the Proponent’s Landowner Meetings opposing any alternative along the east bench of Tooele City (Alternatives D, EI, E2, F1, and F2) and Alternative I in east Tooele Valley. A petition, including signatures from 761 citizens, opposing the Proponent’s Proposed Action through the southeast mountainside of Tooele Valley was submitted with the Mayor’s comment. Another petition opposing alternatives considered in the Tooele, Erda, and Lake Point areas was submitted with a written comment from a private citizen and contained 184 citizen signatures.

A comment also was submitted suggesting that the BLM consider a conservation/demand-side management (i.e., non-transmission) alternative in the EIS.

H.2.1.2 Land Use and Recreation Resources

Comments were received on how the proposed and alternative routes could potentially conflict with existing or future land uses, including conflicts with planned development in Utah, Tooele, and Salt Lake counties, impacts on recreation open space areas, and rangeland infrastructure, and conformance with municipal and county general and master plans. EPA also provided comments related to the requirements for crossing the International Smelting and Refining Superfund site.

H.2.1.3 Health and Safety

The majority of the comments received regarding health and safety questioned the effects of electric and magnetic fields (EMF) on the health of people and livestock. EPA provided a comment submittal on the

use of SF₆ equipment during construction and impacts related to ground disturbance in hazardous waste sites.

H.2.1.4 Adequacy of the Draft EIS

Comments questioned the adequacy of the analysis presented in the Draft EIS. Comments generally expressed what the commenters believed to be incomplete or incorrect data presented in the Draft EIS or questioned the methods used in analysis of the alternatives. For example, EPA provided a comment submittal on methodology used to quantify impacts on wetlands and suggested additional analysis of impacts on air quality. In addition, some comments provided additional information and suggestions to improve the analysis and accuracy of information for the Final EIS.

H.2.1.5 Biological Resources

The Raptor Inventory Nest Survey (RINS) Project submitted a comment questioning the completeness of data used to assess impacts on raptor habitat in the Rush Valley and West Desert areas.

H.2.1.6 Air Quality

EPA provided a comment submittal on the potential for impacts on air quality in Salt Lake and Utah counties, as both counties have non-attainment status under National Ambient Air Quality Standards.

H.2.1.7 Water Resources

Comments provided suggestions to improve the analysis and accuracy of information for water resources to be considered in the Final EIS. Comments noted concern about impacts related to ground disturbance and erosion in watersheds and riparian areas. The EPA proposed mitigation measures to avoid or minimize impacts on wetlands.

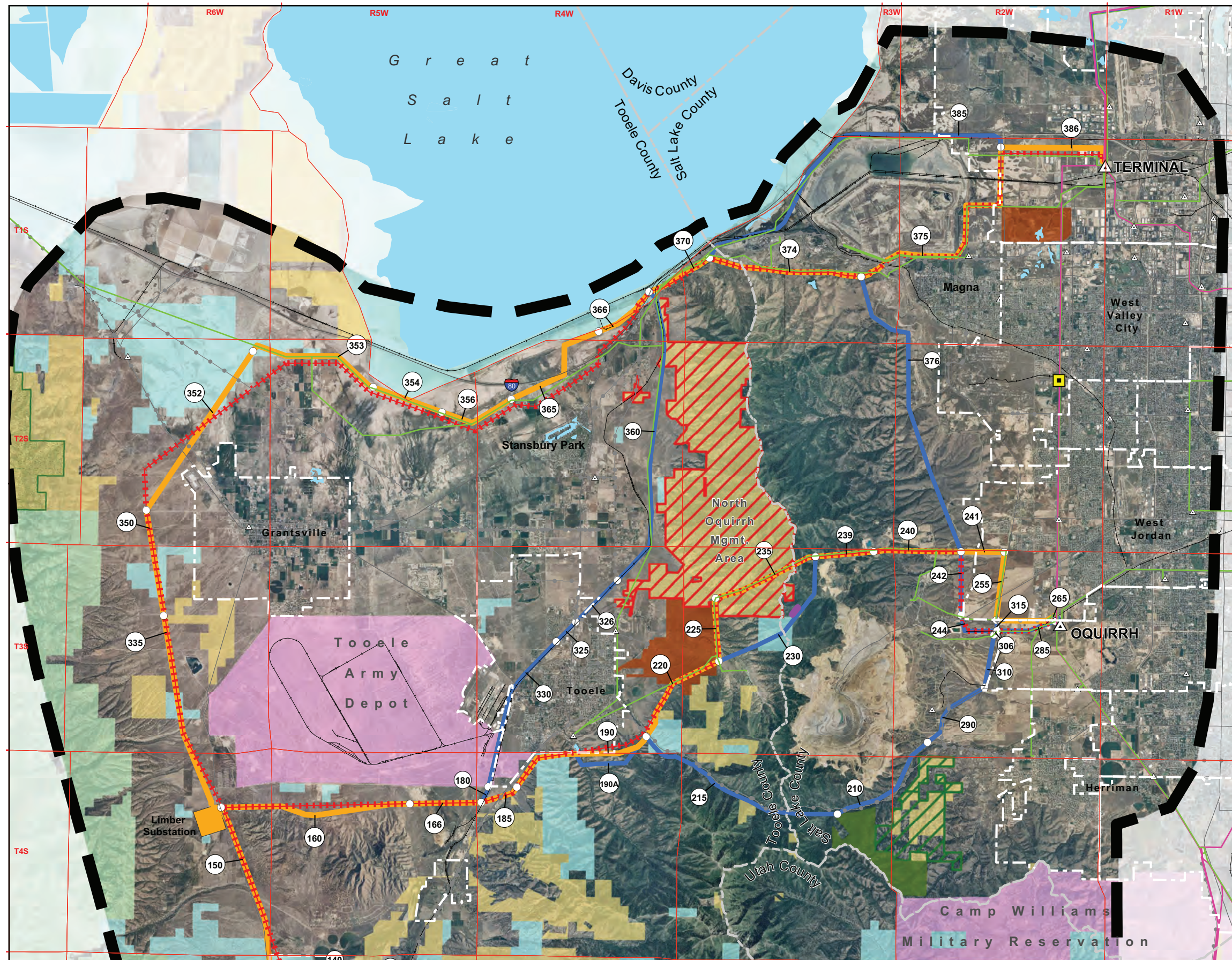
H.2.1.8 Other Issues

A comment was received stating that the photography used to represent the Project was outdated. Utah State University commented that potential visual and health and safety impacts from the transmission lines might affect their ability to recruit and retain students at their Tooele Regional Campus in Tooele City.

H.2.2 Alternative Route Adjustments Based on Comments

Adjustments to the alternative transmission line routes were made in response to the comments received on the Draft EIS. The route alignment shifts and the reason for the adjustments are provided in Table H-3. Alignment adjustments are also depicted in Figure H-1.

TABLE H-3 ALTERNATIVE ROUTE ADJUSTMENTS BASED ON DRAFT EIS COMMENTS		
Location	Link Number	Reason for Route Adjustment
Juab County	2	<ul style="list-style-type: none"> ▪ Proponent’s engineering design adjustment
Juab County	3	<ul style="list-style-type: none"> ▪ Proponent’s engineering design adjustment
Juab County	5	<ul style="list-style-type: none"> ▪ The BLM wanted the route to follow existing roads to the extent possible to minimize impacts of the Project’s new access roads
Utah County	20	<ul style="list-style-type: none"> ▪ The BLM wanted the route to follow existing roads to the extent possible to minimize impacts of the Project’s new access roads.
Utah County	15	<ul style="list-style-type: none"> ▪ Route was moved approximately 0.5 mile to the west to accommodate private property owners and Utah County’s future development plans in Goshen Valley Area.
Utah County	50	
Utah County	55	<ul style="list-style-type: none"> ▪ The BLM wanted the route to follow existing roads to the extent possible to minimize impacts of the Project’s new access roads.
Tooele County	60	
Tooele County	40	
Tooele County	90	<ul style="list-style-type: none"> ▪ Proponent adjusted route to accommodate the proposed UNEV pipeline.
Tooele County	105	<ul style="list-style-type: none"> ▪ The BLM wanted the route to follow existing roads to the extent possible to minimize impacts of the Project’s new access roads. ▪ Proponent’s engineering design adjustment.
Tooele County	150	<ul style="list-style-type: none"> ▪ Proponent adjusted route to the west to parallel Mormon Trail Road in order to minimize bisecting SITLA land.
Tooele County	160	<ul style="list-style-type: none"> ▪ Proponent adjusted route to the south to accommodate gravel pit expansions.
Tooele County	166	<ul style="list-style-type: none"> ▪ Proponent adjusted route to the south to accommodate gravel pit expansions.
Tooele County	190	<ul style="list-style-type: none"> ▪ Proponent adjusted route to the south to minimize land use conflicts and visual impacts from Tooele City and residents. Also minimized crossing of Settlement Canyon reservoir.
Tooele County	190A	<ul style="list-style-type: none"> ▪ The BLM adjusted route to minimize potential visual impacts, fire management operations conflicts, and health and safety issues associated with Settlement Canyon Reservoir.
Tooele County	352	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on residences and future development plans of private property owners.
Tooele County	353	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on future development plans of private property owners.
Tooele County	354	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on future development plans of private property owners.
Tooele County	356	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on future development plans of private property owners.
Tooele County	365	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on future development plans of private property owners.
Tooele County	366	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on future development plans of private property owners.
Tooele County	370	<ul style="list-style-type: none"> ▪ Proponent adjusted route to accommodate the proposed UNEV pipeline project.
Tooele County	366	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on future development plans of private property owners.
Salt Lake County	386	<ul style="list-style-type: none"> ▪ Proponent adjusted route to avoid recently completed industrial building.
Salt Lake County	230/226	<ul style="list-style-type: none"> ▪ Proponent adjusted route to minimize impacts on Kennecott mining operations in Dry Fork and Barney’s Canyon.



Legend

Project Features

- BLM's Preferred Alternatives on Federal Lands*
- Proponent's Proposed Action*
- Alternative Routes
- Proposed Route From DEIS
- Alternative Route From DEIS
- Proposed Substation Site
- Project Study Area

Land Jurisdiction

- Bureau of Land Management
- U.S. Forest Service
- Department of Defense
- State Trust Land
- Private Land

Special Management Areas

- UDWR Wildlife Management Area
- Yellow Fork Canyon Regional Park
- Rose Canyon Ranch Open Space
- North Oquirrh Management Area
- Wilderness Study Area

Utility Features

- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Natural Gas Pipeline

Transportation Features

- Railroad
- Major Road

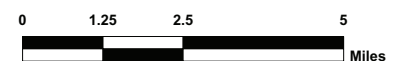
Administrative Boundary

- City Boundary
- County Boundary

Public Land Survey System

- Township and Range Line

*Project Alignment has been revised to address comments on DEIS



SOURCES: Land Ownership, Utah AGRC 2009;
 Aerial Photography, NAIP 2009
 Aerial Photography Captured June - August, 2009
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

Map H-1

1 of 3

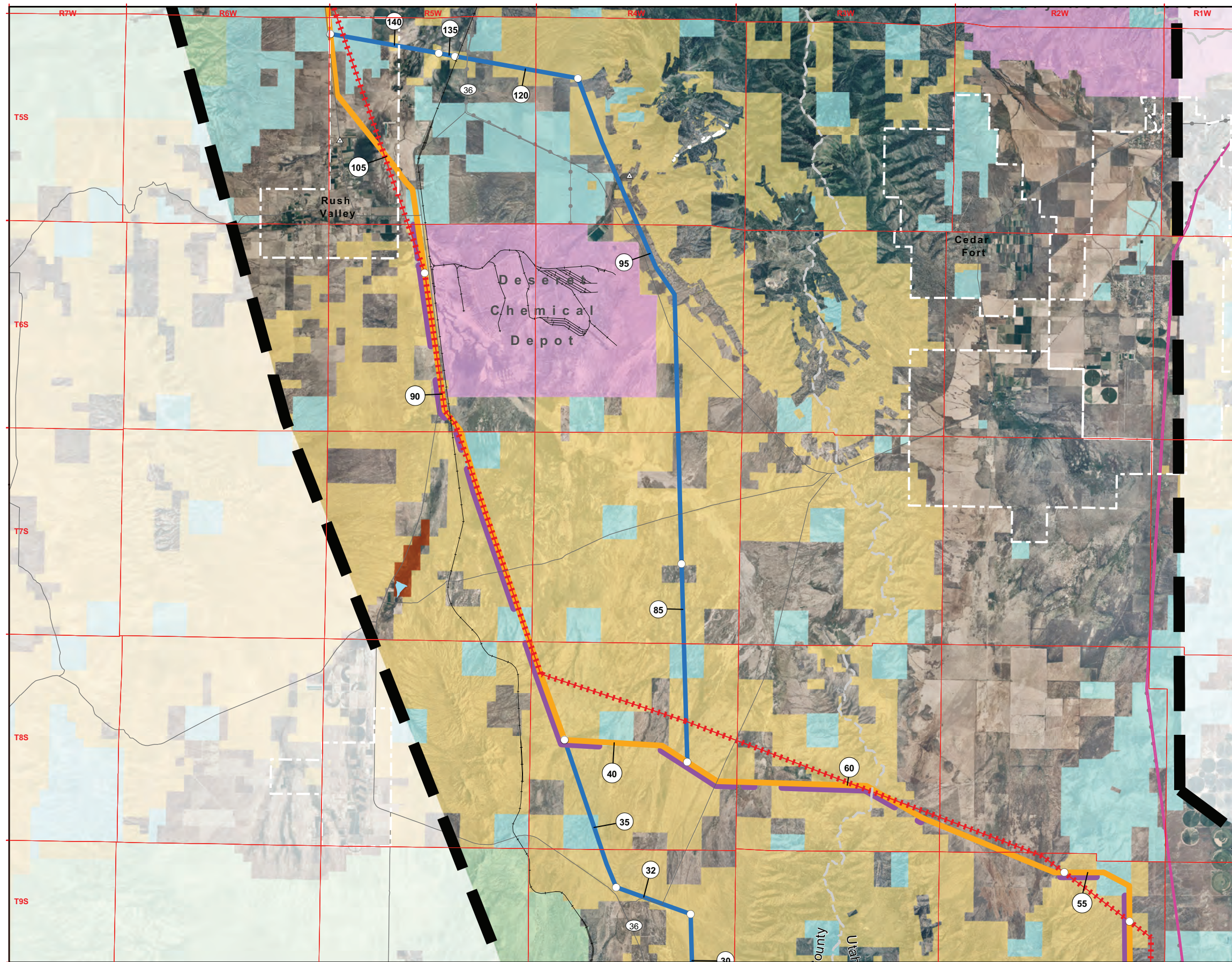
April 2010

Preferred and Alternative Routes

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



All_Alternative_LANDSCAPE.mxd



Legend

Project Features

- BLM's Preferred Alternatives on Federal Lands*
- Proponent's Proposed Action*
- Alternative Routes
- Proposed Route From DEIS
- Alternative Route From DEIS
- Proposed Substation Site
- Project Study Area

Land Jurisdiction

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- U.S. Forest Service
- Department of Defense
- State Trust Land
- Private Land

Special Management Areas

- UDWR Wildlife Management Area
- Yellow Fork Canyon Regional Park
- Rose Canyon Ranch Open Space
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Utility Features

- 345kV Transmission Line
- 138kV Transmission Line
- Power Plant
- Substation
- Natural Gas Pipeline

Transportation Features

- Railroad
- Major Road

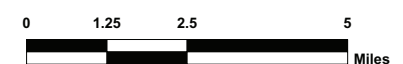
Administrative Boundary

- City Boundary
- County Boundary

Public Land Survey System

- Township and Range Line

*Project Alignment has been revised to address comments on DEIS



SOURCES: Land Ownership, Utah AGRC 2009;
 Aerial Photography, NAIP 2009
 Aerial Photography Captured June - August, 2009
 County Boundaries, Utah AGRC 2004;
 Transmission Lines & Substation Locations, PacifiCorp

Map H-1

2 of 3

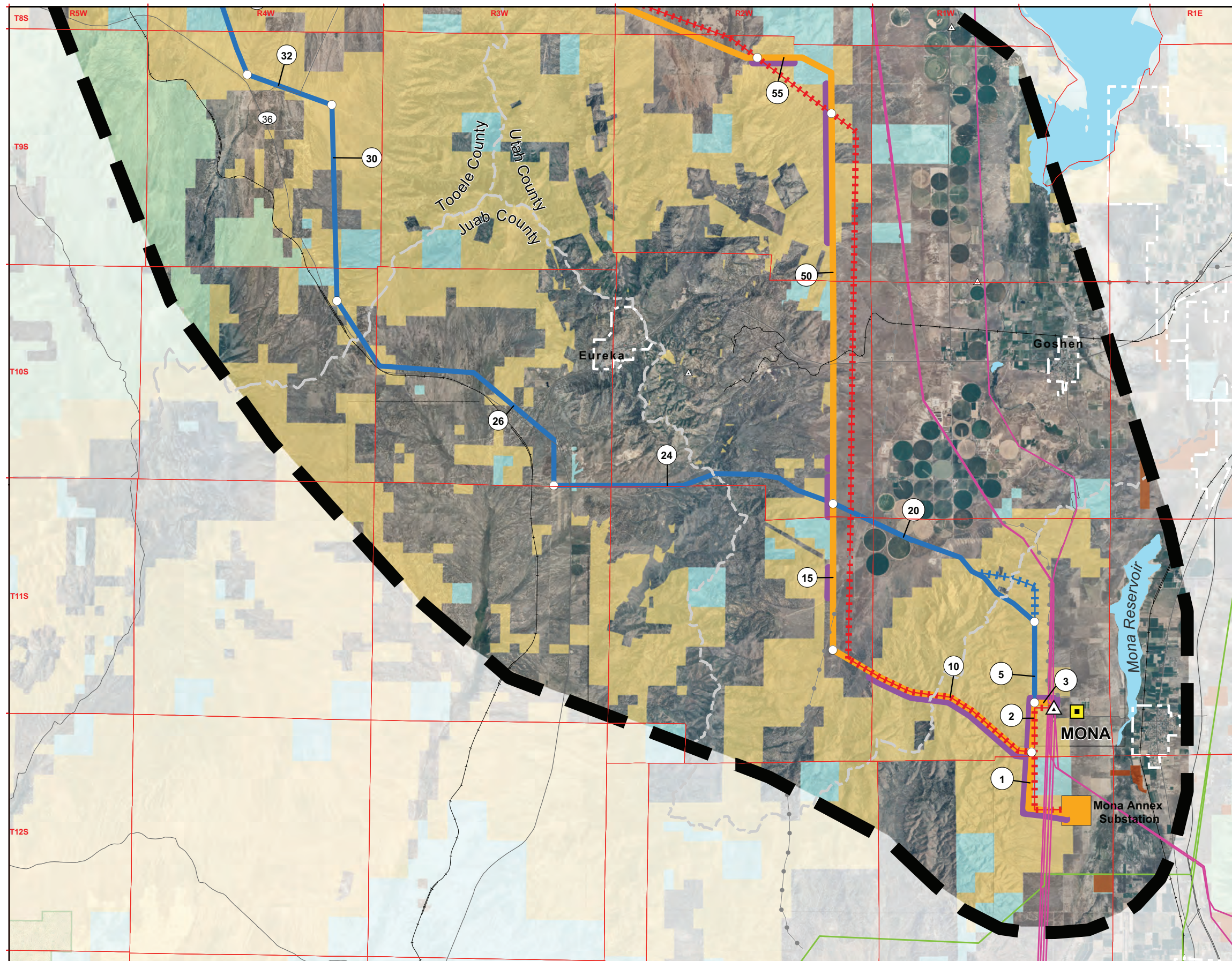
April 2010

Preferred and Alternative Routes

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



All_Alternative_LANDSCAPE.mxd



Legend

Project Features

- BLM's Preferred Alternatives on Federal Lands*
- Proponent's Proposed Action*
- Alternative Routes
- Proposed Route From DEIS
- Alternative Route From DEIS
- Proposed Substation Site
- Project Study Area

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- U.S. Forest Service
- Department of Defense
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*Project Alignment has been revised to address comments on DEIS



SOURCES: Land Ownership, Utah AGRC 2009;
 Aerial Photography, NAIP 2009
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 Transmission Lines & Substation Locations, PacifiCorp

All_Alternative_LANDSCAPE.mxd

Map H-1

3 of 3

April 2010

Preferred and Alternative Routes

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT EIS



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Federal Agencies

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COMMENT(S)

RESPONSE(S)

1 TOOELE ARMY DEPOT

"Lopez, Sheila Ms
CIV USA AMC"
<sheila.jopez2@us
.army.mil>

08/10/2009 04:12
PM

To

<DJ.M20TL.EIS@blm.gov>

cc

<richard.nesbitt@us.army.mil>
"Turner, Tom A CIV USA AMC"
<thomas.a.turner2@us.army.mil>
"Tillman, Chris Mr CIV USA AMC"
<chris.tillman@us.army.mil>

Subject

Draft Environmental Impact
Statement for the Mona to Oquirrh
Transmission Corridor Project -
Comments (UNCLASSIFIED)

Classification: UNCLASSIFIED
Caveats: NONE

The following comments are provided by Tooele Army Depot, Utah, concerning the proposed Mona to Oquirrh Transmission Corridor Project:

Substation site location - Limber Substation - Tooele Army Depot conducts Open Burn/Open Detonations of propellants, explosives, pyrotechnics and/or explosive ordnance as a mission requirement. The Open Burn/Open Detonation area is located in the southwest corner of the installation. Individual detonations are limited to 750 lbs net explosive weight. Substation siting should consider ground and airwave vibration as well as dust and particulates generated from these detonations. The Tooele Army Depot believes that these operational conditions may impact the reliability of the substation in its present location.

Questions concerning these comments may be directed to:

Sheila Lopez
Master Planner
Tooele Army Depot
SJMTE-80M
435.833.2124

Classification: UNCLASSIFIED
Caveats: NONE

The Tooele Army Depot's current activities related to detonating old explosives in the southwest corner of the Depot is approximately 2 miles away from the proposed location of the future Limber Substation. A Tooele Army Depot study was conducted in 1996 to gauge the impact on the city of Grantsville, which is 7 miles to the north. The study concluded that there would be minimal to no impact due to ground motions on the city. (Report dated December 3, 1996, Open Burn/Open Detonation Risk Assessment Ground Motion and Related Effects Study - prepared for the Tooele County Health Department by the Tooele Army Depot).

A major concern would be effects on relays or other instruments at the Limber Substation that are sensitive to vibration and can trip the substation off line. Substations typically do not have vibration-sensitive equipment. The new substation will have solid-state equipment, which is not as sensitive to vibration as electromechanical instruments.

Structural damage from detonation is not likely. The intensity of a vibration is usually expressed in terms of displacement, velocity, or acceleration. In a study conducted by Black & Veatch Corporation for the project, the potential for damage was quantified by reviewing particle velocity data and determining what level of particle velocity needed to crack a plaster wall. It takes a particle velocity of 2 inches per second (ips) to potentially crack a plaster wall. It is likely that all of the equipment in the substation could withstand particle velocities of 4 inches per second without structural damage. A person can feel a particle velocity of 0.02 ips. It takes a vibration level 100 times higher to approach the threshold of structural damage for residential construction and 200 times higher for the threshold of structural damage for a substation.

Vibrations attenuate exponentially with distance from the blast. The Tooele Army Depot report indicated that the test program detonated between 400 and 1,000 pounds of explosives. At 2 miles, the predicted particle velocity for a 1,000 pound detonations confined in the ground would be about 0.01 ips. These are above-ground detonations, so the ground vibration will be less.

Potential dust and particulate matter from blasting operations was also reviewed as part of the substation site analysis. Based on the information from Tooele Army Depot, blasting operations are conducted when the wind direction is blowing to the north. The substation site is located 2 miles to the west of the blast area; therefore, the potential for dust and particulate matter to settle on substation equipment is very low and does not pose any maintenance or operation concerns.

1A

1A

RESPONSE(S)

COMMENT(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8

1595 Wynkoop Street
DENVER, CO 80202-1129
Phone 800-227-8917
<http://www.epa.gov/region08>



Ref: 8EPR-N

JUL 30 2009

Bureau of Land Management
Salt Lake Field Office
Attention: Mike Nelson
2370 South 2300 West
Salt Lake City, UT 84119

Bureau of Land Management
Fillmore Field Office
Attention: Clara Stevens
35 East 500 North
Fillmore, Utah 84631

Re: Comments on the Mona to Oquirrh
Transmission Corridor Project Draft
Environmental Impact Statement
CEQ # 20090152

Dear Mr. Nelson and Ms. Stevens:

The U.S. Environmental Protection Agency (EPA) Region 8 has reviewed the Bureau of Land Management's (BLM) Draft Environmental Impact Statement (DEIS) for the Mona to Oquirrh Transmission Corridor Project and Draft Pony Express Resource Management Plan Amendment. Our comments are provided for your consideration pursuant to our responsibilities and authority under Section 102(2)(C) of the National Environmental Policy Act (NEPA), 42 U.S.C. Section 4332(2)(C), and Section 309 of the Clean Air Act, 42 U.S.C. Section 7609. It is EPA's responsibility to provide an independent review and evaluation of the potential environmental impacts of this project, which includes a rating of the environmental impact of the proposed action and the adequacy of the NEPA document.

In accordance with our policies and procedures for reviews under NEPA and Section 309 of the Clean Air Act, EPA has rated this DEIS as "Environmental Concerns - Insufficient Information" (EC-2). Our environmental concerns are due to anticipated wetland impacts and the potential for disturbing hazardous waste sites. Additional information regarding wetland impacts, selection of the preferred alternative, and air quality impacts to designated nonattainment areas is needed to ensure that environmental effects are properly evaluated in accordance with NEPA. A copy of EPA's rating criteria is attached.

Additional information has been added to the Final EIS. See responses to Comments 2A-O that follow.

2A-O

COMMENT(S)

RESPONSE(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

PROJECT BACKGROUND

Rocky Mountain Power (a division of PacifiCorp) proposes to construct, operate, maintain, and decommission a double-circuit 500/345 kilovolt (kV) transmission line in northern Utah. The project includes approximately 141 miles of new transmission (in the preferred alternative) and two new substations. Development will occur in Juab, Tooele, West Jordan, and Salt Lake Counties. Included in the project is a BLM Salt Lake Field Office Pony Express Resource Management Plan Amendment for a utility corridor wide enough to accommodate a second future double-circuit 500 kV line when needed. BLM evaluated a total of 14 transmission corridor alternatives, with the corridor divided into three sections, as well as a single location for each proposed substation. A no action alternative, corresponding to no increase in transmission capability, was evaluated as well. A preferred alternative was identified by BLM for each of the three proposed sections, which in two of the three was different from the Rocky Mountain Power proposed alternative.

EPA CONCERNS

EPA has reviewed the DEIS and has four primary concerns which are highlighted in this letter: wetland impacts, range of alternatives, impacts to air quality, and hazardous waste sites. Additional information pertaining to our review of the project is found in the enclosed Detailed Comments.

Wetland Impacts

The proposed transmission corridor from the Limber Substation to the Salt Lake City Terminal Substation travels along the southern edge of the Great Salt Lake. The DEIS identifies 11.5 miles of high impact associated with wetland communities for Preferred Alternative H in this area. EPA understands that this impact quantification is based on a 2-mile-wide study corridor (1 mile on either side of the assumed centerline) and that wetland impacts may be overestimated due to the complexity of wetland-upland habitat in the area. We are concerned that the format of using miles of potential impact in the DEIS does not provide enough information to assess the impacts to wetland resources along the alternative corridors analyzed. To more definitively determine the actual scale of potential wetland loss, a better assessment of wetland occurrence in the proposed transmission corridor is needed.

2A

In addition to improved information on wetland scale, EPA believes the nature of wetlands in the proposed corridor should be characterized more completely. We recommend the document include a more detailed analysis of potential wetland impacts, possibly by analyzing the wetlands as a separate resource rather than including the wetlands analysis under the broad category of biological resources. A comprehensive analysis of impacts should also provide information on wetland functions and values using functional assessment models recommended by the State of Utah Department of Environmental Quality, such as the Utah Wetland Ambient Assessment Method. In conjunction with a functional analysis, we also recommend that the applicant provide an estimate of acres impacted. The acreage estimate should include typical footprint areas for the various transmission towers described in the DEIS as well as anticipated new access roads or spurs or improvement to existing roads.

2B

2A

The analysis of large transmission line projects presents some unique challenges. Typically, as is the case for the Project, the NEPA impact assessment and alternatives comparison processes are conducted before the completion of both formal wetlands delineations and final engineering design of the transmission lines and access roads. The extent of wetlands is derived from secondary data such as existing wetland reports, NWI mapping, GAP land cover data, and aerial photography. Impact assessment and alternatives comparison is based on preliminary engineering data.

The “miles crossed” metric is commonly used in the NEPA process for large transmission line projects. This metric represents an index of potential wetlands impacts, as the potential for adverse impacts is generally related to the amount of wetlands crossed. While not providing data on the specific amount of wetlands disturbance, the methodology does facilitate the relative comparison of alternative routes. In response to EPA’s comments, estimated acreages of permanent and temporary wetlands disturbance have been included in Section 4.2.3.4.

Upon completion of the NEPA process and selection of a preferred alternative, the transmission lines and associated access roads will be designed and formal wetland delineations will be conducted. Locations of individual structures and access roads will be compared to wetland areas, and several measures will be taken during construction and maintenance to minimize disturbance of jurisdictional wetlands. Structures and access roads will be located to the extent feasible to minimize permanent disturbance of wetlands. Where avoidance is not practicable, temporary access roads will be graded and then rehabilitated after construction is completed. Other mitigation measures, such as helicopter construction, will be evaluated on a case-by-case basis at specific locations. Two meetings have been held with the USACE-Utah Regulatory Office to discuss wetland issues associated with the Project. Agency staff has agreed with the strategy outlined above regarding delineations and reports, impact analysis, and the implementation of avoidance and mitigation measures.

2B

Detailed information on the nature of wetlands in the study corridors, including specific wetland types and wetland functions, will be compiled when formal delineations are completed. The Draft EIS does contain descriptions of the various wetland types that occur in the study corridors based upon information contained in the Tooele SAMP and GAP data and was identified in Section 3.2.3.2. Additional text has been added to the Final EIS to further clarify the definition of playa wetlands.

In response to EPA’s comments, estimated acreages of permanent and temporary wetland disturbance have been included in the Final EIS, Section 4.2.3.4.

COMMENT(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

A comprehensive assessment of wetland impacts will enable a more detailed discussion of wetland mitigation measures. While we are pleased to see the list of seven selective mitigation measures that can be implemented when wetlands cannot be avoided, we believe a stronger commitment is needed in the EIS. Mitigation measures that include helicopter placement of towers and avoidance of sensitive features through access road placement will have a significant effect on the extent of wetland impacts. Potential utilization of structures already in place within the 138 kV transmission line corridor along the southern edge of Great Salt Lake will also alter ultimate impacts to wetlands from the proposed new transmission. A description of where and how the identified selective mitigation measures, or other anticipated location-specific measures, will be used is a necessary piece of a complete wetland impact assessment for a project of this type.

2C

The DEIS indicates that a permit for discharge of dredged or fill material into a watercourse will be sought from the U.S. Army Corps of Engineers. The guidelines of the Clean Water Act require that a permit applicant demonstrate that the least environmentally damaging practicable alternative (LEDPA) be selected. Only after providing the additional analyses and information described above can the BLM make an informed decision on the LEDPA in regard to wetlands.

2D

Range of Alternatives

EPA is concerned that BLM's Preferred Alternative may impact more wetlands than other reasonably available alternatives and we recommend additional information be included in the Final EIS. As stated in the DEIS, BLM's primary objective in selecting a Preferred Alternative is to select an environmentally preferable route. However, the document does not contain explicit justification for the selection of Alternative I. Preference rankings for various impact criteria are provided in Table 2-9: Alternative Route Comparison, but a discussion of the relative significance of the criteria and their use in Preferred Alternative selection is not included.

2E

Based upon information presented in the DEIS, Alternative I appears to better meet BLM's stated objective of selecting the environmentally preferable alternative and should be selected over Alternative H as the Preferred Alternative for the Limber to Terminal section. Alternative I is better or equal to H for all criteria with the exception of cultural resources, visual resources, and land use according to preference rankings provided in Table 2-9; Alternative I is ranked as first preference for Wildlife and Vegetation (which includes wetlands), critical environmental resources. We also note that link 374/375 is generally preferred over link 385 for land use issues, as well as having less impact on wetlands. A modified alternative that matches Alternative I from Limber through link 370, then switches to the Alternative H corridor to Terminal, is likely to be the environmentally preferable alternative. Regardless of which route is selected, EPA recommends justification for the selection be provided in a more accessible format. The more detailed wetlands discussion requested in the above section will improve clarity of the justification.

2F

Air Quality

EPA is also concerned about the project's potential to impact air quality during construction. We believe that the construction of the proposed project could result in particulate

2G Page H-16

RESPONSE(S)

Formal wetland delineations will be completed along the preferred alternative route that is selected through the NEPA process. Upon concurrence of the delineation by the USACE, the locations of transmission line structures and access roads will be evaluated to determine where they are located within jurisdictional wetlands. At that time, structure and road locations will be modified to the extent feasible to minimize permanent disturbance of wetlands. Once these tasks are completed, a comprehensive review of wetlands will be conducted and location-specific mitigation measures will be developed. This information will be submitted to the USACE-Utah Regulatory Office, at which time it will be determined whether a Nationwide or Individual Permit is required for the project. The full range of required mitigation measures, which could potentially include helicopter construction and off-site mitigation, would also be determined at that time. Ultimately, the location-specific mitigation measures will be incorporated into the Plan of Development that is prepared for the project prior to the issuance of the grant of right-of-way and initiation of construction activities.

The existing 138kV transmission line structures along the southern edge of Great Salt Lake are not adequate to support the proposed 345kV transmission line. The proposed new line, which parallels the existing 138kV line, will require new, larger structures.

Depending upon the results of the formal wetland delineation and subsequent evaluation of project-related impacts, a permit for discharge of fill material into jurisdictional wetlands may be sought from the USACE. In accordance with NEPA guidelines, the BLM is required to assess and compare environmental impacts associated with the alternatives identified in the Draft EIS. Wetlands represent one of several different resources that must be evaluated for each alternative. While the Clean Water Act guidelines require that the least environmentally damaging practicable alternative be selected from a water resources standpoint, NEPA requires that the BLM consider all environmental resources when determining the environmentally preferred alternative.

Comment noted. See response to Comment 2B.

Impact criteria for key environmental resources such as biological resources, visual resources, land use and recreation, and cultural resources are discussed in Chapter 4 of the Draft EIS, along with an explanation of significance criteria.

The justification of the preferred alternative was included in the Draft EIS, Section 2.9.1.

COMMENT(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

Additional information related to the potential air quality impacts of the project has been added to the Final EIS, Section 4.2.1 and 4.5.3.1. This includes a quantification of emissions and Conformity Compliance Analysis with the State Implementation Plan.

RESPONSE(S)

2G

matter (PM10) emissions of concern for Salt Lake and Utah Counties, both identified as nonattainment with EPA's National Ambient Air Quality Standards (NAAQS) for PM10. The DEIS should include a quantification of emissions and determination of potential air quality impacts of the project. Our specific recommendations for avoiding potential air quality impacts are provided in the enclosed Detailed Comments.

2G

Hazardous Waste Sites

In addition, EPA is concerned that the proposed transmission line will cross the International Smelting and Refining Superfund site, where construction has the potential to disturb remedial structures. Where work will occur on Superfund sites that are listed on the National Priorities List, such as the International Smelting and Refining site, the proponent must seek prior approval from EPA. Additional information should be included in the DEIS to ensure that the proposed action will comply with all specific site restrictions and prohibitions as well as laws and regulations for superfund sites. Our specific recommendations for avoiding potential impacts related to the Superfund site are provided in the enclosed Detailed Comments.

2H

Additional information regarding the Pine Canyon Conservation Area and EPA recommendations regarding the superfund site have been incorporated into the Final EIS, Sections 3.2.9.10 and 3.2.9.11.

2H

Thank you for the opportunity to comment on this DEIS. We hope that our request for a more detailed wetland assessment and suggestion for improved explanation of the selection process for the Preferred Alternative and will be of value to BLM in preparing the Final EIS. We also look forward to more complete disclosure of potential impacts to air quality and capped waste sites. If you have any questions on the comments provided in this letter, please contact me at 303-312-6004, or you may contact Molly Brodin of my staff at 303-312-6577.

Sincerely,



Larry Svoboda
Director, NEPA Program
Office of Ecosystems Protection and Remediation

Enclosures: Detailed Comments
EPA's Rating System Criteria

- cc: Brent Truskowski, EPA (e-mail)
- Erna Waterman, EPA (e-mail)
- Kenneth Distler, EPA (e-mail)
- Lorraine Ross, EPA (e-mail)



RESPONSE(S)

COMMENT(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

EPA'S DETAILED COMMENTS FOR THE MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT DEIS

Air Quality

Air Quality was discussed in the DEIS in general terms. Existing air quality and potential for emissions during construction in the project area were cursorily compared with present nonattainment status, for various pollutants, in three surrounding counties. No attempt was made to quantify emissions or determine air quality impacts from the project. EPA believes that the construction of approximately 140 miles of transmission line, 128 miles of access roads, and two substations could result in PM10 emissions of concern for Salt Lake and Utah Counties, both identified as nonattainment with National Ambient Air Quality Standards (NAAQS) for PM10. We suggest the following four steps be taken in preparation of the Final EIS to ensure that unforeseen PM10 emissions do not deteriorate air quality:

- 1) A summary of existing ambient air conditions from monitoring sites located nearby should be included in the EIS to complete section 3.2.1.2. Affected Environment, Air Quality. Existing data can be obtained by contacting the Utah Department of Environment Quality, Division of Air Quality, or found at the following four web locations:

2I

- <http://www.epa.gov/air/data/index.html>
- <http://www.epa.gov/tn/airs/aqsdatamart/>
- <http://www2.nature.nps.gov/air/monitoring/ads/adsreport.cfm>
- <http://vista.cira.colostate.edu/views/>

Comment noted and information has been added to the Final EIS, Section 3.2.1.2.

2I

- 2) The DEIS described the emissions from the project in very general terms, specific detail, such as emission rates that may affect air quality, were not included in the document. There was also no discussion of type and volume of support vehicular traffic, nonroad construction equipment, or fugitive PM10 emissions. For full disclosure, EPA anticipates a specific accounting of all air emissions for the project in the EIS. Because this project is primarily construction related, particular attention should be placed on PM10 emissions, including fugitive emissions, and associated control strategies.

2J

Comment noted. Additional information has been added to the Final EIS, Sections 3.2.1.2 and 4.2.1.

2J

- 3) The Draft EIS does not address General Conformity requirements pursuant to the Clean Air Act (CAA). While not required by NEPA to be included in the EIS, the CAA requires that the BLM conduct a general conformity analysis for any project emissions occurring in an area designated as nonattainment or maintenance for the NAAQS before finalizing an approval of this project. The CAA states that in such areas, a determination must be made that the emissions (either direct or indirect) from a federal action will not exceed a *de minimis* threshold level measured in tons per year for the criteria pollutant of concern. If the action exceeds the *de minimis* level, then a conformity determination is required to document how the federal action will affect implementation of the State Implementation Plan (SIP) to reach attainment.

2K

Additional information has been added to the Final EIS, Sections 3.2.1.2 and 4.2.1.2, to address the CAA Conformity Analysis.

2K

COMMENT(S)

RESPONSE(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

4) Projects conducted in the Utah nonattainment and maintenance areas for PM10 must meet the requirements stipulated in Utah Administrative Code (UAC) 307-309 Nonattainment and Maintenance Areas for PM10: Fugitive Emissions and Fugitive Dust. UAC 307-309 has opacity limits for fugitive emissions including stationary and mobile sources as well as monitoring provisions to ensure activities do not adversely impact air quality. UAC 307-309 also has provisions for a fugitive Dust Control Plan that should be submitted to the State of Utah 30 days after the source becomes subject to R307-309. The project Dust Control Plan provisions should be summarized in the EIS.

2L

A Dust Control Plan is contained within the Plan of Development for the project. Dust control permits will be obtained from the Utah DEQ prior to initiation of construction activities and dust control monitoring would be performed during construction.

2L

Hazardous Waste Sites

The Preferred Alternative will cross 1.4 miles of the International Smelting and Refining Superfund Site. While this site has been identified in the DEIS as being known as the "Carr Fork Reclamation and Wildlife Management Area," it is correctly specified as the "Pine Canyon Conservation Area" under Superfund. The site contains areas of capped waste, and there are restrictions that prevent digging into these areas. It is critical that the proposed action comply with all laws and regulations regarding superfund sites, as well as any specific use restrictions and prohibitions on land within the Pine Canyon Conservation Area. Importantly, where work will occur on Superfund sites listed on the National Priorities List, such as the International Smelting and Refining Superfund Site, the proponent must seek prior approval from EPA. The EPA contact for this site is Erna Waterman; she can be reached at 303-312-6762.

2M

We suggest, at a minimum, that the following language be added to the EIS to adequately document commitment to avoiding impacts to the superfund site:

2M

Text recommended by the EPA has been added to the Final EIS in Sections 1.7 and 1.9. EPA staff was contacted in September 2009 to review the approval process for the project to cross the Pine Canyon Conservation Area. Additional discussions also occurred in October 2009 with UDWR, who administers the conservation easement and manages the Carr Fork WMA.

- 1) Add the following two lines to Table 1-2 Major Federal Authorizing Laws, Regulations, and Guidelines:

Law and Regulation	Reference
Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)	42 U.S.C. §§ 9601 - 9675
Resource Conservation and Recovery Act (RCRA)	42 U.S.C. §§ 6901 - 6992k

- 2) Add the following line to Table 1-3 Summary of Potential Major Federal, State, and Local Permits or Licenses Required and Other Environmental Review Requirements for Transmission Line Construction and Operation:

RESPONSE(S)

COMMENT(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

Issue	Action Requiring Permit, Approval, or Review	Agency	Permit, License, Compliance, or Review	Relevant Laws and Regulations
Ground disturbance and water quality degradation	Construction across a Superfund site	EPA	Agreement or order on consent with EPA	CERCLA (42 U.S.C. §§ 9601-9675)

3) Add the following language to Table 2-5 Typical Best Management Practices:

“Where work will occur on Superfund sites listed on the NPL, proponent must seek prior approval from EPA. Work on contaminated sites must avoid remedial structures (capped areas, treatment or monitoring wells, etc.) and workers must use adequate worker protection measures for working in contaminated areas.”

4) Add the following italicized language to Table 2-6 Selective Mitigation Measures, #7:

First box: Structures and access roads will be placed so as to avoid sensitive features including, but not limited to, wetlands, riparian areas, water courses, hazardous substance remediation and cultural sites. Avoidance measures may include selective tower placement, spanning sensitive features, or realigning access routes. Within the limits of standard tower design, structures will be located as to allow conductors to clearly span identified sensitive features.

Last box: Flexibility in the placement of towers allows for sensitive features to be avoided. Realigning the towers along a route or realigning the route can result in avoiding or minimizing direct impacts on resources such as cultural and biological resources, and land uses such as agriculture, parks, preservation, hazardous substance remediation and recreation areas.

5) Add the following italicized language to the bullet on Page 3-81 under “Special Management Areas.”

Carr Fork Reclamation and Wildlife Management Area – The WMA is approximately 3,599 acres and is located on the west side of the Oquirrh Mountains in Tooele County, just northeast of Tooele City. The Atlantic Richfield Company donated a conservation easement for the property to the UDWR. The UDWR manages the property for the benefit of wildlife. The property is also the site of the International Smelting and Refining superfund site which contains a capped waste repository and is subject to land use restrictions.

(Note: The site should also be identified as Pine Canyon Conservation Area as described above.)

6) Add the following italicized language to the bullet on Page 3-83 under “EPA National

COMMENT(S)

RESPONSE(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

Priorities List:

International Smelting and Refining – The superfund site is located approximately 2 miles northeast of Tooele City and encompasses about 1,200 acres. Past copper smelting and lead-zinc recovery operations have resulted in the presence of arsenic, cadmium, copper, lead, mercury, and zinc in the soils, tailings, and slag. *There is a capped waste repository on-site and the site is subject to land use restrictions.* Seventeen residential properties have been cleaned up, due to high levels of lead. The site is now known as the Carr Fork Reclamation and WMA and is managed by the UDWR.

2M

(Note: The site should also be identified as Pine Canyon Conservation Area as described above.)

7) In Table 4-7 Summary of Mitigation Measures and Impacts, for Alternatives D, E1, and E2, add "7" to the list in the box of "Selective Mitigation Measures" (in coordination with change in #4, above).

SF₆

During scoping, EPA suggested that BLM address the proposed use of sulfur hexafluoride (SF₆) in electrical equipment for the project and discuss efforts to reduce SF₆ emissions. We thank BLM for the information on proposed project SF₆ use in the DEIS and commend Rocky Mountain Power for being a member of EPA's voluntary partnership to reduce SF₆ emissions. However, we recommend providing additional detail on specific mitigation measures to be employed to ensure complete documentation of SF₆ emission reduction efforts. This detail could be provided in a SF₆ Handling and Use Policy as an appendix to the FEIS.

2N

Water Resources

The DEIS indicates that the Preferred Alternative will cross multiple perennial streams and small floodplains associated with ephemeral drainages. We are pleased to see that BLM intends to mitigate effects to surface water features by limiting the construction of roads in the vicinity of streams and spanning sensitive features. However, EPA believes additional detail on planned mitigation efforts is necessary to ensure adequate protection of water resources.

We recommend that BLM further specify where and how mitigation for water resource impacts will be implemented. This additional detail should include the criteria that will be used to determine where it will be necessary to limit road construction or span a sensitive area, as well as the means by which such avoidance will be accomplished. Because complete avoidance of water resources may not be possible, especially for access roads, additional mitigation measures should be identified for use in case of stream bank disturbance. These measures should include methods for sediment and erosion control.

2O Page H-21

As part of their voluntary partnership with the EPA, the Project Proponent has agreed to the measures listed in Section 4.4.1.1 of the Draft EIS.

2N

Handling and material storage procedures for SF₆ have been added to the Plan of Development as an appendix.

The BLM's Preferred Alternative will cross small perennial streams and several narrow, ephemeral drainages. As stated in the Draft EIS, these waterways will be protected by limiting the construction of roads in the vicinity of streams and designing the transmission lines to span these features. The Draft EIS also identifies numerous mitigation measures that will be implemented to minimize the potential erosion and sedimentation effects on surface water features.

2O

The Draft EIS included standard and selective mitigation measures to reduce impacts on water resources, including limiting access and spanning sensitive water bodies. Prior to the issuance of a right-of-way grant and initiation of construction, a detailed Erosion Control Plan (including these and other applicable mitigation measures) will be developed for the preferred route as part of the Plan of Development. This Plan will be location-specific and will include a detailed presentation of the mitigation measures to be implemented.

RESPONSE(S)

COMMENT(S)

2 U.S. ENVIRONMENTAL PROTECTION AGENCY (continued)

U.S. Environmental Protection Agency Rating System for Draft Environmental Impact Statements

Definitions and Follow-Up Action*

Environmental Impact of the Action

LO -- Lack of Objections: The Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC -- Environmental Concerns: The EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO -- Environmental Objections: The EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the noaction alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU -- Environmentally Unsatisfactory: The EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 -- Adequate: EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 -- Insufficient Information: The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new, reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 -- Inadequate: EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and/or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

* From EPA Manual 1640 Policy and Procedures for the Review of Federal Actions Impacting the Environment February, 1987.

State Agencies

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RESPONSE(S)

COMMENT(S)

3 PUBLIC LANDS POLICY COORDINATION OFFICE



State of Utah

JON M. HUNTSMAN, JR.
Governor

GARY R. HERBERT
Lieutenant Governor

Office of the Governor
PUBLIC LANDS POLICY COORDINATION

JOHN HARJA
Director

August 12, 2009

Bureau of Land Management
Salt Lake Field Office
ATTN: Mike Nelson
2370 S. 2300 W.
Salt Lake City, UT 84119

Subject: Mona to Oquirrh Transmission Corridor Draft EIS

Dear Mr. Nelson:

The State of Utah, through the Public Lands Policy Coordination Office (PLPCO), has reviewed this project. PLPCO makes use of the Resource Development Coordinating Committee (RDCC) for state agency review of activities affecting state and public lands throughout Utah. The RDCC includes representatives from the state agencies that are generally involved or impacted by public lands management. Utah Code (63J-4-501 *et seq.*) instructs the RDCC to coordinate the review of technical and policy actions that may affect the physical resources of the state and facilitate the exchange of information on those actions among federal, state, and local government agencies.

The state does not have serious concerns with the substance of the proposed project; however, it finds that the proposed amendments for the Pony Express Resource Management Plan is not consistent with state policy until the provisions of Section 2815 of the National Defense Authorization Act of Fiscal Year 2000 are satisfied. In addition, the School and Institutional Trust Lands Administration provides the following comments:

Text has been added in the Final EIS, Section 1.8.1 to address this comment.

3A

3A

School and Institutional Trust Lands Administration

General Comments

The School and Institutional Trust Lands Administration (SITLA) is generally supportive of the Project and Draft EIS document. SITLA generally concurs with the proposed alignment and

COMMENT(S)

RESPONSE(S)

3 PUBLIC LANDS POLICY COORDINATION OFFICE (continued)

proposed alternatives for the transmission corridor; notable exceptions and objections to proposed alignment locations, which negatively impact SITLA's land-use plans, are described below.

Specific Comments

3B • SITLA urges Rocky Mountain Power (RMP) to align the transmission corridor to cross SITLA lands in a north-south alignment since SITLA's lands typically have rectilinear north-south and east-west boundaries. Two examples of suggested re-alignment along a north-south orientation are shown conceptually in Exhibit "A" for the following SITLA lands:
 ○ Section 27, T3S, R6W SLB&M (RMP link node 335), and
 ○ Sections 4 and 9, T3S, R6W SLB&M (RMP link node 350).

Comment noted. The suggested realignments along north-south and east-west boundaries were reviewed; however, based on the long, linear nature of a utility such as a transmission line, the Project Proponent has determined it is not cost effective or design efficient to avoid every parcel of SITLA lands and realign the route. Where possible, adjustments will be made. SITLA will be compensated for lands crossed as part of the right-of-way acquisition process.

3C • The non-rectilinear alignment of the transmission corridor chops some SITLA's lands into odd-shaped, often unusable small parcels, which harms the long-term utility of the residual property. SITLA proposes that the transmission corridor be located close enough to the corner of a SITLA parcel to not leave an unencumbered, odd-shaped small parcel on the following SITLA lands:
 ○ NE corner of Section 36, T7S, R5W, SLB&M (RMP link node 90),
 ○ SW corner of Section 2, T7S, R5W, SLB&M (RMP link node 90),
 ○ NE corner of Section 28, TSS, R4W, SLB&M (RMP link node 9S),
 ○ SW corner of Section 33, T5S, R5W, SLB&M (RMP link node IOS),
 ○ NW corner of Section 36, T3S, R4W, SLB&M (RMP link node 220), and
 ○ SW corner of Section 36, T3S, R4W, SLB&M (RMP link node 215).

Comment noted. See response to Comment 3B.

3D • SITLA objects to locating the transmission corridor across SITLA's St. John Block property ("Block"). The visual impact of the transmission corridor, if located on the Block, will significantly and negatively impact the future residential development potential of the Block. The proposed alignment and alternative alignment cross the Block in the following locations:
 ○ Sections 6 and 7, TSS, R5W, SLB&M (RMP link nodes IOS/ISO),
 ○ Sections 5 and 6, TSS, R5W, SLB&M (RMP link node 140), and
 ○ Section 36, T4S, R6W, SLB&M (RMP link node 150).

The suggested route alignment to the east on private property was considered; however, this location was not preferred as it would locate the line closer to existing residences in the St. John's and South Mountain areas, as well as impact center-pivot agricultural operations. The Project Proponent has adjusted the route to the west along Mormon Trail Road in a more north-south alignment to minimize crossing SITLA lands (see Figure 2-3 and Appendix C, Map C-9). The visual effects of transmission lines are based on current land uses. Visual impacts on existing land uses were analyzed in the Draft EIS (Section 4.2.7.5). As of October 2009, there were no conceptual residential master plans for the property on file with Tooele County Planning and Zoning Department.

3E • SITLA acknowledges that the transmission corridor must pass through the Rush Valley to reach the Limber Substation location. In Exhibit "B", SITLA proposes alternative alignment concepts in the lowest elevation areas of Rush Valley.

SITLA's Exhibit B submitted to the BLM contained information related to alignment changes in the St. John Block of Rush Valley. See response to Comment 3D.

3F • SITLA objects to locating the transmission corridor across SITLA's parcel in the Oquirrh Mountains, specifically Section 16, T3S, R3W, SLB&M (RMP link node 226). The proposed alignment will significantly and negatively impact the future mineral-resource development potential of the property.

BLM has reviewed SITLA's request to realign the route affecting the SITLA parcel in the Oquirrh Mountains; however, this change is not preferred, as it would require construction in an area with severe terrain and would conflict with existing Kennecott mining operations in Dry Fork Canyon.

RESPONSE(S)

COMMENT(S)

3 PUBLIC LANDS POLICY COORDINATION OFFICE (continued)

The State of Utah appreciates the opportunity to review this proposal and we look forward to working with you on future projects. Please direct any other written questions regarding this correspondence to the Resource Development Coordinating Committee at the address below, or call Judy Edwards at (801) 537-9023.

Sincerely,

John Harja
Director

Enclosures: 2

cc: Kevin Carter, School and Institutional Trust Lands Administration

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Local Agencies

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RESPONSE(S)

COMMENT(S)

4 TOOELE COUNTY

[NCline@co.tooele.](mailto:NCline@co.tooele.ut.us)

ut.us

06/09/2009 05:52

PM

To

[<UT_M20TL_EIS@blm.gov>](mailto:UT_M20TL_EIS@blm.gov)

cc

Subject

Mona to Oquirrh transmission line.

The route proposed by Rocky Mount Power from Mona/current creek to Limber, then on to Terminal I believe to be the best option proposed in the Draft EIS. If I were to change anything along that route, it would be to put the substation up near SR-138 rather than Limber. Having said that, as a Tooele resident it would be my preference to have the line that runs to the Oquirrh substation routed south from SR-201 in West Valley. There is already a transmission line running through that area with Rio Tinto and this would be more compatible and less intrusive than a line that runs from Limber to Oquirrh. Please include my comments as part of the comments on the draft EIS.

4A

Thank you,

Nicole L. Cline, AICP

Tooele County Economic Development Director and Grant Administrator

47 South Main Street, Tooele, Utah 84074 office (435) 843-3179 fax (435) 843-4794 cell (435) 830-0653

Comment and route preference noted. The Draft EIS documented the analysis of 12 different substation locations for the future Limber substation site. The Project Proponent has selected the proposed site (N3) based on substation and transmission line siting criteria that best meets their stated purpose and need for the project.

4A

BLM conducted an environmental analysis of the proposed substation site and determined there are no significant environmental impacts associated with the site.

Comment noted regarding alternative route suggested. This route was considered and analyzed in the Draft EIS as Alternative G.

RESPONSE(S)

COMMENT(S)

5 SOUTH JORDAN CITY

"Jeremy Nielson"
 <jnie1son@sjc.uta
 h.gov>
 06/18/2009 03:59
 PM

To
 <UT_M20TL_EIS@blm.gov>
 <UT_M20TL_EIS@blm.gov>
 cc
 "Fisher, Rod"
 <Rod.Fisher@PacifiCorp.com>, "Don
 Tingey" <DTingey@sjc.utah.gov>,
 "Brad Klavano"
 <BKlavano@sjc.utah.gov>

Subject
 Comments on DEIS from South Jordan
 City

The City of South Jordan is opposed to the location of Link 285 (along Bingham Creek). The City and Kennecott Land are planning a future park along Bingham Creek. This area has historically served as a natural open space area and it is the City's intent to master plan the area for both passive and active park spaces. Attached is the latest draft of the master plan for the area. The transmission lines would impact the possible use and aesthetic value of the park. The City is in support of Link 265 (along Old Bingham Highway).

5A

Thank you,

Jeremy Nielson, P.E.
 Deputy City Engineer
 South Jordan City
 Phone: (801) 254-3742

Comment and route preference noted. The Draft EIS identified and addressed resources associated with the Bingham Creek area and future park associated with Alternatives E1 and F1 in the following sections:

- Earth Resources – 3.2.2.3
- Water Resources – 3.2.2.5
- Biological Resources – 3.2.3.3
- Cultural Resources – 3.2.5.4
- Paleontological Resources – 3.2.6.4
- Visual Resources – 3.2.7.8
- Land Use and Recreation Resources – 3.2.9.11

Recreation and visual resource impacts on the Bingham Creek area and future park/open space were analyzed in the Draft EIS, Sections 4.2.9.3 and 4.2.7.5.

BLM reviewed the latest draft of the master plan for the area. Additionally, two meetings occurred with the City of South Jordan on July 28, 2009, and July 30, 2009. As a result of these meetings, and coordination with West Jordan City, the Project Proponent changed their proposed route to Link 265 in the Final EIS.

RESPONSE(S)

COMMENT(S)

6 SALT LAKE COUNTY

"Lee Colvin"
 <LColvin@slco.org
 >
 06/17/2009 08:25
 AM
 To
 <UT.M20TL.EIS@slm.gov>
 cc
 Subject
 Preferred route for Mona to Oquirrh
 Transmission Corridor

To Whom It May Concern:

The Salt Lake County Real Estate Division has reviewed the routes proposed for the Mona to Oquirrh Transmission Corridor on maps provided by Ms. Buffi Morris of Rocky Mountain Power. Please note that Salt Lake County's preferred route is the one proposed by the BLM. The alternate route to the south crosses a portion of Salt Lake County's 2,500 acre open space preserve in Rose Canyon and Yellow Fork Canyon. It is Salt Lake County's desire to keep this open space preserve in its native and wild condition as nearly as possible, and a large electrical transmission line of the type proposed would severely and negatively impact the visual and physical landscape. Thank you for considering this important issue, and please place a high priority on bypassing the County's open space preserve.

Lee Colvin, Director
 Salt Lake County Real Estate Division
 801-468-2315

Comment and route preference noted. Impacts associated with effects on the open space area in Rose Canyon and Yellow Fork Canyon were included in Alternatives F1 and F2 in the following sections of the Draft EIS:

- Earth Resources – 3.2.2.3
- Water Resources – 3.2.2.5
- Biological Resources – 3.2.3.3
- Cultural Resources – 3.2.5.4
- Paleontological Resources – 3.2.6.4
- Visual Resources – 3.2.7.8
- Land Use and Recreation Resources – 3.2.9.11

Visual and recreation resource impacts on the open space area and potential mitigation measures were analyzed in Draft EIS, Sections 4.2.7.5 and 4.2.9.3.

6A

6A

RESPONSE(S)

COMMENT(S)

7 TOOELE COUNTY COMMISSION



Date: August 9, 2009
 To: Bureau of Land Management
 From: Tooele County Commission
 Subject: Mona to Oquirrh Transmission Line

We need additional power in Tooele County. Several lines are already at or near capacity. We want to bring in new industry and businesses to our county and this infrastructure is critical to accomplish this goal.

We would like the BLM and Rocky Mountain Power to locate the transmission lines in an area that causes the least amount of impact to our citizens. We are very opposed to the proposed route through the south and east benches of Tooele City. That route is much too close to homes and would adversely affect the aesthetics of the valley. Please do everything you can to put these lines as far away from residential areas as possible. We are also opposed to the proposed location of the Limber Substation as it is on critical spring grazing land of one of our citizens.

We also believe that the Pony Express Resource Management Plan should be amended to allow both the RMP lines and the UNEV pipeline projects to proceed. This would pave the way for other infrastructure to be allowed into the county. Again, this would allow for future growth and industry which is very important to us.

Thank you very much for your consideration in these matters.

Respectfully,

Tooele County Commission

Colleen Johnson
 Colleen Johnson
 Chairman

J. Bruce Clegg
 J. Bruce Clegg

Jerry Hurst
 Jerry Hurst

7A Proximity to homes, potential aesthetic effects on sensitive viewers, and proposed mitigation measures were considered as presented in Section 3.2.7.8 of the Draft EIS. Based on meetings between BLM, the Proponent, and Tooele County, the proposed has been adjusted to the degree possible in order to decrease proximity to residences along the southeast bench of Tooele City. Comment and route preference noted.

7B Impacts on grazing lands associated with the proposed Limber Substation site and mitigation measures to minimize these impacts were identified. in Sections 4.2.3.4, Biological Resources, and 4.2.9.3, Land Use and Recreation Resources, of the Draft EIS. As a means of mitigating impacts on grazing, private property owners will be compensated for transmission line easements and substation property acquisition by the Project Proponent as identified in Draft EIS Section 2.8.2.

7C Comment noted.

RESPONSE(S)

COMMENT(S)

8 CITY OF WEST JORDAN



City of West Jordan
 8000 South Redwood Road
 West Jordan, Utah 84088
 Building & Safety (801) 569-5060
 Planning & Zoning (801) 569-5060
 Engineering (801) 569-5070
 Fax (801) 569-5099

August 11, 2009

Mr. Rod Fisher, Community Relations
 Rocky Mountain Power
 201 South Main St. Suite 2300
 Salt Lake City, Utah 84111

RE: Mona to Oquirrh Transmission Corridor Project EIS

Dear Mr. Fisher:

Thank you for the opportunity to comment on the Draft EIS for Mona to Oquirrh Transmission Corridor Project. West Jordan is providing comments on Alternative Routes – Limber to Oquirrh; Figure 2-5, 2 of 2, as these are the proposed alternatives that have an impact to the long-range plan for West Jordan development.

Alternatives F1 and F2 would not be located within the corporate boundaries of West Jordan. Alternative F1 has the least impact to the City of West Jordan. Alternative F2 has the second least impact, with impacts to the shared right-of-way for Old Bingham Highway. This right-of-way is shared with the City of South Jordan. Jurisdictional boundaries and right-of-way maintenance are in the middle of the road, on the section line. With the discussion of the Old Bingham Highway corridor, as recommended below in this document, to locate the new 345 KV line on the south side of the right-of-way, there is no impact to the City for either F1 or F2 alternatives.

With respect to alternatives D, E1, E2, and G, West Jordan offers the following comments. After discussions with Rocky Mountain Power and South Jordan City personnel, the City of West Jordan believes the best interests of the residents of West Jordan and minimum disruption to municipal utility systems would be served by the following alignment selection details:

1. Preferred alignment – The best alternative would be E1 from the Tooele Valley to Old Bingham Highway (OBH), then west along the south side of OBH from near the west side of the new JWCD Reservoir Site (and future City reservoir site) inside the Salt Lake County jurisdiction and South Jordan City jurisdiction to the Oquirrh Substation. This alignment may require the relocation or re-circuiting of the privately owned 46 KV Kennecott Copper power line that is presently on the south side of OBH in order to make room for the double circuit 345 KV line (150 foot easement area, with some overhead onto OBH public right-of-way). Coordination with Rocky Mountain Power and South Jordan will be required for this alignment. The area between the corner of U-111 and OBH and the convergence of OBH and New Bingham Highway

8A

8A

The suggested route alignment and location north of Old Bingham Highway was considered and eliminated. This segment was a connector link between major alternative routes, and the route screening process that lead to its elimination is presented in Draft EIS, Section 2.6.2.2.

RESPONSE(S)

COMMENT(S)

8 CITY OF WEST JORDAN (continued)

Mr. Rod Fisher
August 11, 2009
Page 2

is not shown as a proposed alignment in any of the scenarios listed on the EIS, but is one of the best routes between alignment E1 and D. Rocky Mountain Power was open to the idea of using OBH in the "gap" area. The City of West Jordan has many existing and future utilities in place or planned on the north side, and Rocky Mountain Power also has an existing double circuit 138 KV line that prevents the placement of another power corridor on the north side of OBH. The future roadway expansion of OBH is also being limited by the current alignment of the 138 KV poles, causing some encroachment into the safety zone for the street. Curb and gutter placement was placed south of the desired location to meet the 18-inch clear zone required from face of curb. Therefore, any proposal to place the double circuit 345 KV on the north side of OBH must be resisted, if not outright denied a conditional use permit. There just is not another 150-foot easement area to give on the north side.

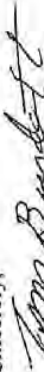
2. Secondary alignment – Due to the fact that the new 345 KV lines will not serve the planned substation at 8600 South and U-111, alternative D/E2 falls into a second tier alternative for the City. The alignment along OBH in this or other OBH alternatives must be on the south side of the right-of-way (South Jordan City) for reasons already mentioned in number 1. While this alignment does follow future City streets, it also crosses future residential and commercial areas that are in the City's General Plan. This alignment would cause difficulties for entrances and City street crossings passing under the alignment, and it would encumber area that is better served by other uses. There are also existing City utilities along this alignment (20-inch and 16-inch waterlines) and planned expansion of future utilities. The future width of 8600 South, U-111, and OBH must be planned for with any placement of poles along these alignments.

3. Least favored alignment – Alternative G is the least favored alternative. It has the greatest impact to the long range plan for development of the City of West Jordan in conjunction with the impacts as stated in number 2.

The City of West Jordan supports alternative E-1 with final approach along Old Bingham Highway. This preferred alignment includes the short segment parallel to existing rail road line section of E1 with the final approach to the Oquirrh Substation abutting the south side of Old Bingham Highway. We believe this alignment will preserve land values, avoid visual impacts, and be accomplished with minimal overall environmental impact, including wild life.

We appreciate you considering and including these comments with your evaluation of the DEIS and being included in the scoping of alternatives. We are available to answer any questions or clarify our comments as needed. Thank you for the opportunity to comment on this important project. We look forward to the release of the Final EIS.

Sincerely,



Tom Burdett, AICP

Director of Development

CC: Wendell Rigby, Public Works Director, West Jordan
Mickey Beaver, Customer and Community Regional Manager, Rocky Mountain Power
Bureau of Land Management

EPG

Comment and route preference noted. Issues associated with the Old Bingham Highway are addressed in the response to Comment 8A. Impacts on future residential and commercial areas, and mitigation measures to minimize impacts on these areas were addressed in Section 4.2.9 of the Draft EIS.

8B

COMMENT(S)

RESPONSE(S)

9 TOOELE COUNTY COMMISSION, TOOELE CITY, GRANTSVILLE CITY

September 21, 2009

Bureau of Land Management
Attn: Mike Nelson
2370 S. 2300 W.
Salt Lake City, UT 84119

RE: Mona to Oquirrh Transmission Line Project

Mr. Nelson,

Thank you for BLM's attention to this important project and your willingness to listen to our concerns and proposals. We also appreciate Rocky Mountain Power's facilitating dialog to resolve our differences. However, these meetings have not yet resulted in agreement with RMP's proposals. After considerable discussion and research by the Tooele Valley community, we come to the BLM expressing our concerns and common proposals to minimize the impact of this transmission line project. This letter represents the united efforts and consensus of governments and citizens from Tooele and Grantsville Cities as well as Tooele County for the unincorporated areas of Tooele Valley.

Therefore we present our proposals to the BLM along with our reasons and justification to garner your support:

1) We generally concur with RMP's proposed route between Mona and Terminal. However we propose transmission lines near Grantsville be limited in number and located as far west as possible.

This proposal avoids residents of Grantsville to the greatest extent.

2) We propose the site of the Limber Substation be relocated to northern Tooele Valley near I-80.

This reduces the impact to Grantsville to only one 500 kv line between Mona and Limber.

This proposal accommodates a better interconnection to the 500 kv grid serving the western United States. Although not a part of RMP's currently planned project, it is obvious that the Limber substation will connect to other 500 kv substations (such as the White Pine substation in eastern Nevada, or Midpoint, Cedar Hill or Populus substations in southern Idaho). Without this additional connection, Limber becomes the only 500 kv node for all of northern Utah and would be located on a dead end line. Furthermore, the western U.S. 500 kv grid has very little north-south interconnectivity inland from the west coast making a northern leg from Limber important to the grid itself. Energy corridors already exist that run along I-80 west out of Tooele Valley to accomplish this interconnection. With Limber located near I-80, connection to future 500 kv lines becomes convenient and of minimal impact.

This proposal improves the 345 kv grid serving northern Utah. The Limber to Territorial line is straddled by 12 to 17 miles having been replaced by the more efficient 500 kv line. Shorter lines between 345 kv substations result in lower impact and in higher transmission efficiency and reliability.

Comment and route preference noted. The Project Proponent revised the Project description in September 2009 (following distribution of the Draft EIS). The revised Project now includes only one single-circuit 500kV line (initially operated at 345kV) between Mona and Limber substations. Additional transmission lines are not anticipated between Mona and Limber substations within the foreseeable future by the Project Proponent.

The proposed route alignment is located approximately 0.3 miles northwest of the Grantsville City boundary and does not cross into the City limits.

9A

9A

Comment noted. See response to Comment 4A.

9B

9B

RESPONSE(S)

COMMENT(S)

9 TOOELE COUNTY COMMISSION, TOOELE CITY, GRANTSVILLE CITY (continued)

This proposal has a positive effect on the 138 kv grid serving Tooele County. U.S. Magnesium and ATI industrial operations at Rowley consume approximately as much power as the Tooele Valley. The existing Terminal to Rowley 138 kv line passes along I-80 through Tooele Valley and past our proposed Lumber location. When connected to Lumber, this line becomes a much shorter, more dependable and efficient Lumber to Rowley run. It also creates a 138 kv connection between Terminal and Lumber available to serve Tooele Valley WITHOUT ANY NEW LINE CONSTRUCTION. At minimal cost, service to Tooele Valley can be doubled in reliability and tripled in capacity.

9B

This proposal simplifies power distribution within Tooele Valley. With a more central location, distribution lines from Lumber to points within Tooele Valley are shorter and do not accumulate as they would to get around the Army Depot and Grantsville City in route from RMP's proposed site.

J) We propose the Lumber to Aquarth transmission line be routed to minimize impact to Tooele Valley's residents. This proposal concurs with Tooele City Mayor, Tooele City Council and The Citizens Committee of Tooele as well as the Tooele County Commission who are opposed to RMP's proposed route through or south or east of Tooele City and have been designated by the same officials and citizens as unacceptable having the greatest amount of negative impact on the greatest amount of citizens. We propose these routes be eliminated for those reasons and because they are no longer practical considering a northern location for the Lumber substation.

9C

Comment and route preference noted. The very high costs of construction (i.e., an additional 18 miles in length), risks associated with system reliability, and potential impacts to cultural and wetland resources were the reasons that this route was not preferred. This is presented in more detail in the evaluation of alternatives, including revised and additional alternatives in the Final EIS (Chapter 2).

We have discussed these and other proposals with RMP. We believe RMP has overstated the costs, risks and difficulties associated with them. Existing transmission lines, substations and a 300 ft tall cell tower in northern Tooele and Skull Valley's detrimental soil suitability. Our arguments here before the BLM are just as valid before the Public Service Commission. We call for a fair evaluation of the proposals by the BLM and a fair distribution of cost between RMP shareholders and customers.

We look forward to a formal meeting with the BLM to discuss our united Tooele Valley proposals at the earliest opportunity.

Sincerely,

Tooele County Commissioners

Colleen S. Johnson - Jerry Hunt
Colleen S. Johnson
Jeff Hunt
J. Bruce Clegg

RESPONSE(S)

COMMENT(S)

9 TOOELE COUNTY COMMISSION, TOOELE CITY, GRANTSVILLE CITY (continued)



Patrick Dunlavy,
Tooele City Mayor

Steve Pruden,
Tooele City Council Chairman

Byron Anderson
Grantsville City Mayor



Kaye Pratt

Tooele City Concerned Citizen's Group

James Vera

Glen Terry

Grantsville City Concerned Citizen's Group Representatives

cc: Rocky Mountain Power

cc: Utah Public Service Commission

RESPONSE(S)

COMMENT(S)
9 TOOELE COUNTY COMMISSION, TOOELE CITY, GRANTSVILLE CITY (continued)


Steve Probin,
Tooele City Mayor

Steve Probin,
Tooele City Council Chairman

Byron Anderson
Grantsville City Mayor

Brad Pratt
Kaya Pratt

Tooele City Concerned Citizens' Group

James Van

Glen Terry

Grantsville City Concerned Citizens' Group Representative

cc: Rocky Mountain Power

cc: Utah Public Service Commission

Special Interest Groups

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RESPONSE(S)

COMMENT(S)

10 THE ENSIGN GROUP

----- Forwarded by Mike Nelson/SLFO/UT/BLM/DOI on 06/30/2009 10:43 AM

"Randy Cassidy" <RCassidy@theensigngroup.com>
 To <brandon.smith@pacificorp.com>
 06/30/2009 08:54
 cc AM <rhidalgo@ufsw.com>, <jbrockwell@ufsw.com>,
 <crobinson@theensigngroup.com>, "Randy Cassidy (rcassidy@theensigngroup.com)"
 <RCassidy@theensigngroup.com>, <Mike_Nelson@blm.gov>, <rmnelson@ut.blm.gov>
 Subject Salt Point Commerce Center and Timpie Farms - RMP Mona to Oquirrh Alignments

Brandon, Thank you for taking the time to meet with Chris and me yesterday afternoon. It sounds as if, in principal, RMP doesn't have a particular heart-burn with our "revised" proposed alignments at Salt Pointe Commerce Center or Timpie Farms, if they don't hinder your ability to keep within your time table and work the adjustments into the BLM's EIS process.

With that in mind are you able to include our "revised" proposed alignments with your cultural/biological surveys that need to be completed prior to June 30th (today) or do we need to work with Mike Nelson in order to buy ourselves an extra week or two. Please let me know as I hope to speak with him later today. The best of "both" worlds as of today would be to complete the necessary surveys on BOTH alignments.

Randy

Randy Cassidy
 The Ensign Group
 P.O. Box 540478
 925 West 100 North Suite F
 North Salt Lake, UT 84054
RCassidy@theensigngroup.com
 Telephone: (801) 677-6400
 Facsimile: (801) 677-6416
 Cell: (801) 201-8272

(See attached file: Timpie Oquirrh To Mona-11of22.pdf)(See attached file: SPCC Oquirrh To Mona-12of22.pdf)(See attached file: SPCC Oquirrh To Mona-13of22.pdf)

The suggested re-alignments of the route (Links 352, 365, and 366) have been incorporated into the Final EIS, Figure 2-3. Cultural and biological surveys will be completed for the Project prior to the Record of Decision.

10A

10A

COMMENT(S)

11 OREGON CALIFORNIA TRAIL ASSOCIATION

Comments on the Mona-to-Oquirrh Transmission Line Project

The draft EIS document is a substantive and impressive study. However, I found several things lacking in its treatment of trail cultural resources (CR) which occasioned these and previous OCTA Crossroads comments. Following a meeting between some of our Utah Crossroads Chapter (hereinafter referred to as "Crossroads"), Oregon-California Trails Association (OCTA) leadership with Cindy Ledbetter, Environmental Specialist and Dale Earl, Archeologist of the BLM's Salt Lake Field office, we feel that our concerns have been addressed at that level and that if the following trail concerns and suggested remedies continue to be followed-up, the project should not present a significant danger to trail resources. This communication documents our concerns and suggested remedies.

Concerns

1. Reviewing the text and maps within the draft EIS, I found little said or recorded about the important trail resources the project would or could affect. Those resources include portions of a) the Hastings Cutoff of the National Historic California Trail, b) the National Pony Express Trail, c) the National Lincoln Highway route, and d) the nearby Southern Route of the California Trail. While this last trail does not currently enjoy National Trail status it has obvious potential for such and Crossroads has undertaken to highlight this appropriate, needed recognition.
2. While these nationally important historic travel routes deserve various protections, this need not extend to a failure to map them within an EIS document, as they are mapped in some detail in a number of public publications far more widely available than this draft EIS. Indeed, when reviewers such as I fail to see these important CRs not directly mentioned/identified in an EIS, we are only forced to conclude they have not been considered within the EIS process.
3. My other concern involved the partial and improper mapping of the Hasting Cutoff in one of the non-CR maps within the draft. This historic trail was incorrectly shown tracking in the area of Interstate 80, rather than along road 201, and the trail was incompletely shown within the project locality.

Remedies

1. Crossroads contacted very helpful BLM staff members to place with them additional Hastings Cutoff location information and to reinforce Crossroads' good working relationships with the BLM.
2. We requested that transmission line towers not be placed on the trail. Such necessary supports are better positioned at a safe and practical distance from the trail, particularly where the line crosses the trail. If construction access is needed near historic trail resources, care should be taken to avoid those sensitive trail traces. If these procedures are implemented, impacts upon the trail should be minimized and not be directly harmful to the trail.
3. Although the locations of the Southern Route of the California Trail is presently not well documented, the Mona, Utah area project work presently appears to be located north and west of sensitive trail resources. Private lands appear to contain these resources. Should future project work encounter possible trail resource, Crossroads would appreciate timely notification.

RESPONSE(S)

A PA, executed by the Project Proponent, BLM, SITLA, SHPO, and other interested parties, is in place that outlines the cultural resource management approach for the NEPA and Section 106 processes for the Project. In accordance with the PA, during the NEPA process an initial impact analysis was conducted using baseline data that consisted of Class I, Class II, and viewed inventories. The Class I data consisted solely of cultural resource sites that have been formally recorded on the State of Utah, Division of Antiquities, Intermountain Antiquities Computer System (IMACS) site form accepted by the Utah SHPO and that are on file at the SHPO, BLM SLFO, or BLM FFO. As such, cultural and historical sites that are known, but not formally documented, in the study area are not part of the baseline data that were analyzed. The PA stipulates that once a final alternative has been selected, an intensive level cultural resource study (Class III) will be conducted within the corridor to identify specific historic properties that would be adversely affected by the Project. During the Class III inventory, all historic trails, including those nationally recognized, located within the inventory corridor of the selected alternative will be documented on the State of Utah IMACS site form, evaluated for eligibility to the NRHP, and if necessary, provide recommendations for mitigation. The results of the Class III will be submitted in a separate cultural resources technical report that will fulfill the requirements of the Section 106 process.

While the specific location of cultural resources are not mapped in public documents, for the protection of cultural resources, mapping of these linear resources was provided at a very general level as a part of the visual resources assessment (Appendix C, Map C-8) in order to illustrate the location of sensitive viewers in the Project area. It is recognized that multiple linear historic cultural resources are known in the vicinity of the study area; however, as previously stated, cultural and historical sites that are known, but not formally documented within the study area are not part of the baseline data that were analyzed during the EIS. If these resources are encountered during the Class III inventory, they will be formally recorded at that time. Though several segments of the Hastings Cut-Off of the California National Historic Trail have been recorded in Tooele and Salt Lake counties, no portion of the trail is formally documented in the records of SHPO within the present study area. Segments of the Lincoln Highway and the Pony Express Trail have been documented within the study area and were included in the EIS analysis. To date, no specific information relating to the Southern Route of the California Trail has been identified. If such a trail segment exists, it would be included as part of the greater California National Historic Trail System and documented as such.

Segments of the Lincoln Highway and the Pony Express Trail have been documented within the study area and were included in the EIS analysis; however, maps specific to these locations are not provided in the document. Cultural resource site location data are considered sensitive information and as a result is not presented in the EIS.

Mitigation measures to reduce impacts on historical trails were included in the Draft EIS, Section 2.8.3 and Table 2-6.

11A

11B

11C

11A

11B

11C

RESPONSE(S)

COMMENT(S)

11 OREGON CALIFORNIA TRAIL ASSOCIATION (continued)

- 4. Crossroads commented upon both the Pony Express Trail and Lincoln Highway situations, recommending similar actions to those noted above. We also noted that contact with the Utah Historic Trails Consortium's would be a convenient path of agency contact to the state's other trail organizations. Normally, they meet once a month on the final Tuesday of the month at 1 PM at the Utah State Historical Society.

Final Comments

Crossroads endorses the existing project negotiation strategies embodied in such mandated mechanisms as the Section 106 consultation and public hearing processes. Substantive interaction with agencies like the BLM, are vital to the proper management of our many resources and needs. Being perhaps the largest historic trail organization in the State of Utah we at Crossroads carry a responsibility to represent those important interests and have enjoyed doing so on this occasion.

T. Michael Smith
 Preservation Officer, Crossroads Chapter
 Oregon California Trail Association (OCTA)
 5 July 2009
 rkologytms@aol.com

cc
 Utah SHPO
 Linda Turner, President Crossroads Chapter

RESPONSE(S)

COMMENT(S)

12 OREGON CALIFORNIA TRAIL ASSOCIATION

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC OPEN HOUSE COMMENT FORM

The BLM would like to hear your comments on the project and the Draft EIS for the Mona to Oquirrh Transmission Corridor Project. The 90-day public comment period is May 15 – August 12, 2009.

Please return this comment form to the sign-in table or mail it to:

ATTN: Cindy Ledbetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

You can also submit comments via email: UT_M2OTL_EIS@blm.gov

Completing this form will automatically add you to the mailing list. If you prefer to not be on the mailing list, please check the box below.

I do not wish to be on the project mailing list

Please address your comments about the project and/or the Draft EIS below:

*As a representative of the Oregon-California
Trail Association 'OCTA', I'd like to
express my concern regarding the
impairment of Hastings's cut off of the
California Trail. (Made most famous
by the Donner-Reed Party crossing the
Salt Flats) Over a thousand emigrants
& gold seekers took this cut-off from
1845/6 to 1850. With over 2,000 OCTA
members & 11 states, many of us have
ancestors that crossed this trail. It needs
to be recognized & documented as a
'Historical & Cultural Trail (Not a Service)'. Many
lost their lives & descendants & historians feel
a deep need to protect 'Hastings Cut-off'. Please
document this trail (shown with white
Carsonite markers placed by some of our 163
members of UTAH Crossroads Chapter of OCTA) &
'define' it correctly with the CARE &
respect it deserves. Thank You!! (over ->)*

12A

See responses to Comments 11A and 11B.

RESPONSE(S)

COMMENT(S)

12 OREGON CALIFORNIA TRAIL ASSOCIATION (continued)

PLEASE NOTE - Roy Tea has given the BLM complete & long
checked copies of maps showing exact location of Hastingscut off
Tell us how to reach you (Roy - 801-943-5891)
If you are not already on the project mailing list and would like to be kept informed about this project, include your
name, address, phone number, fax, and e-mail. Please be advised that your entire comment (including your
personal identifying information) may be made publicly available at any time.

CONTACT INFORMATION
Please print information clearly

Name: Linda Turner Representing Agency or Organization: OCTA Oregon-Calif. Trails a
Address: 3925 S. 2200 W.
City: West Valley City State: UT Zip: 84119
Daytime phone: 801-953-0370 E-mail address: LINDA.T.CROSS.ROGERS@yahoo.c

FOLD HERE

Place Stamp Here

ATTN: Cindy Ledbetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

*Public comments must be postmarked by August 12, 2009

RESPONSE(S)

COMMENT(S)

13 UTAH STATE UNIVERSITY



OFFICE OF THE PRESIDENT
1400 Old Main Hill
Logan, UT 84322-1400
Telephone: (435) 797-1162
FAX: (435) 797-1173

July 30, 2009

Mike Nelson, Realty Specialist
BLM Salt Lake Field Office
2370 S. 2300 W.
Salt Lake City, UT 84119

Subject: Rocky Mountain Power Mona to Oquirrh Power Line Siting

Dear Mr. Nelson:

I am writing this letter to provide input regarding the placement of Rocky Mountain Power lines in Tooele County as part of the Mona to Oquirrh power line siting. The planned placement of the power lines is of interest to Utah State University (USU) and our Tooele Regional Campus for the following reasons:

- USU has a rapidly growing regional campus in Tooele County. Currently approximately 800 students enroll each semester. Enrollment growth ranged from 20% to 40% during the past several academic years, and we anticipate similar levels of continued growth for years to come.
- To meet the increasing demand for access to degree programs, USU is expanding the USU Tooele Regional Campus located at 1000 West and Vine Street in Tooele City. A \$2.3 million expansion of the current USU Tooele building was recently completed.
- Tooele City also donated to USU 30 acres of land located just south of the current building. USU will purchase an additional 20 acres of land to create a 50-acre campus with many separate buildings.
- It is especially important to note that other education entities will share this location. Tooele School District is currently constructing a new career and technical education building adjacent to the USU land. The newly-created Tooele Applied Technology College is submitting a legislative request to construct a new building on the 50-acre USU Tooele Regional Campus.
- This higher education campus area of Tooele City has become the "jewel" of Tooele County and will continue to be the focus of new educational opportunities and facilities.

COMMENT(S)

13 UTAH STATE UNIVERSITY (continued)

Mike Nelson
July 30, 2009
Page 2

- The potential for locating student housing and retail businesses in this area will be greatly enhanced as the campus expands.

USU's position is that the current proposal to locate Rocky Mountain Power (RMP) lines in this area of Tooele City will negatively impact the potential for growth as well as the aesthetics and health of this public and higher education complex. Briefly, these are my primary concerns:

- RMP's alternate route for a section of the Mona to Oquirrh Transmission Corridor borders the west edge of the new USU Tooele Regional Campus (See #1 on the attached map). The main entrance to the new campus faces west. Location of a large power line at the west entrance of the campus will negatively impact the aesthetics of the campus, and poses potential health and safety concerns.
- A second RMP line borders or may intersect (See #2 on the attached map) the southern edge of the campus, impacting expansion of the campus to include student housing and retail businesses.
- Placement of the power lines in the area that will eventually become a residential USU campus will create safety issues that inhibit recruiting and retention of students. Indeed, the RMP lines could compromise the entire viability of the campus (See proposed campus map, attached).

To avoid negative planning, safety, and aesthetic impact to the USU Tooele Regional Campus and related education facilities, I strongly request that the RMP proposed west route be followed to place the power line on the sparsely populated west bench of the Tooele Valley (See #3 on the attached map). We would prefer that the southern proposed route bordering the campus be moved further south to mitigate the negative impact on the campus (See #4 on the attached map).

Thank you for your consideration of these important issues. Please don't hesitate to contact me for additional information. I can be reached by email at stan.albrecht@usu.edu or by phone at 435.797.7172. I look forward to working with you to arrive at a suitable solution.

Sincerely,



Stan L. Albrecht
President

cc: Rich Waije, Chief Executive Officer, Rocky Mountain Power
Ron Allen, Commissioner, Utah Public Service Commission

RESPONSE(S)

The Draft EIS and Final EIS have considered the USU Tooele Regional Campus. The alternative route alignment along the west side of the railroad tracks does not cross the USU Tooele Regional Campus property. Visual impacts of this route and mitigation measures to reduce impacts were addressed in the Draft EIS, Section 4.2.7.5. Health and safety issues associated with the transmission lines were addressed in the Draft EIS, Section 4.4.1.

13A

13B See response to Comment 13A.

13A

13B

COMMENT(S)

14 FARMLAND RESERVE, INC.

BLM Salt Lake City Field Office
 Attn: Mike Nelson
 2370 S. 2300 W.
 Salt Lake City, UT 84119

RE: Mona to Oquirrh Transmission Project – Public Comment

We are aware of the immediate need for new substations and transmission line to serve the growing Utah population. We welcome the opportunity to respond to the Draft Environmental Impact Statement (DEIS), dated April 2009. We understand that there are multiple alternatives that have been studied, and that both Rocky Mountain Power (RMP) and the Bureau of Land Management (BLM) have preliminarily identified their respective preferred alignments. Portions of the preferred alignments for both entities cross lands owned by the Corporation of the Presiding Bishop (CPB), administered by Farmland Reserve, Inc. (FRI). While there may be other locations owned by CPB or other related entities where the proposed transmission corridor may be impactful, this letter is intended to address only the impact on property owned in the Goshen Valley. Despite the potential impact on this property, CPB and FRI were not contacted as stakeholders for the DEIS.

14A

In March 2009, the Utah County Commission approved general plan and zoning amendments affecting the Goshen Valley area. The DEIS does not recognize these amendments. This letter summarizes the timeline leading to those amendments and suggests areas of the DEIS that may be significantly impacted when these amendments are taken into consideration. We feel strongly that the impacts of alternatives A1, A2, B1, B2, and C1 (the "Goshen Valley Alignments") need to be reconsidered in light of these amendments, which directly affect over 11 miles of each of the Goshen Valley Alignments, and that alternative C2 should be carefully considered as a preferable alignment.

14B

Timeline

October 2007 - Commencement of BLM scoping and EIS

October 2008 - Utah County and Economic Development Corporation of Utah approached FRI about providing land to accommodate future growth in Utah County.

March 2009 - Utah County:

- 1) Initiated and adopted a general plan amendment encompassing approximately 60,000 acres (the Goshen Valley Specific Area Plan), to ensure quality long-range land use and transportation planning southwest of Utah Lake.
- 2) Amended the Utah County zoning map to designate 25,752 acres within the Specific Area Plan, owned primarily by CPB, as Planned Community Zone.
- 3) Entered into an agreement with CPB vesting rights to develop 55,000 residential units and approximately 45 million square feet of commercial, retail and office space.

RESPONSE(S)

Comment noted. Notification of availability of the Draft EIS was provided in May 2009 to all landowners within 1-mile of an alternative route and substation site, in addition to the BLM mailing list of interested parties.

14A

Resource data for the Draft EIS were compiled in late summer 2008, and the document was prepared for public release in March 2009. Administrative delays resulted in the document being released for public review in May 2009. A meeting was held with Utah County Planning Department in August 2009 to confirm land use data and general plan information. The Goshen Valley Specific Area Plan did not exist at that time, nor was the BLM aware of any changes proposed by Utah County in March 2009.

14B

On March 3, 2009, the Utah County Commission approved as a general plan amendment the Goshen Valley Specific Area Plan. Also, on March 3, 2009, the Utah County Commission also approved a zone change from Mining and Grazing-1 (M&G-1) to Planned-Community (P-C) for 25,752 acres of land administered by Farmland Reserve, Inc.

The new plan and amendments are acknowledged in the Final EIS (Sections 1.6 and 3.2.9.10 and Map C-10), including planned community zones, residential areas, industrial facilities (future manufacturing). In response to comments on the Draft EIS, alternative Links 15, 50, and portions of Link 55 have been shifted to the west by approximately 0.5 mile. The 0.5-mile shift to the west was implemented to minimize effects to future development.

COMMENT(S)

14 FARMLAND RESERVE, INC. (continued)

4) Approved a Community Structure Plan adopting entitlements for a future manufacturing facility that will provide significant employment and tax revenue. The company that will develop this facility is currently in negotiations with the County, the State, and CPB.

May 2009 - The DEIS was released. FRI received notification the same day. Upon review of the DEIS, FRI staff discovered significant conflicts between the proposed transmission line and the location of the manufacturing facility, conflicts with portions of the 55,000 residential units and the 45 million square feet of commercial space, and conflicts with many other aspects of the adopted Goshen Valley Specific Area Plan.

Affected Resources

Visual Resources: The 200 foot tall transmission towers would create significant visual impact to over 25,000 acres of zoned and entitled commercial and residential property and would also impact the balance of the Goshen Valley Specific Area Plan, potentially reducing the development value and limiting Utah County's ability to continue to grow in the southwest portions of Utah County. In particular, the Goshen Valley Alignments would significantly impact the view shed of any residential use west of the transmission lines.

Land Use Resources: The DEIS identifies only the historic uses of grazing, agriculture, and mining on the affected land in Goshen Valley. Many of these current agriculture uses will remain an important part of the Goshen Valley. Alternatives A1, B1 and C1 would cross the State's largest dairy, owned and operated by CPB for the purpose of milk production to support the LDS Church welfare system. Dairy production would be affected by the electromagnetic fields produced by the transmission lines. There are sited cases where behavior, health, and milk production of cows were impaired by electrical currents from utility power lines. The dairy is a critical resource to the LDS Church, and while the full effects of a giant utility line are largely unknown, caution must be exercised when considering the encroachment on this resource.

In addition, since commencement of the scoping process, significant land use and zoning changes have occurred as outlined in the timeline above. Within the Mona to Limber route segment (roughly 67 miles), the DEIS studies three separate areas using six alternatives: 22% of BLM's preferred route (A1) lies within the Goshen Valley Specific Area Plan, and 18% of RMP's preferred route (A2). By comparison, only 4% of Alternative C2 impacts the County's Specific Area Plan. Nearly 2,767 acres of the Specific Area Plan are directly and severely impacted by Alternatives A1 and B1, and 858 acres in A2 and B2. By comparison, only 94 acres are impacted by C2. The direct impacts to zoned and entitled commercial and high-value residential property would be significant in Alternatives A1, A2, B1, B2, and C1. These impacts are in addition to indirect impacts to other properties within the Goshen Valley Specific Area Plan that are designated for residential or commercial uses.

Socioeconomics: The Goshen Valley Alignments would have significant impacts to the implementation of the adopted Goshen Valley Specific Area Plan. In addition, Alternatives, A1, A2, B1, and B2 would disrupt a key portion of land which is currently the subject of final negotiations to bring a large

RESPONSE(S)

The visual effects of transmission lines are analyzed based on current land uses. Currently, the Goshen Valley is generally used for agriculture and grazing. Visual resource impacts were identified in Draft EIS, Section 4.2.7.5. Visual impacts on future land uses have been addressed in the Final EIS (Section 4.2.7.5). In response to these potential affects, the alignment has been shifted further west. See also response to Comment 14B.

Comment noted. Impacts on grazing, agriculture, and mining were presented in Section 4.2.9 of the Draft EIS. Mitigation measures have been identified to address these effects, to the degree possible, including limiting ground disturbance, as described in Section 2.8.3 of the Draft EIS.

The potential effects associated with electric and magnetic fields were presented in the Draft EIS. It appears that this comment is referring to the phenomenon of "stray voltage," i.e., a small voltage measured between two points that can be contacted by a dairy cow. The source of this voltage is current running on a grounding system, which can have on-farm (i.e., poor wiring) and off-farm (i.e., distribution systems) sources. Transmission lines are generally not a source of stray voltage. While acute, behavioral responses may occur as a result of stray voltage, the research has not linked stray voltage with long-term effects, such as decreased milk production. The Proponent will assist in identifying and remedying any contact currents thought to exist on dairy farms as a result of their electric distribution system.

Academic and government research programs have also evaluated whether EMF may affect cattle. The largest of these programs is being conducted at the University of McGill and involves the controlled exposure of cattle to very high levels of EMF to test for effects on production, feed intake, body weight, immunology, reproduction, and general health. No consistent effects on the animals' health, behavior, or productivity were reported in this program, or in the other programs evaluating cattle health.

See response to comment 14B. Socioeconomic impacts of the project were addressed in Section 4.4.2 of the Draft EIS. Industrial uses associated with the Goshen Valley Specific Area Plan have been acknowledged in the Final EIS (Section 3.2.9.10 and Map C-10). A community structure plan for an industrial park is approved, but the proposed manufacturing facility in Goshen Valley is a conceptual plan, and as of October 2009, had not been submitted for review and approval according to the Utah County Planning Department. In response to comments received on the Draft EIS, the proposed route has been shifted to the west by approximately 0.5 mile to minimize conflicts on future development.

14C

14D

14E

14F

RESPONSE(S)

COMMENT(S)

14 FARMLAND RESERVE, INC. (continued)

manufacturing company to Utah County, with significant employment and tax base. These alternatives directly impact the site of the manufacturing company, which is proposing to bring over 1400 jobs to the area as well as act as a catalyst for future job growth and development for the region.

14F

The transmission line will also impact future residential development. The alignment will disturb one of the most valuable housing sites in the area with views of the mountains to the east and Utah Lake to the north. As mentioned above, the Goshen Valley Alignments would significantly impact the view shed of any residential use west of the transmission lines.

14G

See response to comment 14C.

Given that roughly 11 miles of the Goshen Valley Alignments have undergone significant zoning changes allowing and encouraging future well-planned growth in Utah County, the cost for the Goshen Valley Alignments should be reevaluated inasmuch as the access agreements and purchase of rights-of-way across what has now become zoned and entitled property will cost much more than anticipated. When this additional cost is evaluated, the costs of the RMP and BLM preferred alternatives will likely far exceed those of other proposed alternatives. Per the DEIS, the cost difference between BLM's preferred alignment and Alternative C2 is only about \$2 million, or 1% of the total project cost, while the financial impact on CPB, Utah County, and the State of Utah could be in the hundreds of millions of dollars.

14H

See response to comment 14F.

Alternatives

Upon reviewed of the 6 alternative routes, BLM and RMP have selected slightly varying preferred alternatives that both negatively and severely affect the area within the County's Goshen Valley Specific Area Plan, as well as a key economic development opportunity for the Wasatch Front. CPB proposes that use of alternative C2 should be preferred in order to avoid these critical impacts.

14I

Comment and route preference noted.

We thank you for your consideration of these comments and look forward to working with you to address these concerns and to find an alternative that is acceptable to all stakeholders.

Sincerely,

FARMLAND RESERVE, INC.

By: *[Signature]*

Its: *V. Pres.*

RESPONSE(S)

COMMENT(S)

15 SALT POINT LAND COMPANY, L.C.

SALT POINTE LAND COMPANY, L.C.

P.O. Box 540478

925 North 100 West, Suite F

North Salt Lake, UT 84054

August 11, 2009

Michael G. Nelson

Assistant Field Manager

BUREAU OF LAND MANAGEMENT

SALT LAKE FIELD OFFICE

2370 South 2300 West

Salt Lake City, UT 84119

(via e-mail)

RE: Draft Environmental Impact Statement for the Mona to Oquirrh Transmission Corridor Project – Salt Pointe Commerce Center, Lake Point, Utah; Parcel Nos. 04-0-066-0001, 04-0-066-0002, 04-0-066-0003 and 04-0-070-0001

Dear Mr. Nelson,

Pursuant to the public comment period noted in the April 2009 Draft Environmental Impact Statement (“DEIS”) for the Mona to Oquirrh Transmission Corridor Project, SALT POINTE LAND COMPANY, L.C., the owner (“Owner”) of the referenced parcels, hereby OBJECTS to Proponent’s Proposed “Limber to Terminal” Route for the following reasons:

- the Proposed Route will create an extremely negative visual impact along (in excess of two miles) the “front door” of the ~770 acre Salt Point Commerce Center located north of I-80 and west of west bound Exit 99, and;
- the 150’ wide power corridor right-of-way would be located within and does not conform with the stated “Purpose” of Tooele County’s Travel Influence District overlay zone [Land Use Ordinance, Chapter 19], and;
- potential visual and financial impacts to billboards owned by Saunders Outdoor Advertising, Inc. with whom the Owners have a recorded easement agreement, and;
- in addition to visual impacts, the Proposed Route creates other perceived negative impacts and creates constraints to the parcels that diminish the value of the referenced parcels, and;
- the Owner has worked with Lake Point Land Company and Kennecott Utah Copper who, in turn, have worked with the Proponent on an alternative route that would appear, on the surface, to alleviate all of the concerns addressed above.

The Owner is in FAVOR of the Proposed Alignment Revisions as outlined on the attached Landowner Panels 12 of 22 and 13 of 22. Please consider these comments, comments provided by neighboring land owners and the proposed alternate routes prior to the issuance of the Final EIS and Record of Decision.

Contact either me at (801) 599-4397 or robinson@theensiangroup.com or Randy Cassidy at (801) 201-8272 or rcassidy@theensiangroup.com if you should have any further questions.

Sincerely,

Christopher F. Robinson
Manager

Attachments

Cc: RMP Mona to Oquirrh Transmission Corridor Project Team (via e-mail)

See response to comment 10A, Chapter 19, Travel Influence District Overlay District, of the Tooele County Land Use Ordinance, states in the “Purpose” that “Among other requirements, visual images are deemed critical to the freeway drivers’ safety, convenience, and comfort and are, therefore, to be reviewed and controlled by the planning commission.” The proposed project will be reviewed, thus controlled, during the conditional use permit application process by the Tooele County Planning Commission.

15A

15A

RESPONSE(S)

COMMENT(S)

16 SOUTHERN UTAH WILDERNESS ALLIANCE



DELIVERED VIA E-MAIL TO: UT_M2OTL_EIS@blm.gov

August 12, 2009

Mike Nelson
 Bureau of Land Management
 Salt Lake Field Office
 2370 S. 2300 W.
 Salt Lake City, UT 84119

RE: Mona to Oquirrh Transmission Corridor Project Draft Environmental Impact Statement (UT-020-2008-009)

Dear Mr. Nelson,

On behalf of the Southern Utah Wilderness Alliance (SUWA), please accept these comments on the Bureau of Land Management's (BLM's) Draft Environmental Impact Statement (DEIS) for the Mona to Oquirrh Transmission Corridor Project (UT-020-2008-009) (hereinafter referred to as the "Project" or "Mona to Oquirrh Project"). As you know, SUWA has a deep and longstanding interest in the protection and preservation of all of BLM's wilderness-quality lands in Utah, including Wilderness Study Areas (WSAs), non-WSA lands with wilderness characteristics, and lands identified by the Utah Wilderness Coalition (UWC) as possessing wilderness characteristics.

Various alternatives for the Mona to Oquirrh Project would follow the boundaries of BLM's Oquirrh Mountains Wilderness Inventory Area (WIA) and the overlapping Oquirrh Mountains unit that the UWC has proposed for wilderness designation in America's Red Rock Wilderness Act (ARRWA). Because some of the proposed alternatives have the potential to impact the wilderness qualities of this area, SUWA raises the following concerns regarding the Mona to Oquirrh Project.

A. Mona Annex to Limber Alternatives; SUWA Supports BLM's Preferred Alternative A1.

The DEIS presents six alternatives for the transmission line route from Mona to Limber. While none of the proposed alternatives for this segment would impact any areas proposed for wilderness in ARRWA, in general SUWA supports alternatives that minimize surface disturbance and minimize impacts to wildlife habitat, air quality, water, and other resources.

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16A Comment and route preference noted.

16A

RESPONSE(S)

COMMENT(S)

16 SOUTHERN UTAH WILDERNESS ALLIANCE (continued)

SUWA supports BLM's Alternative A1 because it would result in the overall fewest acres of vegetation that would need to be cleared for the right-of-way (ROW) and the combined fewest acres of temporary and permanent disturbance.¹ Monia to Oquirrh DEIS at 4-4, Table 4-1. In addition, BLM's preferred alternative would follow existing transmission lines for as many miles as any other alternative would, and for more than twice as many miles as the Proponent's Preferred Alternative A2. *Id.* at 4-12, Table 4-4. Building the transmission line so that it parallels existing transmission lines will concentrate development in areas where disturbance has already occurred.

16A

B. Limber to Oquirrh Alternatives; SUWA supports BLM's Preferred Alternative D.

The DEIS analyzes six alternatives for the Limber to Oquirrh section of the proposed transmission line. Two of these alternatives: E1, Rocky Mountain Power's Preferred Alternative, and E2 have the potential to impact the wilderness character of the Oquirrh Mountains area identified by both the BLM and the UWC as possessing wilderness characteristics. Alternatives E1 and E2 would encroach on the south boundary of the Oquirrh Mountains WIA, which is formed by an existing 138kV transmission line that is substantially smaller than the proposed 345kV line. In addition, Alternatives E1 and E2 run directly through the BLM's North Oquirrh Management Area (NOMA). The NOMA was created to protect a variety of important values, including sensitive watershed lands, visually sensitive lands, big game winter range, and lands with wilderness characteristics. To further the goals of the NOMA and to best protect the area, development should be kept out of this area if there are other, reasonable alternatives. To help BLM achieve these goals, SUWA supports BLM's preferred Alternative D.

16B

16B Comment and route preference noted.

The BLM has determined that the Oquirrh Mountains WIA possesses wilderness characteristics (i.e. naturalness, solitude, and opportunities for primitive or unconfined

¹ It is very important to limit the generation of dust and soil erosion by ensuring that undisturbed soils remain undisturbed. Not only does dust cause significant air quality and health concerns, new research shows that dust generated in Utah is also carried by winds into Colorado, falls on the Rocky Mountains, and accelerates the melting of the snowpack, causing serious consequences for river flow levels and the timing of spring runoff. See, e.g., Painter, Thomas H., et al., *Impact of Disturbed Desert Soils on Duration of Mountain Snow Cover*, GEOPHYSICAL RESEARCH LETTERS, Vol. 34 (2007) (attached as Exhibit A); Eilperin, Juliet, *Dust Storms Escalate, Prompting Environmental Fears*, THE WASHINGTON POST, (Apr. 23, 2009) (attached as Exhibit B). The dust on the snowpack absorbs more sunlight than white snow, which is highly reflective, and warms the surrounding air. Streeter, Scott, *Climate Change, Water Shortages Conspire to Create 21st Century Dust Bowl*, THE NEW YORK TIMES, (May 14, 2009) (attached as Exhibit C). Undisturbed soils also help to prevent erosion by reducing the amount of runoff from heavy rain or snow events, and providing plants and their roots a good foothold. In addition to decreasing the amount of dust generated, reducing the extent of surface disturbance is better for wildlife, vegetation, water quality, erosion, visual resources, climate change, and many other important resources. For these reasons, it is very important that projects in Utah not disturb more surface area than absolutely necessary.

COMMENT(S)

RESPONSE(S)

16 SOUTHERN UTAH WILDERNESS ALLIANCE (continued)

recreation), and the DEIS explains that Alternatives E1 and E2 would have both short- and long-term impacts on the wilderness characteristics of this area. Mona to Oquirrh Transmission Corridor Project DEIS at 4-46. In order to ensure that these wilderness values are protected, BLM must make certain that no surface disturbance occurs in the Oquirrh Mountains WIA. However, the DEIS states that a temporary access road would likely be built *within* the WIA outside of the transmission line right-of-way (ROW). *Id.* at 4-46. This temporary access road would impact the naturalness of the area by requiring the clearing of vegetation, grading along the temporary access road, and associated work within and adjacent to the WIA. *Id.* at 4-46.

In addition, impacts to wilderness characteristics would occur during construction, e.g. opportunities for primitive recreation and solitude would be limited by the presence of equipment while the line is being built. *Id.* at 4-46. Long-term impacts on the wilderness characteristics would also occur. For example, the naturalness of the Oquirrh Mountains WIA would be reduced as a result of the visual intrusion from the significantly larger and taller transmission line (the proposed line would more than double the carrying capacity of the existing line, from 138kV to 345kV; the proposed 345kV tower heights would range from approximately 125 to 150 feet tall, nearly twice the height of the existing towers which stand only 80 feet tall). *See id.* at 2-34, Table F-4. The additional height and size of the proposed towers would create a significant visual impact and affect the naturalness of the area, impacting visitors' experience in wilderness quality lands. *See id.* at Appendix F.

Furthermore, the Limber to Oquirrh section of the transmission line would require that the ROW be widened from 80 feet to 150 feet, nearly doubling the width of the existing disturbance and impacting the area's wilderness characteristics. *See id.* at S-2. Tall vegetation within the 150-foot ROW would be cleared, impacting the naturalness of the area and creating a visual intrusion for people seeking solitude and a natural setting. *See id.* at 4-46.

In addition, implementing Alternative D would result in the temporary disturbance of fewer acres of soil than would the Proponent's Alternative E1 (241 acres for Alternative D vs. 247 for Alternative E1). *Id.* at 4-4, Table 4-1. BLM's preferred alternative would also result in fewer acres of permanent disturbance (83 acres for Alternative D vs. 89 acres for Alternative E1) and fewer acres of vegetation that would need to be cleared for the right-of-way (186 acres for Alternative D vs. 202 for Alternative E1). *Id.* In addition, BLM's preferred alternative would result in fewer impacts to wildlife and their habitat, specifically big game winter range, and would protect the integrity of BLM's North Oquirrh Management Area. *See id.* at 1-11, 4-12, Table 4-4.

The Proponent's proposed route, Alternative E1, as well as Alternative E2 would parallel existing transmission lines for a greater distance than would BLM's preferred Alternative D. However, Alternatives E1 and E2 would have a greater impact on the

COMMENT(S)

RESPONSE(S)

16 SOUTHERN UTAH WILDERNESS ALLIANCE (continued)

wilderness characteristics of the Oquirrh Mountains WIA because the proposed transmission line would be substantially larger in size than the existing transmission line, would require the construction of a new access road inside of the WIA, and would impact the visual and other resources of the Oquirrh Mountains WIA. Because SUWA's mission is the preservation of wilderness-quality lands in Utah, SUWA supports BLM's Alternative D.

C. Limber to Terminal Alternatives; EIS Must Discuss How Alternative I Would Impact Wilderness Characteristics of the Oquirrh Mountains WIA and UWC Area.

The DEIS analyzes two alternatives for the Limber to Terminal Substation section of the proposed transmission line. For approximately one mile, Alternative I would be located along the western boundary of the BLM's Oquirrh Mountains WIA, the UWC-located wilderness area, and the NOMA. However, the DEIS does not analyze how Alternative I would impact the wilderness characteristics of the Oquirrh Mountains WIA and UWC-proposed wilderness area. The Final EIS for the Mona to Oquirrh Project should include, in Section 4.2.8, a discussion of the impacts to the wilderness characteristics of the Oquirrh Mountain WIA and UWC area from Alternative I, which is proposed for the Limber to Terminal segment of the transmission line.

Alternative I would require the construction of a 345kV transmission line that would, at times, run along the boundary of the Oquirrh Mountains WIA and NOMA, and at other times would parallel the WIA and NOMA only a short distance to the west. In addition, the ROW for this section of the line would be widened to 150 feet, two to three times its current width, between the proposed Limber Substation to the existing Terminal Substation. Mona to Oquirrh Transmission Corridor Project DEIS at S-2. A portion of the line proposed in Alternative I would parallel two existing transmission lines, one a 69kV line and the other a 138kV line. However, the poles for these existing lines are 40-80 feet tall, while the poles for the proposed line would be 120-150 feet tall. See *id.* at 2-34, Table F-4. As discussed in the preceding section, a wider ROW and a larger and taller transmission line have the potential to impact the wilderness characteristics of the Oquirrh Mountains WIA and UWC-proposed wilderness area, and these potential impacts should be analyzed in the Final EIS.

D. The Final EIS Should Consider Additional Alternatives.

- i. *The Final EIS Should Carry Forward the Energy Conservation and Demand-Side Management Alternative and Consider Eliminating the Limber to Terminal Segment or the Limber to Oquirrh Segment.*

The EIS should carry forward an alternative that addresses energy conservation and demand-side management and, if possible, the Proponent should couple its energy savings with the elimination of either the proposed Limber to Oquirrh segment or the

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16C Identification of impacts on the WIA, as it applies to Alternative I, have been clarified in the Final EIS, Section 4.2.8.

16D See response to comment 16C.

COMMENT(S)

16 SOUTHERN UTAH WILDERNESS ALLIANCE (continued)

proposed Limber to Terminal segment of the line. Eliminating one of these proposed segments would create significantly less surface disturbance and, coupled with energy savings and demand-side management, could still meet the Project's purpose and need, including the current and projected electrical demands for northern Utah. See *id.* at 1-4.

16E

To avoid creating more development in and adjacent to lands with wilderness characteristics, wetlands, wildlife habitat, and other resources, and to minimize disturbance to a substantial amount of land, the Final EIS should consider an alternative that eliminates the need for either the Limber to Terminal or the Limber to Oquirrh section of the line and replaces the lost capacity with increased energy conservation and efficient demand-side management.

CONCLUSION

Thank you for your consideration of these comments on the Mona to Oquirrh Transmission Corridor Project DEIS. We are grateful for BLM's ongoing consideration of SUWA's input and we look forward to remaining involved throughout the NEPA process for this Project.

Sincerely,

Tiffany Bartz
Southwestern Field Attorney

RESPONSE(S)

While the Proponent has demand-side management and other energy conservation programs in place and strongly promote and encourage their use, these measures are not enough to offset the increasing demand for electricity in the area. Load forecasts currently take into account the impact of these energy conservation programs on the local area. Section 2.6.1.1 of the Draft EIS addressed energy conservation. Demand-side management was considered but eliminated as an alternative to the proposed Project.

16E

Additionally, based on the Proponent's load growth forecasts (Draft EIS, Appendix A), eliminating either the Limber to Oquirrh or Limber to Terminal segments would not address the future needs of customers and would not meet the stated purpose and need for the Project.

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RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER



August 12, 2009

Mr. Mike Nelson, Project Manager
Bureau of Land Management
Salt Lake Field Office
2370 S. 2300 W.
Salt Lake City, UT 84119

Subject: Comments on the Draft Environmental Impact Statement (DEIS) for the Mona to Oquirrh Transmission Corridor Project and Draft Pony Express Resource Management Plan Amendment

Dear Mr. Nelson,

Rocky Mountain Power, a division of PacifiCorp, expresses our thanks for your efforts on the development and publication of the Draft Environmental Impact Statement (DEIS) for the Mona to Oquirrh Transmission Corridor Project (herein referred to as the Project) and Draft Pony Express Resource Management Plan Amendment. We appreciate your hard work and professionalism as the Project has progressed through the National Environmental Policy Act (NEPA) process.

We would like to further clarify a number of technical details described in the DEIS and reemphasize how critically important this line is to ensuring reliable service to our retail and network customers. As a regulated public utility, Rocky Mountain Power is required to provide electric service to all customers within its service territory without discrimination and at the lowest cost after consideration of risk. This obligation frames the process we use to make decisions regarding maintaining, operating, and upgrading our transmission system. The Proposed Action described in the DEIS encapsulates the end product of these decisions after years of continuous planning, analysis, and community outreach and therefore is the alternative that best meets operational and capacity requirements of the company.

We support the selection of our Proposed Action by the BLM in its decision to issue Rocky Mountain Power a right-of-way grant and to designate a new utility corridor. Our comments are divided into three main areas:

- Additional information we believe should be included in the DEIS to clarify the critical importance of the Proposed Action's route in the vicinity of the Mona and Mona Annex substations with respect to the Project's overall importance to the interconnected regional transmission system.
- Further explanation of why we believe Rocky Mountain Power's Proposed Action best meets the Project's purpose and need.
- Corrections to the DEIS that will more accurately describe the Proposed Action, engineering details, construction activities, and proposed mitigation measures. Each distinct case is identified in Appendix I.

RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)



7. Additional Information that must be included in the Statement of Purpose and Need and Considered in the Analysis of Alternatives

Currently the Mona Substation, located in Southwest Central Utah, is a key electrical transmission hub that supports the electric grid in Utah and the surrounding states. Figure 1 is provided below for reference. This substation is interconnected to nine high capacity 345 kV Extra High Voltage transmission lines as well as the 500 kV direct current (DC) transmission line that carries electricity from the Intermountain Power Project. The Mona Substation interconnects critically important Rocky Mountain Power generation facilities located in the region, including the Currant Creek Power Plant (534 megawatts); the Huntington Power Plant (966 megawatts); and the Hunter Power Plant (1,320 megawatts). In addition, Mona provides interconnection to regionally significant power plants owned by other energy providers, including the Bonanza plant (485 megawatts) and the Intermountain Power Project (1,800 megawatts). Through these important interconnections, the Mona hub plays a key role in six major transmission paths connecting energy markets and load centers into and out of Utah with similar facilities in Nevada, Arizona, Colorado, New Mexico, and California. Therefore, it is vital for the overall reliability and security of the interconnected transmission grid in the West to maintain the rated capacity (both existing and that planned for the future) and performance of the Mona hub its associated transmission lines.

17A

17A Comment noted.

In the future, significant additional transmission line interconnections are planned for Mona as part of Rocky Mountain Power's Energy Gateway Program, which is a key part of the company's plan to satisfy the growing demand by its customers for electricity. Physical locations for transmission lines and corridors interconnecting this station are extremely important to maintaining its reliability. National reliability standards require performance in this regard by specifying levels of bulk electric system performance under a wide range of contingencies that could place individual system elements out of service. These performance requirements help to ensure reliable service to customers and that transmission system outages on utility systems do not compromise the wider interconnected energy supply and supply system.

National Electric Reliability Corporation (NERC) Transmission Planning Standards (TPL 01, TPL02, TPL03 and TPL04 currently published in the Code of Federal Regulations) require transmission owners and operators like Rocky Mountain Power to plan for four contingency levels of transmission system performance. This fourth level of contingency requires Rocky Mountain Power to perform system analysis and studies for service interruptions on multiple transmission lines and/or total corridors. These studies attempt to determine the level of detrimental impact to the wider transmission grid, interconnected generation, and customer load impacted. Rocky Mountain Power is required to perform a risk assessment and to work with other interconnected utilities in understanding the extent and impact of such contingencies. These large scale corridor outages may be caused by severe weather events, smoke and fire leading to multiple line faults, or human causes.

2

RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)

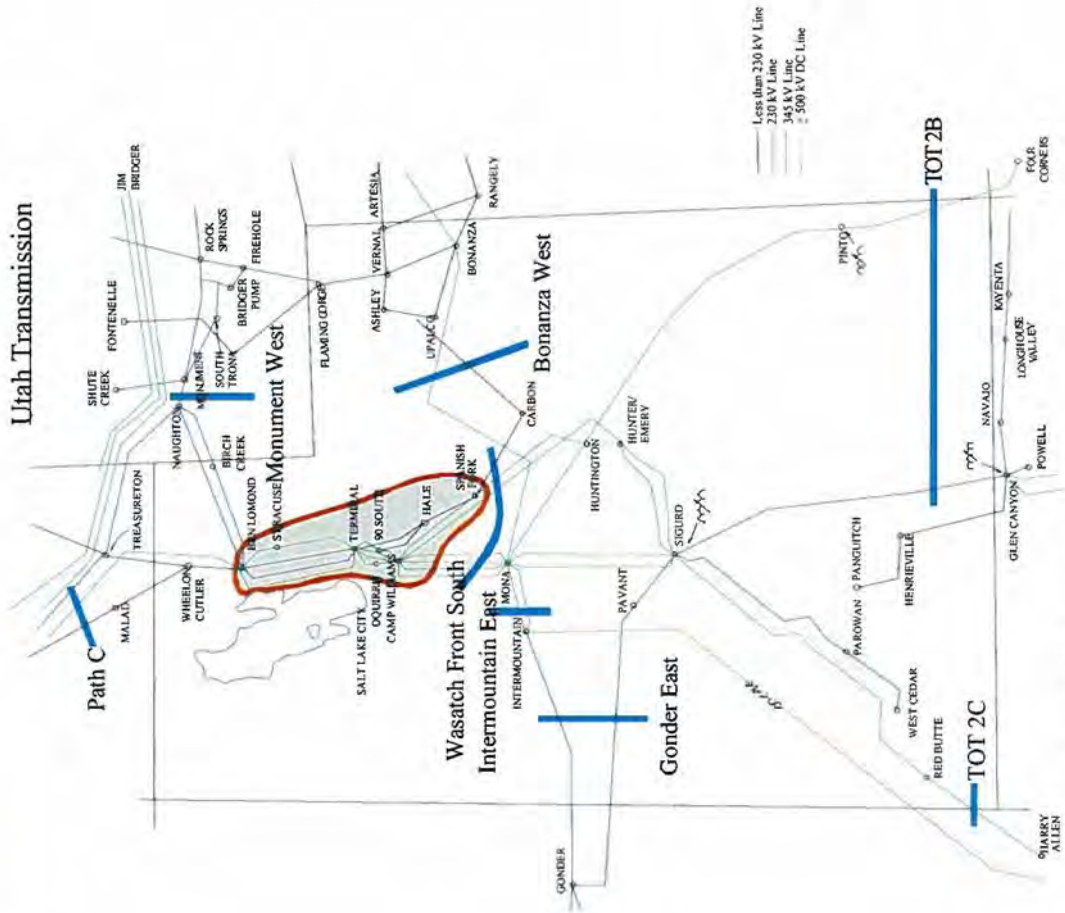


Figure 1. Schematic Image of Utah Electrical Grid.

RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)



Rocky Mountain Power has performed electric system power flow and dynamic stability studies for the Mona Substation with the new transmission upgrades proposed between Mona and Limber substations. These studies conclude that large amounts of energy moving into or out of Mona Substation and outage of the corridor northward of Mona causes significant disruption of the electric grid in the area and extending outside the state of Utah. Such a system disturbance could impact several surrounding states and other interconnected utilities as protective systems that create "islands" or the separation of various portions of the western states interconnection (electrical grid) are activated to contain the disturbance and to prevent damage to utility or customer equipment. Studies concluded that system disturbances in this corridor should be avoided where practical, and prudent options pursued to preclude exposure to such events. The most practical way to avoid simultaneous outages of multiple transmission lines within a single corridor is to provide physical separation of lines to reduce the chance that a single event (i.e., extreme weather, fire and smoke plumes, human interference, etc.) would cause multiple transmission path outages.

17A

The recently completed *North of Mona Corridor Outage Study Report* (August 2009) analyzed what would happen should an extreme outage event occur in this area. The report provides additional detail on this point and is included as Attachment 1 to this letter. Its analysis concludes:

- With all five transmission lines in the same transmission corridor, the system experienced a voltage collapse for a common corridor outage north of Mona 345 kV substation. Therefore, adding an additional line in the same transmission corridor as the existing four transmission circuits does not appear to meet the requirements of the NERC Standards. The addition of this new line does nothing to prevent the voltage collapse because it will be lost along with the other four lines during this contingency. Adding this line in the same corridor may actually make the system performance for this common corridor outage worse than if the line was not built at all. The reason for this poorer system performance is that the additional line would tend to concentrate the power flows in this common corridor because it would reduce the overall impedance of the path.

17B

- With the new Mona-Limber-Oquirrh line constructed in a separate corridor, a common corridor outage north of Mona 345 kV substation does not result in voltage collapse.

Rocky Mountain Power strongly believes that the Proposed Action is a viable option that will result in separating this new high voltage, high capacity transmission line away from existing transmission lines currently interconnected to Mona from the north. Rocky Mountain Power further believes the current and future reliability of the regional electric transmission grid warrants this action. It should also be noted that in the event that this transmission line is compromised in the future, the most likely remedy will be the construction of an additional transmission line (or lines), which undoubtedly will result in additional costs to customers and additional environmental resource impacts. In taking the long view, it is clear that the most prudent and reasonable alternative is the Proposed Action.

2. Why Rocky Mountain Power's Proposed Action Best Meets the Project's Purpose and Need

The alternatives that currently best meet the purpose of and need for the Project are identified in the DEIS as proposed alternatives A2, E1, and H.

17C

Alternative route A1 is located 1,500 feet west of the existing 345kV transmission lines for a distance of approximately 3.1 miles. According to the NERC and WECC guidelines (NERC Standard TPL-001 through TPL-004, WECC TPL-001 through TPL-004, and WECC-1-R System Performance Criteria), each transmission circuit must be separated by at least "the largest span length of the two transmission circuits at the point of separation or 500 feet, whichever is greater, between the transmission circuits," in order to have a rating as an adjacent transmission circuit. Typical span lengths for the 500kV line are 1,000 to 1,300 feet in distance as described by the Project Proponent. The location of this alternative appears to be compliant with NERC reliability standards and WECC reliability guidelines.

17B

In addition, the BLM also is required to adhere to the Federal Land Policy and Management Act of 1976 (43 USC 1761-1771; 43 CFR 2800), Section 503 and Order 13213 that stipulates rights-of-way are to be common and use designated corridors for new rights-of-way to minimize resource impacts. This segment of the Project is located in a designated utility corridor in the FFO House Range Resource Area RMP, as well as a proposed Section 368 DOE West-wide Energy Corridor (Section 368 of Energy Policy Act of 2005).

Comment and route preference noted. However, in October 2009, the Proponent informed the BLM that their route preference for Limber to Oquirrh has switched to Alternative E2.

17C

RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)



Alternative A2–Mona to Limber

The Bureau of Land Management’s (BLM’s) preferred route, Alternative A1, parallels the existing high voltage 345kV utility corridor for approximately 3.1 miles, which poses system reliability issues in accordance with Western Electric Coordinating Council (WECC) guidelines discussed previously.

Alternative A2 parallels the existing 345 kV line for approximately 1.2 miles and then heads west to permit Rocky Mountain Power to satisfy the NERC and WECC criteria by keeping the two lines at an acceptable distance for reliability. For this reason, Rocky Mountain Power submits that Alternative A2 for the Mona Annex to Limber portion of the Project as the alternative that should be selected as it obtains the necessary separation from existing corridor much sooner than the BLM preferred route, minimizing the risk of an outage more quickly.

17D Comment noted. See response to Comment 17B.

17D

Alternative E1–Limber to Oquirrh

During the environmental screening process in 2007, Rocky Mountain Power’s proposed Alternative E1 was chosen as the route that would meet the purpose and need while avoiding conflicts with Kennecott’s mining operations. The BLM’s preferred route, Alternative D proposes to cross through existing Kennecott operations potentially resulting in conflicts in this area. Rocky Mountain Power recommends selection of Alternative E1, as it currently is the route in this area that best meets the purpose and need to provide safe, reliable, and cost-effective electric transmission service to our customers.

Rocky Mountain Power realizes that there are minor adjustments that could be made to existing routes that would still meet the purpose and need. We have been working closely with community members as well as the BLM to identify areas along the route that may resolve concerns that exist to other resources. Rocky Mountain Power recognizes the importance of the NEPA process for making informed decisions and minimizing the impacts of the Project. We look forward to working with the BLM to determine routes that address agency and public comment in addition to meeting the purpose and need which includes the necessity to meet NERC and WECC guidelines and criteria discussed in this letter.

Routes E1 and E2 cross through the NOMA for a distance of 2.6 miles. Authorization of new rights-of-way in the NOMA must be constructed underground above 5,200 feet mean sea level (msl) and avoid Class II VRM areas. The proposed action would not be in compliance with the Pony Express RMP.

17E

17E

Alternative H–Limber to Terminal

Rocky Mountain Power supports the selection of Alternative H for the Limber to Terminal segment of the Project. This route would result in the easiest constructability north from the proposed Limber substation, would avoid Tooele and Grantsville by staying west of these cities in undeveloped areas, and would meet the purpose and need by adhering to the NERC and WECC guidelines.

As a point of reference, numerous site visits took place in 2007 with our Owner’s Engineers and the BLM’s third-party consultant. At that time, a number of routes were considered and eventually eliminated from detailed analysis. Rocky Mountain Power’s proposed route was chosen after a timely and thorough technical and environmental screening. Through this screening process it was determined that Rocky Mountain Power’s proposed alternatives would best meet the purpose and need based on engineering constraints, efforts to minimize impacts to the environment, and providing the safest, reliable route for electrical transmission to northern Utah. Not only do these alternatives best meet the purpose and need, the selection process that took place in 2007 determined that these alternatives would address issues such as system reliability concerns, interconnection potential to substations, towers sited in standing water along portions of the line, hazardous exposure to workers in certain sites, wetland impacts, impacts to the Miller Motorsports Park, and avoid conflicts with mining operations. We believe that this screening process to best meet the needs of our customers was not adequately reflected in the DEIS and should be revised to include this information.

The screening process for alternative route selection was described in the Draft EIS, Sections 2.2.1.5 and 2.6.2. Additional information has been added to the Final EIS in Sections 2.2.1.5 and 2.6.2.

17F

17F

RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)



3. Recommended Corrections to the DEIS

In addition to the information provided above, Rocky Mountain Power has identified some technical issues in the DEIS with respect to the descriptions of transmission, engineering, construction, and ROW activities discussed in Chapter 2. As currently presented, this information is incorrect. Appendix 1 provides a list of these items we request be revised in the DEIS.

17G

Rocky Mountain Power believes that the BLM has made a good effort to address the Proposed Action within the spirit and the law of NEPA. The additional information we have provided is intended to assist the BLM in understanding the importance of the criteria outlined by NERC and WECC, and how our Proposed Action alternative best meets these criteria as well as the Project's purpose and need. Thank you for your attention in this matter.

Sincerely,

Brandon Smith

Enclosures:

Appendix 1 - Recommended Corrections to the DEIS

Attachment 1 - North Of Mona Corridor Outage Study Report

Comment noted. The Proponent provided descriptions of transmission, engineering, construction, and right-of-way activities in Chapter 2 as part of the Plan of Development submittal to the BLM. Information in the Final EIS, Sections 2.7 and 2.8 has been updated to reflect suggested corrections to project description and technical engineering aspects of project construction activities.

17G

RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)



Appendix 1. Recommended Corrections to the DEIS

ENGINEERING AND CONSTRUCTION	
Summary	Remove statement "would be confined to the daytime hours" and add that "Crews may be required to work multiple shifts, including night time hours, in areas where environmental or seasonal constraints drive scheduling."
Section 2.6.1.1	Delete "(kilowatt [kW])" from the first bullet on Page 2-21. It is confusing the way it is presented with MW.
Section 2.6.1.2	Change "transmission system needs" to "future electrical demands for Northern Utah". The paragraph does not accurately describe these needs and should be revised to read, "...meet the projected future electrical demands for Northern Utah in the Wasatch Front area..."
Section 2.6.1.4	Direct or Alternating Current Transmission: This section needs some clarification and should be revised to read, "The main benefit of a direct current (DC) system is the greater control of power flows over very long distances (i.e. 400 miles or more) whereas line construction cost savings may be able to offset the high costs of DC and terminal substations. To interconnect with an AC system, the DC must be converted to AC. Converter substations require more land than a typical AC substation, and costs for one 500kV DC converter station can range to more than \$350 million (a potential total of \$700 million for the two new substations). The AC system selected allows for multiple substation interconnections, necessary for load centers and for generation resources while being more economical than DC. A DC system also has limited ability for future expansion where additional future transmission capacity is needed and therefore requires a higher upfront cost. For these reasons, the AC design was chosen for the Project over a DC design."
Section 2.6.1.4	Underground Transmission, First Paragraph: This section needs additional explanation and should be revised to read, "Extra High-Voltage (EHV) underground lines 345kV and 500kV have been constructed in some parts of the United States, but only for short distances, and usually where circumstances dictated that overhead lines were not feasible (e.g., in the vicinity of airports and urban centers). The cost associated with underground construction of these EHV line is more than 10 times the initial cost of an overhead system of similar capacity and reliability. The underground use of these bulk power transmission facilities also has associated technical, operational, reliability, environmental and maintenance risks that need to be addressed long term."
Section 2.7.1.3, 3rd Paragraph	Change "with 500 kV conductors" to "to 500 kV standards" and delete "eliminating the need to rebuild or upgrade the line in the future." to make the statement consistent with our proposed activities.
Section 2.8.1	The following sentence needs to be added after the third sentence: "Weather conditions typically prohibit high elevation construction during winter months."
Section 2.8.2	Right-of-Way Acquisition Process: The last sentence of this section is not accurate and should be revised to read, "Land rights would be obtained in the name of PacifiCorp, an Oregon corporation d/b/a Rocky Mountain Power."
Section 2.8.3.1	The following needs to be inserted after the first sentence to explain why these activities take place: "This necessary activity helps to ensure the system is designed and constructed to be safe, reliable, cost efficient and can reduce the overall environmental disturbance during initial build and over the life cycle of the project." Additionally, the second sentence is not completely accurate and needs to be revised to read, "...soils to a typical depth of 40-50 feet below the existing ground, however, borehole depth may exceed 50 feet depending on soil conditions." The following sentence needs to be included to provide a complete description of activities: "Helicopter-transported drill rigs may be used for geotechnical exploration in areas where existing roads do not provide adequate access or where overland travel is expressly prohibited. Geophysical exploration techniques may be employed in areas where drilling is impractical to assist in subsurface characterization. Geophysical exploration techniques use instrumentation combined with surficial actuation to identify subsurface soil and rock stratification."

17H Comment noted. The reference to daytime hours has been removed from the Air Quality section of the Executive Summary in the Final EIS. The suggested text was not added because it is not applicable to this section.

17I Comment noted. Section 2.6.1.1 and 2.6.1.2 have been revised.

17J Comments noted. Section 2.6.1.4 has been revised for clarification.

17K Comment noted. Section 2.7.1.3 has been revised to address 500kV standards.

17L Comments noted. Sections 2.8.1 and 2.8.2 have been revised.

17M Comments noted. Section 2.8.3.1 has been revised.

RESPONSE(S)

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)



Appendix 1. Recommended Corrections to the DEIS

17N	Section 2.8.3.5, 3rd paragraph	Foundation installation: Rocky Mountain Power does not propose to haul soil from the site. Revise third paragraph to read: "During construction, topsoil will be stripped in the disturbance area and stockpiled outside of work zones. Foundations will be designed with sufficient reveal so that soils could be placed around the top to promote positive drainage away from foundations. Upon completion of re-contouring, topsoil from the excavated foundations will be spread over the spoils and revegetated."	17N	Comment noted. Section 2.8.3.5 revised to delete references to hauling soil from site.
17O	Section 2.8.3.7	Also, "metal pieces" needs to be removed from the first sentence of the 3rd paragraph. It has not yet specifically been determined what would be used to cover the holes. The sentence, "No construction yards would be located within the right-of-way" is inaccurate and needs to be removed.	17O	Comment noted. Section 2.8.3.7 has been revised.
17P	Section 2.8.4.2	Maintenance. Replace fourth paragraph with the following text, "Rocky Mountain Power will maintain and inspect their substations according to best practices through a long history of providing reliable electrical service to its customers." The information presented is inaccurate and needs to be revised.	17P	Comment noted. Section 2.8.4.2 has been revised to reflect maintenance according to BMPs and standards.
17Q	General	MITIGATION MEASURES All references to "restoration" need to be replaced with "reclamation". It is not reasonable or required for Rocky Mountain Power to restore all disturbed areas, rather we would reclaim these areas in accordance with our Vegetation Management Specification Manual and the Standard FAC-003-1 Transmission Vegetation Management Program.	17Q	Comment noted. References to restoration have been replaced with reclamation.
17R	Table 2-5 #2	Delete the statement, "No paint or permanent discoloring agents indicating survey or construction limits would be applied to rocks, vegetation, structures, fences, etc." Some markings may be required during construction.	17R	Comment noted, but not incorporated. BLM prohibits use of permanent paint or discoloring agents. Temporary marking or flagging will be used for construction.
17S	Table 2-5 #18	Please revise to read that, "Where required by BLM, non-specular wire and conductors would be used in those areas where visual sensitivity is a concern and/or the BLM has designated as having moderate to high scenic quality."	17S	Comment noted, but not incorporated. The Proponent committed to use of non-specular wire and conductors in BMP 18 for the entire project.
17T	Table 2-5 #1	As written, this statement is vague and open-ended. It needs to be revised to read, "In areas determined by that agency to be sensitive to disturbance, existing access roads/trails will be widened and otherwise upgraded only in areas where repairs are necessary to make existing roads/trails passable."	17T	Comment noted. Table 2-6, Measure 1 revised to be more specific.
17U	Table 2-5 #2	It is not reasonable to say that Rocky Mountain Power will not build roads in certain areas. It may be required at certain locations. The first two sentences must be revised to read, "Where possible, construction of access roads would be avoided on agricultural lands and in other areas determined to be sensitive by the agency. Construction and maintenance traffic will use existing roads or cross-country routes (including the right-of-way) to the extent practicable."	17U	Comment noted, but not incorporated. Table 2-6, Measure 2 is a selective site specific measure for riparian areas. Access roads will be minimized or not constructed in riparian areas.
17V	Table 2-5 #3	As written, this measure is vague and does not provide specific enough direction. It must be revised to read, "...routers in areas determined by the agencies will follow the landform contours where practicable." Delete providing that such alignment does not impact resource values additionally.	17V	Comment noted. Table 2-6, Measure 3 revised to clarify text.
17W	Table 2-5 #4	Also include, "To satisfy conductor-clearance requirements (NEEC) and Rocky Mountain Power's Vegetation Management Specification Manual and Standard FAC-003-1 Transmission Vegetation Management Program."	17W	Comment noted, but not incorporated. Table 2-6, Measure 4 is intended to be a non-standard treatment of right-of-way clearing, provided it meets NERC and DOE requirements for vegetation management.
17X	Table 2-5 #5	Rocky Mountain Power does not always have control over access to certain areas. This measure must be revised to read, "...all access that is undesired or not required for maintenance will be closed, where feasible, using the most..."	17X	Comment noted. Table 2-6, Measure 5 has been revised.
17Y	Table 2-5 #6	Modification of structures is not always feasible depending on the geotechnical conditions. Therefore, this statement needs to be revised to read, "Where possible, tower design or an alternative tower type may be used to minimize ground disturbance, operational conflicts, and/or visual contrast."	17Y	Comment noted. Table 2-6, Measure 6 has been revised to reflect parameters of geotechnical conditions.
17Z	Table 2-5 #7	Depending on route alignment, it is not reasonable for Rocky Mountain Power to avoid all wetlands, riparian areas, water courses and cultural sites. Consultation with the appropriate agencies has taken place and necessary permits will be acquired USACE and SHPO. Therefore, this measure needs to be arranged placing the sentence "Within the limits of standard tower design..." at the beginning to emphasize that this measure is contingent on reasonable placement of towers during the design process.	17Z	Comment noted. Table 2-6, Measure 7 has been revised.
17AA	Table 2-5 #10	It is not reasonable or required for Rocky Mountain Power to use dulled metal finish on all towers. Revise this statement to read, "...will be used to reduce visual impacts when necessary or required by the agency."	17AA	Comment noted, but not incorporated. Table 2-6, Measure 10 is a selective mitigation measure used to reduce visual impacts from the glare of galvanized metal. This measure will be required on BLM-administered lands and is recommended on all other private and state lands as well as to reduce visual impacts.

COMMENT(S)

17 ROCKY MOUNTAIN POWER (continued)



Appendix 1. Recommended Corrections to the DEIS

17N	Table 2-6 #11	As currently written, this statement does not explain what qualifies as a "highly sensitive location". This should be revised to read, "...in highly sensitive locations when requested by the agency."
17O	Table 2-6 #12	The following text needs to be added to clarify how this determination would be made. "Clearing of the ROW would be done in accordance with Rocky Mountain Power's Vegetation Management Specification Manual and Standard FAC-003-1 Transmission Vegetation Management Program."
17P	Section 4.2.3.3	First sentence of this section on mitigation planning must be revised to read that "would be implemented when necessary". As it currently reads, it is incorrectly stated that these measures would be implemented even when not required by the agency.

RESPONSE(S)

17AB	Comment noted. Table 2-6, Measure 11 has been revised.
17AC	Comment noted, but not incorporated. See responses to Comments 17W and 17X.
17AD	Comment noted, but not incorporated. BLM will require implementation of selective mitigation measures to reduce impacts to wildlife and vegetation resources.

RESPONSE(S)

COMMENT(S)

18 ATLANTIC RICHFIELD COMPANY



Duronda Smith
Manager-Discontinued Operations

1701 Summit Avenue, Suite 2
Plano, TX 75074
Phone: 972-509-7001
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E-mail: smithd692@bp.com

August 16, 2009

Bureau of Land Management
Attn: Mike Nelson
2370 S. 2300 W.
Salt Lake City, UT. 84119

Re: Oquirrh Mountain Proposed Transmission Line

Dear Mike:

With this letter, Atlantic Richfield Company offers the following comments regarding the captioned Transmission Line Project:

Atlantic Richfield owns property upon which it appears Reach 225 and 220 will traverse with regards to the proposed route near Tooele, Utah. Included within this property is the former International Smelter NPL Site that has been remediated as part of the NPL Process. The former site is now encumbered by Institutional Controls comprised of a Conservation Easement and various Environmental Covenants. Please be advised that the builder and owner of the proposed transmission line must take into account and comply with the restrictions on land use included in these documents. Restrictions include; limited access, no new structure construction and limits on ground disturbance. For your information and reference I have attached the Conservation Easement currently in place for the NPL Site.

Please give myself or Steve Anderson of Anderson Engineering Co., Inc. a call when there are further questions concerning this property.

Kind Regards,

Cc: Steve Anderson

See response to Comment 2M above. The Project Proponent held meetings with ARCO, EPA, and UDWR in October 2009 regarding crossing this property and potential restrictions and mitigation measures.

18A



A BP affiliated company

RESPONSE(S)

COMMENT(S)

19 RIO TINTO – KENNECOTT UTAH COPPER

Kennecott Utah Copper
 PO Box 6000
 Magnolia, UT 84034
 801-369-6000

Clayton Walker
 Vice President, Projects & Value Generation

August 12, 2009

Michael G. Nelson
 Assistant Field Manager
 Bureau of Land Management
 Salt Lake Field Office
 2370 South 2300 West
 Salt Lake City, UT 84119

RE: Draft Environmental Impact Statement for the Mona to Oquirrh
 Transmission Corridor Project

Dear Mr. Nelson:

Pursuant to the public comment period noted in the April 2009 Draft Environmental Impact Statement ("DEIS") for the Mona to Oquirrh Transmission Corridor Project, Kennecott Utah Copper, the owner ("Owner") of the referenced parcel, recommends the following routes for Rocky Mountain Power's "Limber to Oquirrh" and "Limber to Terminal" transmission lines.

**Limber to Oquirrh
 (East-West 345kV transmission line through Barney's Canyon area)**

Preferred Route

The preferred route for Kennecott Utah Copper is through the North Oquirrh Management Area (NOMA), where there are already transmission lines. While it is understood that the BLM does not favor the "Limber to Oquirrh" transmission route through the NOMA, Kennecott strongly recommends that the BLM reconsider, as it is unnecessary to create another transmission route when one already exists. It should be noted that Kennecott Utah Copper donated the land currently called NOMA to the BLM.

19A

19A Comment and route preference noted.

Additionally, Kennecott recommends that the transmission line avoid the area known as "Barney's Canyon" which is an active mining area. Furthermore, Kennecott recommends that the transmission line follow the Rocky Mountain Power route until it turns south below the Copperton Concentrator. At this point, we recommend the transmission line continue east to Highway 111 – Baucus Highway. Please see the attached map.

19B

The Proponent has revised the alignment of alternative routes to avoid potential mining operation conflicts in Dry Fork Canyon (see Figures 2-3 and 2-5) based on discussions with Rio Tinto staff.



RESPONSE(S)

COMMENT(S)

19 RIO TINTO – KENNECOTT UTAH COPPER (continued)

Michael G. Nelson
August 12, 2009
Page 2

19C **Limber to Terminal
(345kV transmission line around north end of the Oquirrhs)**

19C Preferred Route
Kennecott Utah Copper prefers routing the transmission line along the north side of the I-80 corridor, as Kennecott plans on expanding the Tailings Impoundment located between Highway 201 and I-80.

Comment noted. The location of alternative routes had accounted for Kennecott's publicized expansion plans of the tailing ponds to the east, as discussed with Salt Lake City and Salt Lake County planning departments in 2008.

The basis for Kennecott's preferred route is the future expansion options and potential stabilization of the east wall of the south Tailings Impoundment. Again, please see attached map.

19D Also, please note that Kennecott is in agreement with the Salt Pointe Land Company and Lake Point Land Company in regards to the alignment on parcel No. 05-0-021-0002, located in Lake Point. Kennecott owns an aqueduct underneath Rocky Mountain Power's proposed route. This aqueduct is significant to Kennecott's operations on the north end of the Oquirrhs and must be avoided at all costs.

In response to Draft EIS comments, Links 365 and 366 have been adjusted in the Final EIS where the subject property is located (see Figures 2-3 and 2-6) in order to avoid conflicts with the aqueduct.

If you have any questions regarding the recommendations listed above, please contact Steve Schnoor, Land and Water Manager, at 801.556.3317.

Sincerely,

Clayton Walker

cc: Steve Schnoor
Attachments

RESPONSE(S)

COMMENT(S)

20 UTAH STATE UNIVERSITY



August 28, 2009

Mike Nelson, Realty Specialist
BLM Salt Lake Field Office
2370 S. 2300 W.
Salt Lake City, UT 84119

Dear Mr. Nelson:

I am writing this letter to express my concerns in the placement of the Rocky Mountain Power transmission lines in Tooele County as part of the Mona to Oquirrh project. The placement of the proposed transmission lines could have an impact to the Utah State University – Tooele Regional Campus. Allow me to outline my objection.

The USU-Tooele Regional Campus is about to embark on the development of a 50 acre educational center. In cooperation with the Tooele County School District and the Tooele Applied Technology Center, a series of educational building are either in the final planning stages or under construction. The property in question is located in the southwest corner of Tooele City, in the area known as the old airport. Along the east boundary of the 50 acre campus is a residential area. To the west is the railroad tracks and the Utah Industrial Depot.

There is proposed, alternative transmission line from the proposed Limber Station to the Terminal Station and/or Oquirrh Station that is sited along the railroad line less the 2,000 feet from the center of our campus. The proposed alternative line, colored blue on the maps I have reviewed, will restrict access and increase safety concerns for the 845 USU students, the 400 Tooele Applied Technology Center students, and more than 600 Tooele County School District students. The student, faculty, staff, and parent population moving through the area, dangerously close to 345KV lines, would exceed 2,000 per day. In addition, Tooele City has a subdivision platted along the transmission corridor that will eventually house 7,000 residents. In terms of exposure of the power lines to the general public, you can't find an area of the county with a greater population density!

My position on the placement of the alternative route along the western, railroad corridor of Tooele City is simple: it is a misguided idea ignorant of population density and future land utilization for the public good – education. We must limit the negative impacts of the proposed alternative transmission lines on the USU Tooele Regional Campus and partnering education facilities. I firmly recommend the Rocky Mountain Power Mona to Oquirrh proposed transmission lines follow a route through the least populated west bench of the Tooele Valley.

Thank you for considering my opinion on this issue. I can be reached at (435) 882-6611 for further comment. With open and honest discussions, I believe we can arrive at a suitable solution.

Sincerely,
Gary S. Straquadine, PhD
Dean and Executive Director

20A See response to Comment 13A.

20B Comment and route preference noted.

20A

20B

RESPONSE(S)

COMMENT(S)

21 RAPTOR INVENTORY NEST SURVEY PROJECT

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC COMMENT

Submitted by:

RAPTOR INVENTORY NEST SURVEY PROJECT
ROBYN A. MACDUFF, DIRECTOR
9887 ALBURY ROAD
SANDY, UT 84092

AUGUST 12, 2009

The Raptor Inventory Nest Survey (RINS) Project is pleased to have an opportunity to submit its Public Comments concerning the Draft Environmental Impact Statement for the proposed Mona to Oquirrh Transmission Corridor Project. This project will have a significant impact on raptor populations along the route that will ultimately be selected for this project and these impacts will extend well beyond the period of the construction of the transmission line.

The Public Comments submitted by the RINS Project are based on more than a decade of data collection on raptor nest activities in the areas being considered for the new transmission corridor. It is well worth noting that this data collection is the result of thousands of hours of effort by highly committed volunteers. RINS volunteers, at their own expense, make multiple visits to their assigned USGS quadrangles during the nesting season, monitoring status of their nests and preparing reports documenting their observations. The resulting data associated with over 3,300 nests provides not only a measure of the success of the raptor nesting activities, but also an assessment of raptor populations in general and of the overall health of the larger West Desert Region. Finally, additional volunteer effort has been invested in Rush Valley in order to address the potential impact of the proposed Mona to Oquirrh Project.

RINS volunteers have participated in Public Open House meetings, reviewed the Draft Environmental Impact Statement and surveyed portions of the routes that are being considered for the transmission corridor. Based on these activities, the Public Comments submitted by the RINS Project will address issues that have been identified and will present Recommendations for consideration.

ISSUES

The assessment of the Draft Environmental Impact Statement (EIS) is severely constrained by the lack of data on raptor populations for the potential routes for the transmission corridors. Maps are included which

COMMENT(S)

RESPONSE(S)

21 RAPTOR INVENTORY NEST SURVEY PROJECT (continued)

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
 DRAFT ENVIRONMENTAL IMPACT STATEMENT
 PUBLIC COMMENT
 Submitted by: RAPTOR INVENTORY NEST SURVEY PROJECT

Identify Core Raptor Nesting Areas. However, areas of significant raptor nesting activities have not been included. For example, the Saint John quadrangle, located on route A1 – BLM Preferred and A2 – Proponent's Proposed Action (A1/A2), is not identified as a Core Raptor Nesting Area although 88 nests have been documented in the quadrangle. The data collection procedures and timetables are not included in the EIS, so an assessment of the accuracy is not possible. During 2009, there have been significant numbers of new, active nests identified along the A1/A2 route including Red-tailed Hawk, Swainson's Hawk, Long-eared Owl, Great Horned Owl and Ferruginous Hawk. These raptor populations are likely to significantly impact the construction schedule for the project since the Construction Restrictions will extend from December through August 15.

21A

RECOMMENDATIONS

1. Preferred Action: Alternative B1 – East Rush Valley

Route A1/A2 in Rush Valley as stated in the EIS have the greatest impact on Core Raptor Nesting Habitat with 16.7 miles. This assessment clearly understates the impact on raptor nesting activities. With over 150 nest sites documented in the Vernon North East, Saint John and South Mountain quadrangles, the A1/A2 route transits one of the most heavily populated raptor areas in the West Desert Region. This is also a highly productive agricultural area that is of significant value to raptors and other wildlife.

21B

It is recommended that the Alternative B1 – East Rush Valley be selected as the Preferred Alternative. The EIS describes this alternative as having the "Most moderate impact." There are significantly fewer nesting sites along this corridor. There is an existing transmission corridor that was developed for mining operations in Mercur that could be used and there is significantly less impact on agricultural activities. This area has also been severely degraded by extensive OHV utilization. Included with these comments is a report describing OHV impact on the Five Mile Pass area.

21C

2. Limber Substation

The EIS indicated that the proposed Limber Substation is planned to occupy 370 acres in a Core Raptor Nesting Area. This very large area would significantly reduce the availability of raptor nest sites.

21D

It is recommended that the Limber Substation be reduced in size and be relocated to the east side of the Mormon Trail Road.

21E

The Draft EIS acknowledged the importance of this area for nesting raptors in Section 3.2.3.2, Section 3.2.3.3, and Section 4.2.3.4. Core Raptor Nesting Areas, areas supporting high concentrations of raptor nests, were delineated. The data used for this analysis include nest locations obtained from the RINS in 2008. The Draft EIS acknowledges that once a route is selected through the NEPA process, pre-construction surveys for raptor nests will be completed. Species-specific seasonal restrictions and spatial buffers will be implemented for active nests for all construction activities.

21A

Within the Vernon North East quadrangle, RINS data includes 25 raptor nests within the 2-mile-wide study corridor for alternatives A1/A2 data. This area was designated as a Core Raptor Nesting Area. There is one nest within the A1/A2 study corridor in the Saint John quadrangle and four nests within this study corridor in the South Mountain quadrangle. However, portions of these quadrangles to the west of the study corridor do support higher concentrations of raptor nests. The BLM acknowledges the importance of this area as raptor habitat, and the "miles of Core Raptor Nesting Areas crossed" metric represents an index of relative use by nesting raptors. As mentioned in response to Comment 21A, pre-construction surveys for raptor nests will be completed once a route is selected through the NEPA process.

21B

21C

Comment and route preference noted.

Although the proposed Limber Substation site is located along the extreme southern edge of a Core Raptor Nesting Area, there are no RINS nests within this area. As described in the Draft EIS, vegetation communities on the site include non-native grassland (90 percent) and big sagebrush (10 percent). No trees or other nesting substrates for raptor species that nest above ground are on the proposed Limber Substation site.

21D

In addition, while the Limber substation site would be approximately 370 acres in its entirety, only 155 acres would be occupied by the substation yard, and the remaining acreage would be undeveloped and used as a buffer to adjacent land use.

21E

See responses to Comments 1A and 21D.

COMMENT(S)

RESPONSE(S)

21 RAPTOR INVENTORY NEST SURVEY PROJECT (continued)

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
 DRAFT ENVIRONMENTAL IMPACT STATEMENT
 PUBLIC COMMENT
 Submitted by: RAPTOR INVENTORY NEST SURVEY PROJECT

3. Maintenance Road Access

Regardless of the eventual location of the power corridor, access to the power line maintenance road should be restricted. Left open, these roads would invite significant levels of OHV/ATV utilization, which leads to habitat degradation and erosion, camping, discharging firearms, and target practice. There is a positive correlation between easy access into new areas and increased roads and trails. This increased human activity significantly affects wildlife including raptor-nesting activities.

Comment noted. Impacts related to public access to access roads are discussed in Section 4.2.3.4 of the Final EIS. In addition, where practicable, access roads would be closed on BLM-administered lands to minimize public access and associated impacts.

21F

21F

4. Route A1/A2

If the preferred route, A1/A2, is selected, construction should be limited to the eastern edge of the corridor that has been identified. Maintaining as much distance as possible from the Juniper-Sagebrush ecotones, since the boundary constitutes valuable habitat for raptor nest sites. Specifically through Vernon NE, Onaqui Mountains South, Saint John, and South Mountain quadrangles.

21G

21G

Comment noted.

5. Post-Construction Monitoring

The EIS does not address post construction monitoring of the impact of the transmission lines on raptor nesting activities and raptor populations. Post construction monitoring would test the assumptions made in the EIS, identify possible mitigation needs and inform future decision-making.

21H

21H

As noted in Section 2.8 of the Draft EIS, the transmission lines will be designed in accordance with *Avian Power Line Interaction Committee* standards to eliminate any potential for electrocutions. Pre-construction surveys will be conducted to locate active raptor nests, and seasonal restrictions and buffers will be applied around all active nests to minimize disturbance of nesting raptors. At this time, there is no plan for post-construction monitoring of raptor species as a condition of the right-of-way grant.

RESPONSE(S)

COMMENT(S)

22 TOOELE CITIZEN'S COMMITTEE

Brad Pratt
<bradpratt7@me.co
m>
07/13/2009 05:17
PM

To
UT_M20TL_EIS@blm.gov
cc

Subject
Google Earth Placemark: Brad&Kaye
Pratt Proposed RMP Route.kmz

Attn: Mike Nelson, BLM Salt Lake Field Officer

As a way of introduction, I am the elected Chairman and Spokesperson for the Tooele Citizen's Committee who are opposing the Proposed and Alternate Routes running through the residential areas in Tooele Utah. Members of the Committee voted in favor of my proposed route attached at our last meeting Thursday July 9, 2009 and asked me to present it to the BLM and Rocky Mountain Power for consideration. We are not against Rocky Mountain Power; but we are steadfastly against where they want to place their lines. It is unacceptable to us as residents. We also realize the need to move forward by Rocky Mountain Power and the BLM and that part of the process of opposing the project is to also offer valid solutions to assist in resolving the issues.

At the BLM Meeting held in Tooele on June 23, 2009 I spoke with Brandon Smith, Rocky Mountain Power Project Manager suggesting the route I have attached as being a better route for Section 190 of the Mona to Oquirrh Transmission Project. My proposed route shifts RMP's route approx 1.8 miles South which I was told was within your scoping allowance variance.

It is several miles shorter than any other proposed or alternate routes to reach the Oquirrh Substation and moves the lines away from all residential areas in Tooele. It is invisible from all roads entering and exiting Tooele City. It eliminates the route involving the East

The BLM and the Proponent reviewed the suggested alternative route. This alternative route was considered but eliminated from further analysis as a result of the terrain and construction difficulties, increase in road construction and overall construction costs, as well as long-term operation and maintenance of the transmission lines at elevations over 9,000 feet msl. Winter snow loading at this elevation would make maintenance or emergency access to the line in the winter extremely difficult.

22A

22A

RESPONSE(S)

COMMENT(S)

22 TOOELE CITIZEN'S COMMITTEE (continued)

22A Bench of Tooele and the North Oquirrh Management area and it connects at Butterfield Pass following the BLM's Alternate Route to the Oquirrh Substation.

I spoke again with Brandon Smith last Friday July 10, 2009. Mr. Smith said Rocky Mountain Power was sending engineers to meet with the BLM on Tues, Wed and Thurs of this week to look at our area along with several issues along the Mona to Oquirrh Corridor. And following their assessment, he wanted to schedule a meeting with myself and a small group of representatives from our Committee.

Please review the attached route and also provide it to Mr. Smith so we can work together towards a positive solution for all involved. Thank you for your help and assistance. We appreciate your efforts and the protection of the BLM. I look forward to hearing from you and Mr. Smith soon. I can be reached via cell 435-840-8173 or 435-840-2467. email bradpratt7@hotmail.com or kmppratti@hotmail.com

Sincerely,
 Brad Pratt, Chair and Spokesperson
 Tooele Committee Opposing RMP/ M20 Routes through Tooele Valley

Under separate letter I have sent my written comments as to the negative impact this would be on Tooele Valley and it's residents.

Google Earth streams the world over wired and wireless networks enabling users to virtually go anywhere on the planet and see places in photographic detail. This is not like any map you have ever seen. This is a 3D model of the real world, based on real satellite images combined with maps, guides to restaurants, hotels, entertainment, businesses and more. You can zoom from space to street level instantly and then pan or jump from place to place, city to city, even country to country.

Get Google Earth. Put the world in perspective.
<http://earth.google.com>
 (See attached file: Brad&Kaye Pratt Proposed RMP Route.kmz)

Individuals

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RESPONSE(S)

COMMENT(S)

23 PETE GRIMM

Pete Grimm
grimm.pete@gmail.com
 To UT_M2OTL_EIS@blm.gov
 06/24/2009 11:23
 cc AM
 Subject mona to oquirrh transmission line

Analine Management Co.
 (successor in interest to Globe Investment Company)

c/o Pete Grimm, 5145 South 2100 East, Holladay, UT 84117 801-277-5719

June 24, 2009

Cindy Ledbetter
 Bureau of Land Management
 Salt Lake Field Office
 2370 South 2300 West
 Salt Lake City, UT 84119

Dear BLM,

I strongly object to the proposed route for the Mona to Oquirrh power transmission line corridor that skirts the southern edge of Tooele City – the section that is labeled “190” on one of the maps.

23A

23A Comment and route preference noted.

RMP talks of aiding development. And, this segment of the proposed line may indeed benefit development in the Salt Lake Valley; but it will certainly not aid development in Tooele Valley. That is unless you call the destruction of the best residential area of the County ‘development’

In my opinion, a better definition of ‘development’ would be to improve all the ground touched by a proposed project. And, there are portions of Tooele County that would probably be improved (or at least not so badly hurt) by a new power line corridor. But, the nicest residential and potential residential property in the County is not a property that would be improved by the addition of a high-voltage transmission line. A power line would decrease the value of this property, and most of the tax payers that live there now would move somewhere else. I do not think that Tooele would like to see their South bench become a new industrial development.

23B

23B

Socioeconomic impacts of the proposed and alternatives routes, including effects on property values, were identified in the Draft EIS, Section 4.4.2.

Although a different route may be slightly longer or offer other challenges, there are several alternative routes for this power line corridor that would not destroy the beauty and residential value of Tooele’s South bench.

I had thought that a route up Skull Valley made the most sense. Yet I have been told that the military’s right to fly down to the 100ft level might be hard to get waived. I do not know what the power requirements are at Dugway; but I wonder if the benefits the military would receive through greater power delivery to Dugway might not encourage them to abandon the flight rights along a power line corridor. If so, I suggest that Skull Valley would be the best route for a new power line.

23C

23C

A route through Skull Valley was not considered for the Project. The Proponent’s purpose and need for the Project identifies a need for a substation in Tooele Valley to support future electrical loads. Routing a line in Skull Valley would not meet this stated need for the Project.

COMMENT(S)

23 PETE GRIMM (continued)

Failing the military concession, perhaps the best alternative route would be to keep the corridor along the West edge of Tooele valley, all the way North of Grantsville. Then the line could follow the freeway East, and, after Lakepoint, take the routes indicated on your maps to the Terminal or Oquirrh substations. Sub-lines could branch East to serve the central valley as needed. If you worry about the congestion at Lakepoint, you could easily route the new power line offshore across the shallow South end of the lake – or run a short section higher on the North end of the Oquirrths – or you could simply replace the existing 138kV line there with the new 500kV one. Since the existing line transfers power from the East to the West, and the new line would be transmitting power from the West to the East, the benefit of the new over the existing is potentially a 638k differential (if I understand things correctly). Except for that short section through the lake or along the North end of the Oquirrths, this West-edge-of-Tooele-Valley route would be flat and easily accessible for construction, repair and fighting fire and other issues – much better than any route across the Southern or Central Oquirrths or up Middle Canyon.

23D

And speaking of Middle Canyon – that looks like a bad idea to me as well. Most of the trees near Tooele City are on the North-facing slope of that canyon – right where you are proposing an alternative route. As I understand it, you would be cutting those trees and destabilizing the slopes and doing who-knows-what to the air quality in Tooele Valley and to the watershed in Middle Canyon. All are things that I find very objectionable. And of course, none of those issues come into play if you take the West-edge-of-Tooele-Valley route.

23E

I hope you will consider the significant costs that the RMP power transmission corridor would impose on ground just South of Tooele City and conclude that the West-edge-of-Tooele-Valley route would be a better choice.

23F

Sincerely yours,

Pete Grimm
801-277-5719
Grimm.pete@gmail.com

cc: Brandon Smith, RMP project manager
Paul Parker, EPG
Jerry Hurst
Coleen Johnson
Bruce Clegg
And others...

RESPONSE(S)

The Proponent’s system reliability need for the Project is to have both 345kV lines in separate corridors from Limber to Oquirrh and Limber to Terminal. Co-locating the lines adjacent to each other would add unacceptable risk of a simultaneous outage to these segments of the transmission system. Additionally, the route suggested in the Great Salt Lake would present more constructability and long-term operation issues (including water construction and corrosion of metal in a salt water environment) and would result in higher construction and maintenance costs.

23D

Additionally, this suggested route would likely result in greater impacts on aquatic and wetland resources in the Great Salt Lake, as well as require additional federal and state permits to locate structures in the Great Salt Lake than in the proposed routes.

Replacing the existing 138kV line with the proposed 345kV line is not a feasible option, as the 138kV line provides service to existing Tooele Valley substation facilities.

23E

Comment and route preference noted.

23F

See response to Comment 23B.

RESPONSE(S)

COMMENT(S)

24 JOHN AND CATHIE HANSEN

"John Hansen"
 <jhansen@companionsystems.com>
 06/19/2009 09:51 AM

To

<patrick@TooeleCity.org>, <bsc@netscape.com>, <prudens@ldsces.org>, <igowinas@utah.gov>, <goodfellow@utahsenate.org>, <mmadsen@utahsenate.org>, <UT_#207L_EIS@lm.gov>, <philippowlic@utah.gov>, <reap@utah.gov>, <rlwilson@utah.gov>, <jlogan@utah.gov>, <crevelt@utah.gov>, "Cc:" <rvtc@yahoo.com>

cc

<jhansen@companionsystems.com>

Subject

Mona to Oquirrh Power Transmission Line

To Whom It May Concern:

We write this email on behalf of ourselves, our family, and our community to make it clear that we are completely opposed to power lines running on the Southeast bench of Tooele or running thru Tooele City proper in anyway!

We are sure that you are aware of the Mona to Oquirrh power transmission line and the proposed routes associated with it. If the lines must travel thru Tooele Valley then the only acceptable route travels along the west side of the valley to I-80 and then to Lakepoint.

24A Comment and route preference noted.

24B This alternative route was considered for the Limber to Terminal portion of the Project, as well as the Limber to Oquirrh segment. See Draft EIS Section 2.3.4 (Alternative H) and Section 2.4.2.5 (Alternative G).

COMMENT(S)

24 JOHN AND CATHIE HANSEN (continued)

RESPONSE(S)

24C The East bench route has many flaws to include the following:
 -Negative impact on the Biological Resources in this area which include a large community of wildlife. This area is pristine and untouched and needs to stay that way for the good of all the wildlife in the area.
 -Negative impact on the Visual Resource / sensitive viewing area that all of the Tooele Valley enjoys. This includes the area below the "T" that will be impacted by these lines. The lines will also crossover the Settlement Canyon dam / recreation area and have a terribly negative impact on a key Tooele recreation area.
 -Negative impact on the Earth Resources by creating a 150' to 300' area that will be grubbed and cleared of all natural vegetation and promote erosion in the area.
 -Greatly increased risk of fire in a densely wooded area that is not easily accessed by the Tooele County / City volunteer fire department.
 -Negative impact to property values on the entire East side of Tooele, especially in the homes located on the upper bench.

24D These are just a few of the many reasons that the East Bench proposed route is a BAD idea. We are tired of everyone just sticking it to Tooele, we have MagCorp, we have the nerve agent, we have Dugway, we have the west desert hazardous waste companies, we already do more than our fair share of the dirty work. These lines should run down the Salt Lake Valley not ours. We will fight this with any and every means available to us.

24E We are proud to be residents of Tooele and hope that our children will feel the same way. Please help stop this destruction of the beautiful East bench that all of us have enjoyed for our entire lives, we want our children and grandchildren to enjoy it the same way that we have.

24F Very Respectfully,
 John & Cathie Hansen
 739 E Oakridge Drive
 Tooele, UT 84074

John Hansen
 Chief Operating Officer

(Embedded image moved to file:
 pic10808.jpg)

801.936.8082 ext:387
 801.294.3537 fax
 435.830.3857 cell

 645 West 200 North
 North Salt Lake
 Utah, 84054

jhanzen@companionsystems.com
 www.companionsystems.com

Biological impacts associated with Alternatives D, E1, and E2, which use the foothills south of Tooele, were identified in Section 4.2.3.4 of the Draft EIS, as well as Section 2.9 (Comparison of Alternatives).

Visual impacts associated with Alternatives D, E1, and E2, which use the foothills south of Tooele, were identified in Section 4.2.7.5 of the Draft EIS, as well as Section 2.9 (Comparison of Alternatives). The Proponent has made an alignment adjustment of the route to minimize crossing the Settlement Canyon reservoir. This change is depicted in the Final EIS, Section 2.3.3.

Alternatives D, E1, and E2 would require a 150-foot wide right-of-way. Vegetation over 12 feet in height would be cleared from the right-of-way by mechanical methods, but the right-of-way would not be graded down to mineral soil. Ground cover and low-growing vegetation would remain in the right-of-way. Erosion control methods and a reclamation plan will be implemented to minimize soil erosion.

It is unlikely that Project facilities would cause fires. Transmission lines may attract lightning; however, the shield wire (located along the top of the structures) provides protection to the system. Lightning that would hit the area will potentially hit the line rather than a house or tree. There could be potential short-term impacts during construction related to increased risk of ignitions due to construction activities. Fire safety mitigation measures and protocols are included in the fire protection section of the Plan of Development and implemented during construction and maintenance activities.

As part of construction for the transmission lines, access roads will be constructed to each tower location. These access roads can be used for fighting wildfires, if necessary, as well as serve as a fire break along with the vegetation clearing of the right-of-way.

24G See response to Comment 23B.

RESPONSE(S)

COMMENT(S)

25 PETER VENTURA

Peter Ventura
<entutah@msn.com>

06/26/2009 01:03 PM
To: <ut_mzotl_eis@blm.gov>, <jsharvey@utah.gov>

Subject: Mona to Oquirrh Transmission corridor proposal

Dear Sirs,

I attended the open house in Tooele on Tuesday evening and saw the maps and the proposals for the Mona to Oquirrh Transmission Corridor Project. It appears you (the BLM) and Rocky Mountain power would prefer to run the new line over the Oquirrh mountains in an area that is close to residential and possibly up the nicest canyon we have in the valley.

At issue is that last little piece that goes over the Oquirrh mountains.

I would suggest other routes to you with hopefully good reasons that would make these routes more viable than what you presently prefer.

- 1) From the substation, in Tooele run the line next to the railroad tracks (already an eyesore) over to Lake point and then over the mountain. The existing 138kv line that comes from SLC could be eliminated and the new line to run in its place over the mountain. If you have all this power with the bigger transmission capability, that line from SLC would be unnecessary.

An alternative route along the railroad tracks and the north end of the Oquirrh Mountains was considered as part of the Draft EIS (Alternative I).

Replacing the existing 138kV line with the proposed 345kV line is not a feasible option as the 138kV line provides service to existing Tooele Valley substation facilities.

25A

2)

COMMENT(S)

25 PETER VENTURA (continued)

An alternative route along the west side of Grantsville was considered as part of the Draft EIS (Alternative G).
 Replacing the existing 138kV line with the proposed 345kV line is not a feasible option, as the 138kV line provides service to existing Tooele Valley substation facilities.

RESPONSE(S)

25B

a- From the substation, run the line west of Grantsville (this is an alternate route you have on the maps) to the Great Salt Lake and as you go around Lake Point run the line where the present 138kV line comes from SLC. This line that comes from SLC would be unnecessary and the new line can go up and over the mountain.

25C

b- Another alternative at the Lake Point area is to run the line in the lake. The lake is shallow there. There are core samples available from when the rail road put the rail road line next to the lake. The platforms can be large enough and easily built (now that the lake is low). This can be done. I've seen larger lines than what is proposed in Georgia run through swamp land and out in the ocean up the Georgia coast.

25D

3) From the substation, run the line further south over the mountain where people don't live: north of Stockton but south of Tooele. At the meeting, topography maps of the area compared your proposed routes with land further south were not available (elevation and terrain differences etc.)

25E

Running the line as you propose up the south side of Middle canyon with an easment of 75 feet to either side with the possibility of the easment being fenced would ruin Middle canyon. Most of the camping and cook out areas are on that south side. The image of the clear cut land up the canyon with fencing etc. in the nicest and one of the few canyons available to us is not what I want to see and is not a good option.

25F

Running the line across Vine Street/Middle canyon under the big "T" and then over, also ruin the view, runs across private property that is soe of the most desirable real estate in Tooele. Not a good option.

25G

Tooele does not benefit from this last bit of line going over the mountain to feed SLC. While I believe sacrifices need to be made for the common good, what sacrifices are the folks in SLC being asked to make? Why don't you run a line up the east side of the Oquirrh mountains for their benefit? What is Kennecott land being asked to sacrifice? The proposed route seems to "feed" Daybreak and their future construction plans. What sacrifices are Rocky Mountain power making? Yeah, they may have to spend more to go a different route but they don't live here.

25H

We unfortunately would get the power line towers through the valley and the towers through our nicest canyons or crossing the most expensive real estate property in the county (with a decrease in property value, decrease in esthetic value, decrease in tax revenue due to decreased construction). We also would get the disruption of our peace while the mess is being strung.

25I

We have not even addressed the wind gusts we get in this area and danger to residential by fire etc. nor the health risks of the power lines. (They don't put them up that high because we have Redwoods growing around here!!)

25J

At the next meetings would you address these proposals.

25K

Thank You,

25L

Peter Ventura, M.D.

25M

Windows Live™ SkyDrive™: Get 25 GB of free online storage. Get it on your BlackBerry or iPhone.

25B

25C

25D

25E

25F

25G

25H

25I

25J

25K

25L

25M

RESPONSE(S)

COMMENT(S)

26 J. MARK JACOB

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC OPEN HOUSE COMMENT FORM

The BLM would like to hear your comments on the project and the Draft EIS for the Mona to Oquirrh Transmission Corridor Project. The 90-day public comment period is May 15 – August 12, 2009.

Please return this comment form to the sign-in table or mail it to:

ATTN: Cindy Leebetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

You can also submit comments via email: UT_M2OTL_EIS@blm.gov

Completing this form will automatically add you to the mailing list. If you prefer to not be on the mailing list, please check the box below.

I do not wish to be on the project mailing list

Please address your comments about the project and/or the Draft EIS below:

I am a property owner near Elberta and this project line is proposed to cross approximately 1 mile of my land. My land is located in Sec. 13 next to the Church property. I agree with the Church and feel that this property has potential for future development of residential use. It has recently been rezoned by Utah County and this new information should be considered in this decision. I feel that this huge purchase will cause a detrimental effect and greatly decrease the value of my property. I feel that the power line should be brought along the blue route from the West through the

Eureka.
Please See back
J Mark Jacob
801 226-3407

26A

26B

On March 3, 2009, the Utah County Commission approved a zone change from Mining and Grazing-1 (M&G-1) to Planned-Community (P-C) for 25,752 acres of land owned by Corporation of the Presiding Bishop, administered by Farmland Reserve, Inc.. The zone change did not include any other property owners outside of Corporation of the Presiding Bishop. This information has been included in the Final EIS in Section 3.2.9.10.

Comment and route preference noted. Based on comments received on the Draft EIS, the proposed route has been shifted to the west by approximately 0.5 mile. The 0.5-mile shift to the west was implemented to minimize land use impacts along the proposed route. See Final EIS, Section 3.2.9.10 and response to Comment 23B.

26A

26B

RESPONSE(S)

COMMENT(S)

26 J. MARK JACOB (continued)

Tell us how to reach you
If you are not already on the project mailing list and would like to be kept informed about this project, include your name, address, phone number, fax, and e-mail. Please be advised that your entire comment (including your personal identifying information) may be made publicly available at any time.

CONTACT INFORMATION
Please print information clearly
Name: J. Mark Jacob Representing Agency or Organization: self
Address: 914 E. 300 N
City: Orem State: UT Zip: 84097
Daytime phone: 801-226-3407 E-mail address:

I feel that moving the line ~~3~~ 1/2 mile or so to the west along link 50 would put it closer to the mountains and would cause less damage. Construction costs would not be that much more.

----- FOLD HERE -----

Place Stamp Here

ATTN: Cindy Ledbetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

*Public comments must be postmarked by August 12, 2009

RESPONSE(S)

COMMENT(S)

27 UNIDENTIFIED

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC OPEN HOUSE COMMENT FORM

The BLM would like to hear your comments on the project and the Draft EIS for the Mona to Oquirrh Transmission Corridor Project. The 90-day public comment period is May 15 – August 12, 2009.

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Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

You can also submit comments via email: UT_M2OTL_EIS@blm.gov

Completing this form will automatically add you to the mailing list. If you prefer to not be on the mailing list, please check the box below.

I do not wish to be on the project mailing list

Please address your comments about the project and/or the Draft EIS below:

Stull Valley has not been looked at. Dargus
has a need for a Backup power source.
Runs down Stull Valley thru creek at the
North end ~~and~~ By the breez way they
Back feed down the west side of the
The Impact is less.

27A

27A See response to Comment 23C.

COMMENT(S)

28 KELLY R. ANDERSON

RESPONSE(S)

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC OPEN HOUSE COMMENT FORM

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You can also submit comments via email: UT_M2OTL_EIS@blm.gov

Completing this form will automatically add you to the mailing list. If you prefer to not be on the mailing list, please check the box below.

I do not wish to be on the project mailing list

Please address your comments about the project and/or the Draft EIS below:

THE PROPOSED HIGH VOLTAGE POWER LINE SHOULD NOT GO AROUND THE TOOELE VALLEY FOOTHILLS,

I RECOMMEND THE ROUTE GO EAST ON SR 73 ALONG THE SOUTH END OF THE OQUIRRH RANKE THEN NORTH AT CEDAR FORT AND OVER SOUTH MOUNTAIN TYPING IN TO THE WEST SIDE OF THE POWER LINE CORRIDOR TO WEST JORDAN SUB STATION.

THE PROPOSED ROUTE ACROSS THE TOOELE FOOTHILLS WOULD RUIN THE ESTATIC VIEW, REDUCE LAND VALUES AND CAUSE FIRE SAFETY CONCERNS

THE ROUTE AROUND THE SOUTH END OF THE OQUIRRH'S IS NOT POPULATED AND WOULD BE A MORE SAFE ROUTE.

This suggested alternative route would add approximately 35 miles in length to the Project (Alternative D and E2 are approximately 31 miles long) and cross the BLM's Five-Mile Pass OHV Recreation Area. Based on potential impacts on recreation, wildlife, vegetation, and cultural resources in the Five-mile Pass area and the additional route mileage, which would increase project costs substantially, this alternative was considered and eliminated from further analysis.

28A

28A

28B

28B

See response to comments 24C, 24E, and 24F.

28C

28C

Comment and route preference noted.

RESPONSE(S)

COMMENT(S)

28 KELLY R. ANDERSON (continued)

Tell us how to reach you
If you are not already on the project mailing list and would like to be kept informed about this project, include your name, address, phone number, fax, and e-mail. Please be advised that your entire comment (including your personal identifying information) may be made publicly available at any time.

CONTACT INFORMATION

Please print information clearly

Name: Kelly R Anderson Representing Agency or Organization: CONSERVATION CITIZEN

Address: 618 KINGSTON DR

City: TOOELE State: UT Zip: 84074

Daytime phone: (435) 882-7607 E-mail address: _____

FOLD HERE

Place Stamp Here

ATTN: Cindy Ledbetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

*Public comments must be postmarked by August 12, 2009

RESPONSE(S)

COMMENT(S)

29 ANDREA CAHOON

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC OPEN HOUSE COMMENT FORM

The BLM would like to hear your comments on the project and the Draft EIS for the Mona to Oquirrh Transmission Corridor Project. The 90-day public comment period is May 15 – August 12, 2009.

Please return this comment form to the sign-in table or mail it to:

ATTN: Cindy Ledbetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

You can also submit comments via email: UT_M2OTL_EIS@blm.gov

Completing this form will automatically add you to the mailing list. If you prefer to not be on the mailing list, please check the box below.

I do not wish to be on the project mailing list I am already on the list

Please address your comments about the project and/or the Draft EIS below:

Is there any reason why these lines for Salt Lake use can't take a more direct route through Utah County instead of again using Tooele as Utah's dumping ground?

I am most concerned with the power lines proposed through the Southeast part of Tooele City. The city has been trying to preserve the beauty of these foothills with a sensitive overlay district which prohibits development that will destroy the beauty of our valley. This will destroy that beauty. There are many parts of Tooele County that are already contaminated from previous mining activities. The land from 1000 North Drabury road is a super-fund site & can't be used for anything else. The lines could cross E-W where without cutting up the foothills.

I believe the proposed southeast location of lines also poses a fire risk and there is not any way to fight a fire in that area to keep the homes there safe. This area has some of the most expensive real estate in Tooele County and I am concerned ↓

29A The Draft EIS addressed alternative routes considered and eliminated in Section 2.6.2.2 (Level 1 Screening).

29B The Tooele City Zoning Map, dated February 15, 2006, identifies four sensitive overlay districts. Alternatives D, E1, E2, F1, and F2 of the Draft EIS would cross over one of these sensitive overlays, the South Gateway Overlay Zone. However, during a meeting with Tooele City on July 29, 2009, Tooele City did not identify any proposed sensitive overlay district(s) or changes to existing sensitive overlays districts.

29C As a result of comments on the Draft EIS, the Proponent has adjusted the alignment of Link 190 to the south to avoid crossing the Tooele City sensitive overlay zone. Currently alternatives D, E1, E2, F1, and F2 would not cross a Tooele City sensitive overlay zone.

29D The Carr Fork WMA is a Superfund site, also known as the Pine Canyon Conservation Area, as identified in the Draft EIS, Section 3.2.9.10. The Proponent is currently in discussion with the UDWR, ARCO, and the EPA regarding construction stipulations in the WMA.

See response to Comments 24E and 25F.

29D

RESPONSE(S)

COMMENT(S)

29 ANDREA CAHOON (continued)

Tell us how to reach you
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CONTACT INFORMATION
 Please print information clearly

Name: Andrea Cahoon Representing Agency or Organization: _____
 Address: 1289 Brandy Ln
 City: Pease State: Utah Zip: 84074
 Daytime phone: 435-883-8587 E-mail address: andcahoon@wirelessbeehive.com

that it endangers my home and others. Power lines of this magnitude also pose health risks to those nearby. Lots of people use this area for recreation, including neighborhood children. The wind in this area is severe ~~and~~ some existing power lines have been destroyed by the force of these winds. I am completely opposed to these lines being located in the southeast area of Jaredville FOLD HERE and the county foothills. Thank you for the opportunity to comment on this. Please listen to those who will be affected by this and have to live with your decisions. *Andrea Cahoon*

Place Stamp Here

29D

29E

29F

29E See response to Comment 25F.

29F Comment and route preference noted.

*Public comments must be submitted by August 15, 2000

RESPONSE(S)

COMMENT(S)

30 HOWARD YERKE

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC OPEN HOUSE COMMENT FORM

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Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

You can also submit comments via email: UT_M2OTL_EIS@blm.gov

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I do not wish to be on the project mailing list

Please address your comments about the project and/or the Draft EIS below:

1) The lines should be run to least impact present home owners, the nineteen acres of lines in the mountains looks to be the best at this time

30A

Comment and route preference noted.

2) Follow the old railroad tracks to the bench area and keep from being in the foot hills or a not a great Bend area.

30B

See response to Comment 25A.



RESPONSE(S)

COMMENT(S)

30 HOWARD YERKE (continued)

Tell us how to reach you
If you are not already on the project mailing list and would like to be kept informed about this project, include your name, address, phone number, fax, and e-mail. Please be advised that your entire comment (including your personal identifying information) may be made publicly available at any time.

CONTACT INFORMATION
Please print information clearly

Name: Howard Yerke Representing Agency or Organization: N/A
Address: 197 VAL VISTA DR.
City: TOOELE State: UTAH Zip: 84074
Daytime phone: 435-882-2534 E-mail address: _____



ATTN: Cindy Lebetter,
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

*Public comments must be postmarked by August 12, 2009

RESPONSE(S)

COMMENT(S)

31 TONY FLIPPO

MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
DRAFT ENVIRONMENTAL IMPACT STATEMENT

PUBLIC OPEN HOUSE COMMENT FORM

The BLM would like to hear your comments on the project and the Draft EIS for the Mona to Oquirrh Transmission Corridor Project. The 90-day public comment period is May 15 – August 12, 2008.

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Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

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Completing this form will automatically add you to the mailing list. If you prefer to not be on the mailing list, please check the box below.

I do not wish to be on the project mailing list

Please address your comments about the project and/or the Draft EIS below:

It is apparent that the parties preparing this EIS have failed to use all elements of an EIS. The actual social and economic impacts of the EIS would be detrimental to the Toole City area. This is unacceptable due to the multiple alternative routes available for the power line. We owe the future development of Toole City additional power to ensure development is possible, but not at the cost that will be paid if the route specified is used. We also owe the future the use of and views of the only panoramic area in Toole City. This measure will be lost to the future if the specified route is used. Rocky Mt Power needs to make a honest effort to review the alternate routes, not the one that gets their "precut book" the best. I know Sam and I am sure most people, are tired of large corporate power taking what they want without consideration of what it does to the little guy. I would request Rocky Mt Power be forced to develop an EIS that meets the real intent of such.



31A

31A

The BLM prepared the Draft EIS and range of alternatives. The Proponent submitted a proposed action for consideration, along with a purpose and need for the Project. The range of alternatives considered 14 different alternative alignments for the project and more than 450 miles of line routes. Six alternative route alignments between Limber and Oquirrh were analyzed in the Final EIS.

RESPONSE(S)

COMMENT(S)

31 TONY FLIPPO (continued)

Tell us how to reach you
If you are not already on the project mailing list and would like to be kept informed about this project, include your name, address, phone number, fax, and e-mail. Please be advised that your entire comment (including your personal identifying information) may be made publicly available at any time.

CONTACT INFORMATION
Please print information clearly

Name: Tony Flippo Representing Agency or Organization: _____
Address: 673 Deer Hollow Road
City: Tooele State: Utah Zip: _____
Daytime phone: _____ E-mail address: tonyflippo@hotmail.com

----- FOLD HERE -----

Place
Stamp
Here

ATTN: Cindy Ledbetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

*Public comments must be postmarked by August 12, 2009

RESPONSE(S)

COMMENT(S)
32 PETER VENTURA

**MONA TO OQUIRRH TRANSMISSION CORRIDOR PROJECT
 DRAFT ENVIRONMENTAL IMPACT STATEMENT**

PUBLIC OPEN HOUSE COMMENT FORM

The BLM would like to hear your comments on the project and the Draft EIS for the Mona to Oquirrh Transmission Corridor Project. The 90-day public comment period is May 15 – August 12, 2009.

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 Bureau of Land Management
 Salt Lake Field Office
 2370 South 2300 West
 Salt Lake City, UT 84119

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I do not wish to be on the project mailing list

Please address your comments about the project and/or the Draft EIS below:

The perception is that the proposed line from the substation in Tooele over the mountain benefits "day break" & SLCC while not benefiting Tooele.
 We would prefer the line go out to the Great Salt Lake (as outlined on the green line) and around the mountain.

This gives you a loop of power around the mountain & Tooele can be "fed" from the sub station.
 The reliability issue is theoretical at best.

The 2 power lines around lake point could be far enough apart to avoid a decrease in routing.

Why not run the power on the east of Oquirrh and through Camp Williams. Ask them to run it through their property.

be aware of reliability being an issue with lines & utilities to handle a post doesn't wash. (ie - run it up the east side of the Oquirrh mountains. or around lake point & not over the mountain).

32A

See response to Comment 23D.

32B

System reliability issues associated with the Proponent's purpose and need are identified in the Draft EIS, Appendix A. See also response to Comment 17A.

32C

See response to Comment 29A.

32D

See response to Comment 23D.

RESPONSE(S)

COMMENT(S)

25 PETER VENTURA (continued)

Tell us how to reach you
If you are not already on the project mailing list and would like to be kept informed about this project, include your name, address, phone number, fax, and e-mail. Please be advised that your entire comment (including your personal identifying information) may be made publicly available at any time.

CONTACT INFORMATION
Please print information clearly
Name: Peter Ventura, M.P. Representing Agency or Organization:
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City: Tooele State: Utah Zip: 84074
Daytime phone: (435) 833-9600 E-mail address: central@min.com



ATTN: Cindy Ledbetter
Bureau of Land Management
Salt Lake Field Office
2370 South 2300 West
Salt Lake City, UT 84119

*Public comments must be postmarked by August 12, 2009

COMMENT(S)

33 RANDY L. CHRISTENSEN

RESPONSE(S)

Mr. Mike Nelson,

I strongly disagree with Rocky Mountain Power's preferred route through the southeast bench of Tooele, as part of the Mona to Oquirrh power corridor for the following reasons.

This proposed route will bring a negative impact on the biological resources inside this area. These include deer, elk, wild turkeys, grouse and other wildlife. This area is pristine and untouched, and needs to stay that way for the good of all wildlife in Corner Canyon. There are four natural springs that provide vital water to wildlife and livestock in the canyon. (This is the only water source in the canyon.) I have enclosed documentation for these springs. These springs were not included in EIS. (This is a very critical omission.) Corner Canyon has one of the largest producing wells for Tooele City therefore; we must protect the quality of our well head.

Creating a 150 to 300' area, grubbed and cleared of all natural vegetation, will promote erosion to the area, and will have a negative impact on the earth's resources. (This grubbing would completely destroy the surface springs in Corner Canyon.) Tooele City engineers already have landslide and erosion concerns in the existing east bench subdivisions and this can only make the situation worse.

With my home, along with other homes, being within a few hundred yards of one proposed route, I am greatly concerned about the negative impact on human health. It has been proven that stray power from high voltage power lines can take a negative affect on humans. Another great concern is increased risk of wildfire in the densely wooded areas, which are also dangerously close to residents of Tooele. This area is not easily accessed by the Tooele County/City volunteer fire department, and brings a potential danger to those residing near the route.

The BLM and the community have a God given responsibility to work together in making responsible decisions regarding land management. These are just a few of the many reasons why the east bench route is a BAD idea.

Sincerely,



Randy L. Christensen
1332 East Cassity Drive
Tooele, Utah 84074
Cell # 801-641-3958

33A

Comment and route preference noted.

33B

See response to Comment 24C.

33C

The Draft EIS identified all known springs located within 600 feet of the alternative transmission line routes, as reflected in the Draft EIS, Sections 3.2.2.4 and 4.2.2.2. Of the four springs referenced in the comment, only Rensch Spring is within approximately 515 feet of Link 190A. The other springs are not located within 600 feet of any alternative route and are located south and uphill of Links 190 and 190A in Corner Canyon. Construction of the proposed project would not adversely affect active springs. The transmission lines and access roads will be designed to span or otherwise avoid all springs and seeps, and there will be no physical disturbance of any springs or adjacent areas. Specific measures to minimize the potential for erosion and sedimentation will be implemented during construction. These measures will be detailed in a formal Erosion Control Plan that will be prepared prior to initiation of construction.

33D

33E

See response to Comment 24E.

See response to Comment 23B and 24F.

COMMENT(S)

34 GEORGE C. ROBINSON

"George Robison"
<GRobison@tooeles
d.org>

07/16/2009 12:37
PM

To
<UT_M20TL_EIS@blm.gov>
cc
Subject
Mona/Oquirrh Transmission Line

Dear Mike,
I talked to you on the 16th and asked for a more detailed map of the transmission line and the dangers of the High Voltage lines. You said you would send me some items and that this was the comment period. I am sending the FAQ's that I have found and I hope you can move the lines a mile or 2 Southward from Tooele. Could you expound on these issue as it deals with a very high voltage system? Thanks

34A

34A

Comment and route preference noted. See response to Comment 34B below.

Impacts associated with health and safety of the transmission lines were addressed in the Draft EIS, Section 4.4.1.

Sincerely,
George Robison

FAQ for Health Effects of Transmission Power Line Magnetic and Electric Fields

This FAQ is designed to answer in a brief and readily accessible format questions frequently asked about the dangers associated with exposure to magnetic and electric fields emitted by transmission power lines.

The questions contained herein confined only to issues associated with the extremely low frequency electro magnetic fields (ELF-EMF) associated with transmission power lines. Similar issues have been raised concerning the high frequency magnetic fields associated with

34B

34B

Organization (WHO) in 2007, and the conclusions of this review are posted on the WHO's website for the public to view (<http://www.who.int/mediacentre/factsheets/fs322/en/index.html>).

The statements on the [powerlinefacts.com](http://www.powerlinefacts.com) website are inconsistent with the conclusions of scientific agencies and, in general, overstate the significance of findings from individual studies and the strength of the research in general. Scientific agencies have concluded that the research is not strong enough to support the conclusion that EMF is the cause of any disease, including cancer or miscarriage. The data related to childhood leukemia has been characterized as limited and insufficient to provide a basis to conclude that magnetic fields are a cause of this disease. Scientific agencies have recommended additional research to clarify findings, as well as low-cost measures to reduce exposure.

RESPONSE(S)

COMMENT(S)

34 GEORGE C. ROBINSON (continued)

cell phones. These high frequency fields have impacts that differ from those associated with power lines and, therefore, this FAQ does not apply to them.

1. What are transmission power lines?
 - a. They are those high voltage lines that carry power from power plants to substations or between substations. Generally, they carry voltage greater than 35 to 65 kV (kilovolts). Lines that carry power from substations to the ultimate users are called distribution lines. They generally use voltages under 35 kV. Transmission power lines radiate magnetic and electric fields that pulse sixty times per second. This is called extra-low frequency EMF (ELF-EMF).
2. How can I determine if a line is a transmission or distribution line?
 - a. One rule of thumb is to count the number of mushroom shaped insulators between the line and the structure that holds the line. If there are more than three such insulators, it is likely to be a transmission line. If there are around 7-12 insulators, the line probably carries 115 kV. Twelve or more suggests the line carries more than 300 kV.
3. I feel nothing unusual when I am near a transmission power line. Why might they be dangerous?
 - a. Transmission power lines emit two types of fields, electric and magnetic. Together they are called electro-magnetic fields, EMF. Magnetic fields are known to interact with animal tissues, and are therefore potentially dangerous. While a tiny minority can sense magnetic fields, most of us can detect neither magnetic nor electric fields.
4. Are magnetic fields from power lines dangerous to human health?
 - a. There is substantial evidence that exposure to extra-low frequency magnetic fields of an average intensity greater than 2 milligauss doubles the risk of a child contracting leukemia. There is very good evidence that even momentary exposure to ELF fields greater than 16 mG increase by a factor of 5 a woman will have a spontaneous abortion within the first 10 weeks of pregnancy. There is also evidence that these fields are associated with other diseases (see below). Exposures below 2 mG appear to have no adverse health effects. High frequency magnetic fields emitted by cell phones and TV station antennas are a different phenomena.
5. How common is magnetic field exposures at the dangerous levels.
 - a. Not very common. Less than 2% of the population experiences ELF magnetic fields that average more than 2 milligauss. Average US exposure is around 0.5-0.75 mG. The number of those who experience momentary exposures greater than 16 mG is not known.
6. Are electric fields from power lines dangerous to human health?
 - a. There is little evidence that electric fields at the intensities associated with power lines directly impact human health. However, these fields have the potential for indirectly inducing harmful reactions. It is undisputed that fields above 1 mV/m (millivolt per meter) can disrupt heart pacemakers and defibof this intensity, while rare in general, are common immediately adjacent to transmission power lines. Also, one researcher claims that electric fields from power lines ionize particles in the air, and these particles are carcinogenic. This research has been validated by epidemiological evidence.

COMMENT(S)

RESPONSE(S)

34 GEORGE C. ROBINSON (continued)

7. I live near a transmission power line. How do I know if I am in danger?
- a. When assessing danger, distance is all-important. The current research seems to suggest that living further than 400 feet from a transmission line will provide an adequate margin of safety from magnetic fields. However, the very latest research suggests that pregnant women should never venture anywhere near a transmission power line, for even momentary exposure to high magnetic fields sharply enhances the risk of a miscarriage. They should avoid even driving under a transmission power line.
- b. Those utilizing pace makers or automatic defibrillators should similarly avoid even momentarily venturing near transmission power lines.
- c. Those concerned about the less-documented risks associated with particles ionized by electric fields should avoid outdoor exposures with 2000 feet downwind from transmission power lines.
8. Are lower voltage power lines (say 115 kV) safer than high voltage (345kV and above) lines?
- a. The risks associated with electric fields directly correspond to a line's voltage. Therefore, the risks associated with electric fields increase in tandem with the line's voltage.
- b. The better documented risks associated with a line's magnetic field are associated with the current going through a line rather than its voltage. To deliver a given amount of power, utilities must push more current through low voltage lines than high voltage lines. Therefore, in-field measurements show the magnetic field under a 115 kV line is often greater than the field immediately under a 345 kV line. Also, high voltage lines are customarily built on wider rights of way than low voltage lines. Therefore, people tend to live closer to low voltage lines than they do to high voltage lines. For these reasons, low voltage transmission power lines generally pose a greater risk to human health than do high voltage lines. Lines with 65 kV or less usually emit very low levels of magnetic fields.
9. Can magnetic fields be reduced by physical barriers?
- a. Not usually. Walls, houses, trees and the like are no impediment to magnetic fields. Field measurements indicate occupants of the front seats of cars experience an approximate 30% reduction in magnetic fields.
10. Can electric fields be reduced by physical barriers?
- a. Yes they can. Furthermore, particles ionized by electric fields pose a danger only to those, like children, who are outside a good part of the day.
11. How strong is the evidence identifying an associated between ELF magnetic fields and human disease?
- a. There is extremely strong evidence finding a relationship between ELF magnetic fields greater than 2 mG and childhood leukemia. This relationship has been a matter of scientific inquiry since 1979. Sixteen out of nineteen studies conducted since 1995 are now viewed as identifying a statistically significant relationship between magnetic fields greater than 2 to 4 mG and a two to four-fold increase in a child's risk of contracting that disease.

COMMENT(S)

34 GEORGE C. ROBINSON (continued)

RESPONSE(S)

- b. There is very strong evidence finding a relationship between maximum ELF magnetic field exposure greater than 16 mG and a 6-fold increase in miscarriages.
- c. There is strong evidence linking ELF magnetic fields and Alzheimer's and Lou Gehrig's disease (ALS).
- d. There is substantial evidence linking ELF magnetic fields greater than 12 mG and breast cancer and strong evidence linking magnetic fields and the suppression of the therapeutic effects of the anti-cancer drug, tamoxifen.
12. How strong is the evidence linking electric fields and cancer?
- a. There is strong evidence linking electric fields and cancer? However, a mechanistic process has been identified. It has been verified by in-field measurements, and validated through epidemiological studies.
13. Why have there not been follow up studies on the link between electric fields and cancer?
- a. There is no constituency to promote the funding such studies. This is a big problem in this field (see below).
14. Why is there not more intensive research in the US on the link between ELF-EMF and cancer?
- a. Only a small percentage of the population lives near enough to transmission power lines to be exposed to the dangerous magnetic fields of intensities greater than 2 mG. A far greater percentage may be exposed to dangerous fields from the lower voltage distribution lines, but, as far as we know, there has been no studies on the incidence of magnetic field exposures from distribution power lines. Furthermore, the utility industry aggressively acts to minimize such dangers through the issuance of exculpatory statements and its funding of research that downplays the dangers (See EPRI discussion below).
15. There are those who suggest non-ionizing radiation such as ELF-EMF contains too little energy influence animal tissues.
- a. This formerly popular argument has largely fallen into disuse. Ionizing radiation (such as X-rays) contains sufficient energy to knock electrons out of their valiances, thereby creating chemically active ions. By-in-large, ELF-EMF does not contain sufficient energy to create ions. It was therefore argued ELF-EMF must be biologically inactive. The argument has largely fallen into disuse (except by John Muller-see the next question) because all knowledgeable scientists agree that magnetic fields have biological impacts. They clearly promote bone growth at high intensities, suppress melatonin production, and induce cells to emit stress proteins. The argument revolves around whether these recognized biological impacts imply potential human harm. (The electric fields immediately adjacent to power lines are ionizing, which is the genesis of the argument that electric fields are associated with cancer.)
16. Who are John Moulder and Peter Valberg, and why are they so vociferous in decrying the dangers of EMF?
- a. John Moulder and Peter Valberg both earn substantial incomes

COMMENT(S)

RESPONSE(S)

34 GEORGE C. ROBINSON (continued)

from testifying for power companies that ELF-EMF is not dangerous. John Moulder is the most active, having been under retainer from five utilities simultaneously. Valberg is associated with Harvard University (although not a full-time faculty member). He has not done work in the field for at least five years.

17. Moulder and Valberg seem to be able to cite significant evidence that suggests there is no danger. How can that be?

a. In September of 2000, there was an extraordinary event, the publication of the British Journal article. In that article, the prime authors of all the significant epidemiological research of the past five years came together and admitted their original research has come to invalid conclusions. Whereas they had originally concluded there was not a statistically significant relationship between ELF-EMF and cancer, they now conceded that their original research should have recognized the existence of such a significant relationship. These results were confirmed by two additional research groups. Moulder and Valberg, while aware of the new research, justify their assertions by pointing both to invalidated research and to “blue panels” that, relying upon the now-invalidated research, had found insufficient evidence for such a relationship. In addition, Moulder frequently distorts the findings of his references by pejoratively picking sentences out of context.

18. While Moulder and Valberg are biased by their personal financial considerations, are you not equally biased by your personal concern over EMF’s deleterious impact?

a. Yes.

19. Bodies such as the UK National Radiological Board and the comparable German authorities, while cancer, have said it’s not worth worrying over. How can that be?

a. Europe employs on average higher voltages than does the US. Because of the physics, this means that European transmission power lines emit lower levels of magnetic fields than do US lines. Furthermore, most European countries, including the UK and Germany have prohibited the construction of transmission power lines near homes for many years. The US has no comparable restriction. As a result, only a negligible number of European homes experience high levels of ELF-EMF. However, such high-level exposures are common in the US. Accordingly, European conclusions on the low level of exposures do not apply to the US.

20. The IARC, a division of the World Health Organization has found a link between cancer and ELF-EMF. Yet, it seems extraordinarily cautious in its pronouncement of this link. Similarly, the National Radiological Board and the National Institute of Health seem to be very cautious in pronouncing the existence of a link. Why is this?

a. Electricity is essential to a modern society. Top level government bodies such as the IARC are concerned that issuing pronouncements will improve the welfare of the relatively small number exposed to high intensity fields, while endangering the prosperity of the majority of those who are not threatened by these fields. We should also not overlook the role of the utilities. As members of a regulated industry, the electric utilities have developed and deployed advanced lobbying tools. They have become very effective lobbyists who are able to influence policymakers on such matters.

21. Do FHA regulations allow the issuance of insured mortgages for homes when transmission power lines are so close to homes that, even in theory, the supporting polls could fall on the house?

RESPONSE(S)

COMMENT(S)

34 GEORGE C. ROBINSON (continued)

- a. No. FHA regulations prohibit the issuance of insured mortgages for houses very close to transmission power lines.
- 22. What is the current status of research?
 - a. Research funding is a problem. One logical source for such funding would be the utilities' own research arm, the EPRI (formerly, the Electric Power Research Institute). However, there is evidence the EPRI declines to fund follow-up research when the original research uncovers evidence of magnetic field's potential to cause disease. It fails to fund the follow-up research even when its own analysts suggest the additional research should be conducted.
 - b. The federal government completed in mid-1999 its \$45 million EMFRapid study that recommended passive actions in general, but did recommend transmission power lines be sited so as to reduce magnetic field emissions. However, the EMFRapid study based many of its findings upon research that is now recognized to be invalid. Had it been based upon valid research, it is likely its recommendations would have been much stronger. Nevertheless, there has been little federal research since that date.
 - c. The California EMF project is just winding up. It has now released its findings. In its evaluation, it concludes magnetic fields likely cause childhood and adult leukemia, adult brain cancer, spontaneous abortions, and ALS. The evaluation further concludes that magnetic fields possibly cause childhood brain cancer, female and male breast cancer, Alzheimers disease, suicide, and heart problems.

34B

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Sincerely,
George C. Robison

RESPONSE(S)

COMMENT(S)

35 MARTIN KNIGHT

"Marty"
 <tugok@triilobyte.net>
 07/27/2009 08:41 PM

To
 cc
 Subject

<UT_M20TL_EIS@b.lm.gov>

EIS Comments

To whom it may concern:

35A I am writing in response to the Draft Environmental Impact Statement for the Mona to Oquirrh Transmission Corridor Project. I support the No Action Alternative. All the alternatives will significantly impact the things I cherish and the reasons I live in Tooele County.

Comment noted.

The open spaces will be permanently scarred by transmission lines and accompanying new roads, and viewscapes of the mountains and valley will be destroyed. I believe the power requirements justifying such action are incorrect since the recent economic downturn and dramatic decrease in residential/commercial growth has delayed the need for this infrastructure.

I also believe that this EIS should be redone to accommodate distributed generation resources, especially solar and wind power generation, since implementation of renewable energy sources is imminent and will alter power transmission requirements considerably. Energy conservation measures are also key to stemming the need for building this destructive infrastructure.

Distributed generation and energy conservation were considered and eliminated as an alternative to the transmission line options in the Draft EIS, Section 2.6.1.

I propose that no action is taken and the power transmission project be delayed for 5 years to study the incorporation of new renewable energy resources and better technology into the power grid to minimize Tooele valley impacts.

The Project is needed in-service by June 2013. As identified in Appendix A of the Draft EIS, this timeframe for operation of the Project is based on forecasted electrical loads. Selection of the No-Action Alternative would not meet the Proponent's purpose and need for the Project.

Thank you for the opportunity to comment on this EIS.

Martin Kogut
 488 Ontario St.
 Tooele, UT 84074
 435-882-6821

RESPONSE(S)

COMMENT(S)
36 ERIC MCGUIRE

"McGuire, Robert
E Civ USAF ANG
151 CES/CEZE"
<robert.mcguire@ang.af.mil>

To

"UT_M20TL_EIS@lm.gov"
<UT_M20TL_EIS@lm.gov>

cc

"Gentry, William C SMSgt USAF ANG
130 EIS/LGTM"

<william.gentry@ang.af.mil>,
"Green, Rebecca Civ USAF ANG 151
LRS/LGRDD"

<rebecca.green@ang.af.mil>,
"chamiae@netzero.com"
<chamiae@netzero.com>

Subject

Mona to Oquirrh Transmission
Corridor Project

08/11/2009 11:00
AM

To whom it may concern,

My name is Eric McGuire and I'm a resident of Stansbury Park located in the Tooele Valley.

I'm writing in response of Rocky Mountain Power's proposal for a high voltage transmission line planned for the Tooele Valley.

I am very opposed to this proposal, due to the health risks to individuals that live near these lines. Research has shown that inductance from high voltage transmission can cause health risks to near by residents.

36A Comment noted. See response to Comment 25F.

36A

COMMENT(S)

36 ERIC MCGUIRE (continued)

These examples come from The Power Line Health Facts website.
<http://www.powerlinefacts.com/>

The California Health Department final report on power frequency EMF was published in October 13, 2002. This 7 year million dollar study concludes that EMFs(High Voltage) can cause some degree of increased risk of childhood leukemia, Adult brain cancer, Lou Gehrig’s Disease, and miscarriage. The evaluation further concludes that magnetic fields may cause suicide and adult leukemia.

36B

The State of Connecticut passed by overwhelming margins in early May 2004 a law that requires power lines to be buried in they pass near residences, schools, hospitals and other sensitive facilities.

36B See the response to Comment 34B.

A major June 2005 British study concludes there is a statistical link between EMF from power lines and childhood leukemia even at distances of 200 meters.

These are a few of the results of such power lines being constructed near residential areas. The Tooele Valley is growing at a fast pace and more and more people are moving in everyday. I believe in my life time it will be as populated as the Salt Lake Valley. The proposal to construct these line through this valley needs to be reviewed and find a more suitable location.

Rocky Mountain Power my not care about the health of the children and people of the Grantsville area, but I do. Please do everything in your power to ensure this doesn’t happen. I’m also sending a copy of this to my Congressman Rob Bishop. Hopefully, he can get help with legislation to keep things like this from happening.

Eric McGuire

Stansbury Park

The California Health Department final report on Health Department final report on power frequency EMF was published in October 13, 2002. This 7-year, \$9 million study concludes EMFs can cause some degree of leukemia, adult brain cancer, Lou Gehrig’s Disease, and miscarriage. The Evaluation further concludes that magnetic fields may cause suicide and EMF was published in October 13, 2002. This 7-year, \$9 million study concludes EMFs can cause some degree of increased risk of California Health Department final report on power frequency EMF was published in October 13, 2002. This 7-year, \$9 million study concludes EMFs can cause some degree of , adult brain cancer, Lou Gehrig’s Disease, and miscarriage. The Evaluation further conclude that magnetic fields may cause suicide and adult leukemia

36C

36C See response to Comment 36B.

RESPONSE(S)

RESPONSE(S)

COMMENT(S)

37 BILL LAWRENCE

"Bill Lawrence"
 <billlawrence@utah.gov>
 08/11/2009 08:30 AM

To: <UT_M201L_EIS@blm.gov>
 CC:

Subject: Mona to Oquirrh Transmission Corridor Project

ATTN: Mike Melson

This letter is in opposition to the proposed route that runs on the west side of Grantsville. Reasons for opposing include:

1. Grantsville City currently has an unobstructed views of the Stansbury Mountain range, which includes a wilderness area. The western route would obstruct that view from within Grantsville City, as well as while driving along the Mormon Trail Road, diminishing the value of the wilderness to the citizens of Grantsville. Preserving the wilderness quality of these unique lands should be held paramount. The simulated views shown in the document should have included the view towards the wilderness, which was left out.
 Only views East, South were included.

37A

2. There currently is a community recreation area, Grantsville Reservoir, that the proposed western route would diminish. There are unobstructed views as well as an pristine open outdoor experience, that would be diminished with the proposed Western Route. Also the map on their (Rocky Mountain Power) website showing the corridor, neglected to include the reservoir.

37B

Thanks
 Bill Lawrence
 373 East Davenport Drive
 Grantsville, Utah 84029
 435-884-0357
 bhmsmm@gmail.com

Views considered in the Draft EIS included Grantsville City residences and Mormon Trail Road viewers (Sections 3.2.7 and 3.2.7.5, and Appendix C, Map C-8). Potential impacts created by Alternatives G and H (Links 335, 352, and 350 nearest to Mormon Trail Road and Grantsville City) are covered in Section 4.2.7.5, Alternative G, and would be high only in isolated areas - on residences west of Grantsville City where the alternative crosses SR 138, and Mormon Trail Road users near the proposed Limber Substation. A new simulation is included in the Final EIS (Appendix G, Viewpoint 8) to illustrate a typical view from western Grantsville City where the line would be most visible for city residents at a distance of more than 2.5 miles from the Project Alternatives.

37A

Impacts on views from Grantville Reservoir were addressed in the Draft EIS Section 4.2.7.5.

37B

RESPONSE(S)

COMMENT(S)

38 KAYE PRATT

Kaye Pratt
<kmpratt1@hotmail.com>
08/12/2009 12:51 PM

To
"Mike Nelson, BLM"
<mike.nelson@blm.gov>, b1m
monazoquirrh <ut m2ot1 eis@blm.gov>
cc

Subject

Opposing Comments

Mike and Cindy,

These are two letters attached in this one file I prepared. One was given at the Tooele City Council Meeting on Jul 1, 2009. The other was given to the Tooele County Commissioners July 21, 2009. To the latter I have added information I have collected and feel is pertinent. I know you guys will do all you can to make sure RMP doesn't ruin any of our environment - including people. I hope you know, I know you are not to blame for RMP's actions. I was rather fierce in my last letter. Last night's meeting has put me in a bad frame of mind. We were again ambushed and misled. This is really very important to us and to all the other people in Tooele we are representing.

Thank you Kaye Pratt

(See attached file: July 1.docx)

COMMENT(S)

38 KAYE PRATT (continued)

RESPONSE(S)

Aug 11, 2009

RE: Rocky Mountain Power - Mona to Oquirrh Transmission Corridor Project

TO: Bureau of Land Management

Attn: Mike Nelson

Quote the Tooele County General Plan 2006 EIS page 3-60.....

“Management goals and policies Tooele General Plan 2006 regarding visual resources pertinent to transmission line and substation siting are limited to the Mid-Valley Recreation and Technology Park areas, which guide the development in and around the Deseret Peak Complex and Miller Motor Sports Complex”

“Telecommunications facilities and transmission lines should not be located within view of the Deseret Peak and Miller Motor Sports Park, unless they are sited and designed so as to be virtually invisible to the naked eye from the subject properties; or are designed to appear as a natural feature of the environment and do not block views or disrupt scenic vistas; or are so well architecturally integrated into an existing building as to effectively be unnoticeable... or placed underground.”

Why does this “special protection” only pertain to Miller Motor Sports Park and The Deseret Peak Complex. The EIS only took a portion of the County’s Plan. Is there more in the plan that protects our Mountains and Canyons?

We are trusting this must be an error in the EIS and that the County was not apathetic to our interests and needs. Because the Protection Granted under the County’s General Plan has protected Miller Motor Sports Park and Deseret Peak from any route passing close to them. We would like to have the entire

Section 3.2.7.7 of the Draft EIS, under Tooele County, references the goals and policies of the Tooele County General Plan (2006) that pertain to visual resources and siting of transmission lines and substations. No elements of the General Plan referenced visual resources other than this component. The entire General Plan had been reviewed and referenced as part of the analysis for the Draft EIS.

38A

38A

COMMENT(S)

RESPONSE(S)

38 KAYE PRATT (continued)

plan included in the EIS if it grants the same privileges and protection to the mountains and residents.

If not, we will be asking why weren't these beautiful mountains – the highly sensitive view areas of Tooele, the prime real estate land in our valley and the recreation lands of Tooele not protected and given the same consideration as these two projects were given? They are man-made structures and can be rebuilt and reconstructed at any given time or location..... but God created the mountains and they cannot be replaced or reconstructed by man. We are keeper of God's creations, you as our elected officials are the public's keeper -

As elected officials and government agencies you were elected and paid by the citizens and are paid to keep a careful watch over us. It is your obligation to listen to us and then speak for the majority to keep our interests protected and safe. You need to keep your eyes wide open, looking out for wolves in sheeps clothing - salesmen who enter our valley with a sales line to take what they want and even convince you to write rules that protect them and their private business interests first – over and above our interests.

The citizens of Willard and North Ogden were not so lucky. Their elected City and County officials were persuaded by RMP to sign a construction permit prematurely. When citizens woke up one morning to see the unwanted devastation RMP's construction to their views and residences, they didn't have any legal means to stop RMP or request the routes be moved. We are very grateful our City and County Officials were wide awake on their first watch and had the forethought to not be talked into signing any premature agreements with RMP. Because there wasn't a written agreement the citizens of Tooele have a window of opportunity to oppose RMP's destructive plans for Tooele.

Pete Grimm told me a story about a Camel and his master, The camel kept putting his nose in the his master's tent in order to be able to breathe during

COMMENT(S)

38 KAYE PRATT (continued)

RESPONSE(S)

the sand storm. He eventually forced his “master” out of his tent entirely. The camel, the servant, became the Master. RMP should be our camel – our servant. But like any powerful servant, we need to keep it in it’s place. If we let it put its nose in our tent, it can easily take over our whole tent and force us out into an “ugly” sandstorm. Roles can be reversed - the world can be turned upside down. We need to give our camel appropriate care, but we need to keep our camel in its place. We can and do enjoy the benefits of electric power while taking appropriate care for the needs of RMP – BUT we do Not and should Not let RMP force it’s ugly power corridors into our beautiful city.

RMP is our paid servant. We pay our electric bills and they in turn supply us power. Anytime we need more power they are obligated to bring it to us – but remember we are paying for the process. According to the Federal Register, in the third qtr of 2008 RMP applied for a 3.6% consumer rate increase. The rate hike was approved by the Utilities Commission. Then again in the first quarter of 2009 RMP applied for another consumer rate increase of 4.7%. That’s an 8.3% increase in our power bill in less than a year!! So yes, the Master has a very well paid Power camel servant. For this reason, the Master should say where the power corridor is placed in his tent, since the Master is paying the bill.

Under the Federal Register we - citizens of Tooele County – are legally granted a 90 day open comment period. The Federal Register was filed by the Bureau of Land Management on May 15, 2009 is taking our right to voice our opinion for a short 90 days to let you, our political, elected officials know and RMP know we don’t want the power corridors where RMP has proposed to place their huge ugly power lines. We don’t want them where we live . We do not want them close to residential areas or ruining our views and our future growth.

COMMENT(S)

38 KAYE PRATT (continued)

So far we have been heard by Tooele City. Mayor Pat Dunlavy and the Tooele City Council recently voted unanimously to oppose RMP's proposed routes anywhere in Tooele City at the July 1, 2009 City Council Meeting. They are in complete agreement with the citizens. Tooele County Commissioners voted unanimously to oppose the South East Bench Routes at the County Commission Meeting July 21, 2009. Our State Legislator is the House of Representatives, James Gowans has signed a letter also opposing the South East Bench Route in Tooele City. This is because of the Concerned Citizen's Committee we formed to oppose the Routes presented by RMP and the BLM through Tooele. Our committee has obtained just under 4000 signatures on the Petitions. Our voices are being heard, but there is still no guarantee RMP will move their proposed route. As a public utility RMP can take imminent domain of our property and have it condemned. We cannot allow this to happen.

38B

Comment noted.

Part of the Federal Register is the Environmental Impact Study. We, as a committee after reading and studying it, have discovered during the 90 day comment period missing, incorrect or incomplete documents. Information not included may have led to a biased report. If all the missing and incomplete information is presented and included in the Final Environmental Impact Study, many of RMP proposed routes will be eliminated.

38C

The relevant sections of the Tooele County General Plan (2006) were included in Chapter 3 of the Draft EIS. In addition, Chapter 1, Section 1.6, recognizes and includes the Tooele County Plan. See also response to Comment 38A.

1. As mentioned only part of the Tooele County General Plan 2006 is included in the Draft EIS. The entire County Plan should be included. We also want to know who turned in the information from the County and who is responsible for the misrepresentation of facts.

2. Tooele City has a master plan that was not included and the EIS even says that one doesn't exist. Tooele City has a plan for the city and its future growth. It doesn't include ugly 200 ft power lines as a fence across the gateway to the valley. The mountain foothills are our prime real estate.

38D

BLM is not aware of a Tooele City Master Plan. The Tooele City General Plan, *Land Use Ordinance of Tooele City* (last updated April 8, 2008) was reviewed, and does not include a discussion or recommendation regarding the placement of transmission lines, substations, or associated structures. This city general plan document was referenced as part of the analysis of the Draft EIS. In addition, BLM also met with Tooele City as identified in Chapter 5, Table 5-3 of the Draft EIS.

RESPONSE(S)

COMMENT(S)

38 KAYE PRATT (continued)

RESPONSE(S)

3. Several natural springs are not mentioned nor given adequate description as to their importance. One of these springs is the only water source for wildlife on Corner Mountain. One spring is located in Left Hand Fork and is “the Water” source that supplies Tooele City with its culinary water. That’s a pretty big miss. And if that spring doesn’t get disturbed by RMP during building, they could hit the dozen springs in Middle Canyon that serve Tooele City’s other culinary water source. If any of these natural water sources are permanently damaged as the EIS states there is great risk they will be – Tooele will dry up and without water who needs power?

38E See response to Comment 33B.

4. Two of our major Canyons will be negatively affected. These canyons are used by our residents for recreation, enjoyment and entertainment. People live in Tooele and do without a lot of things; malls, theatres, greater employment opportunities or pay more to travel to Salt Lake to work in exchange for the open space and the quiet tranquil beauty a good fishing trip or for a walk in the mountains, and to breath clean air while taking in the beautiful scenic views of green or snow capped mountains.

38F Comment noted.

5. Tooele City has a volunteer fire department. The next closest fire dept is in Stansbury Park. Construction and repair of power lines increases the risk of wildfires. On Aug 6, 2009 we had a massive wildfire in Settlement Canyon, Left Hand Fork, Skull Valley and Pole Canyon. BLM helicopters used the water in Settlement Canyon Reservoir to put out the fires consuming thousands of acres of mountains burning down throughout Tooele County. Residents on the South East Benches were put on evacuation alert. The closeness of the water from Settlement Canyon Reservoir quickly saved Settlement Canyon and thwarted greater losses in the others. How will BLM helicopters access this valuable water commodity if they have 150 foot power lines running over it?

As a result of comments on the Draft EIS, the Proponent has made an alignment adjustment of Link 190 to minimize crossing the Settlement Canyon reservoir. This change is depicted in the Final EIS, Figures 2-5 and 2-6.

In addition, the BLM has added Link 190A, which would re-align the route farther south and away from Settlement Canyon Reservoir to address potential conflicts with aerial fire operations.

Helicopter fire operations can maneuver around transmission lines and other obstacles provided the fire crews working in a given area are aware of the obstacle. BMP #5 (marker balls) may also be implemented in the location.

38E

38F

38G

COMMENT(S)

RESPONSE(S)

38 KAYE PRATT (continued)

6. Tooele City has 105 acres they have identified as open space located on the south east bench under a Federal Grant. Tooele City has approved two large residential developments for Loma Vista (700 lots R14) and another above Deer Hollow and Elk Meadow and that's just a few of the residential developments not mentioned in the EIS.

38H

A 101-acre area on the east bench of the Oquirrh Mountains in Tooele City has been proposed for a conservation easement, which could limit development. The City acquired the 101-acre area in September 2009. This information has been included in the Final EIS, Section 3.2.9.10.

38H

7. The helicopter landing pad used by Life Flight at Mountain West Medical Center was not listed on taken into consideration as it passes right next to the route running through Tooele. That's another huge life threatening, life altering mistake made in the EIS.

38I

As a result of comments on the Draft EIS, the Proponent has adjusted the alignment of Link 190 to the south to avoid crossing the Tooele City sensitive overlay zone and any property located within the Tooele City limits. Therefore, there are no direct impacts on the 101-acre conservation area or any residential property within the Tooele City limits for Alternatives D, E1, E1, F1, or F2.

The EIS has also used outdated photos and maps which painted an unrealistic visual picture of Tooele City and the Tooele Valley. There isn't a picture of tl East Benches and the homes and residents that are really there. The BLM was shocked at the pictures I took to the June 23rd meeting they held showing children on trampolines and the picturesque – yes, breathtaking views that would be destroyed. The BLM doesn't want them there now they have seen what's here. They were not aware the corridors where running anywhere near where people lived or what they would be ruining. The RMP project manager had not even set foot in Tooele until the morning of June 23rd either. You cannot appreciate what's here unless you see it or have the knowledge of its presence in accurate, current, and detailed information. The Environmental Study is flawed and needs to be corrected.

38J

38I

Final EIS Sections 3.2.9.9 and 4.2.9.3 include an analysis of possible impacts of the proposed project on the helicopter landing pad at the Mountain West Medical Center. The landing pad is approximately 1,000 feet from the transmission line alternative route along the railroad and is not a registered facility with the FAA.

38J

Tooele City and Tooele Valley have a wide variety of residential development patterns and visual character areas that are extremely variable and often visually unique. The photos presented in Appendix F of the Draft EIS were not intended to depict every specific type of residence or neighborhood located along the project corridors, but were intended to represent residential character areas (Residential Image Type), as opposed to industrial, commercial or natural areas, and were used to identify those areas where the project would be out of character with the existing development patterns. Additional photographs that represent a broader range of Residential Image Types found within the study corridors have been included in the Final EIS (Appendix F). Mapping presented in the Draft EIS and existing and planned residential area data collected for the analysis of alternatives included all known existing and planned residences and residential clusters (Appendix C, Map C-8).

8. The EIS states there are **19 homes on the South East Bench** who will be negatively impacted with Routes D, E1, E2, F1, F2 Section 190 – That isn't true – **there are 309 homes on the South East Bench** with average value of \$500,000 each. Lots in the area are currently selling at an average of \$150,000 for a 1/3 acre. And there are over 600 homes within 1 mile with an East side property value. Placement of the power lines on the South East Benches would have the GREATEST amount of impact on the

38K

38K

The aerial photography base map imagery used for the project maps was NAIP 2006 imagery. It was the only publicly available imagery of the entire project area when efforts for the study were initiated in 2007. More recent aerial imagery, dated 2008 and 2009, has been obtained for the Final EIS and is depicted in Figures 2-4 through 2-8 and in Appendix C, Maps C-9 and C-10. In addition, several visual simulations have been added to the Final EIS depicting the proposed route south and east of Tooele City (See Appendix G, Visual #10 and #11).

The 19 homes referenced in Table 2-9 of the Draft EIS for Alternatives D, E1, E2, F1, and F2 were within a 0.25 mile distance of the route centerline. This information was collected by aerial photo interpretation as well as field verification to record locations of more recent homes that were not shown on the aerial imagery. This effort was conducted in summer 2008. As a result of comments on the Draft EIS, the Proponent has made an alignment adjustment of Link 190 to the south to minimize land use impacts and avoid crossing the Tooele City sensitive overlay zone. There are now 13 residences within 0.25 miles of the adjusted route alignment. The closest residence is approximately 960 feet north of the reference centerline.

RESPONSE(S)

COMMENT(S)

38 KAYE PRATT (continued)

GREATEST amount of People, the environment, and at the GREATEST amount of cost.

9. Comparison values are documented in the EIS as if they had equal proportional ratios. This is not the case. In any area, any business, any home budget, the ratio of a dollar has a different value associated with it. RMP views billions compared to millions and the list goes down from there. The EIS needs to make their comparisons is ratio values. Apples compared to Apples. Oranges to Oranges. This would be the proper perspective associated with true costs and losses to the appropriate areas.

38L See response to Comment 23B.

38L

Tooele City is the largest City in Tooele County. We are 3 times the size of the next City according the census. We pay more in taxes because of the value of the homes and property especially those on the South East Benches. The annual revenue that would be lost to the County will add up and it will be at a great cost to the city and county schools and roads and all the other amenities we fund. Not to mention there won't be future residential growth. The financial loss will be greater than any loss RMP can compare it to. There's a difference between their ability to keep charging higher rates to us to compensate for their raises and their expenses. We won't have a way to create any more land to replace what they will be taking. Land and Water are a limited resource; there's only so much of it and when it's gone it's gone. Tooele will stagnate and eventually disappear and RMP will carry on into the future fat and sassy as if nothing happened.

10. My list goes on. The EIS states 89 acres of ground will be PERMANENTLY destroyed and 202 acres of vegetation destroyed if any of the South East Bench routes are taken. That's again – three times or four times the COST of using any other property in the County. RMP states longer Routes are more costly to them – but we pay the bill – maybe we should look at our costs. RMP has also reported to us in their

38M The acres listed for permanent and temporary ground disturbance apply to the entire route length. See Table 4-1, Section 4.2 of the Final EIS.

38M

38M

COMMENT(S)

38 KAYE PRATT (continued)

own engineering documents it is more costly to build power lines in mountainous terrain.

11. Tooele has a "T" on the Mountain placed there by the graduating class of 1916. It is not mentioned in the EIS. This historical record of our T is recorded in the yearbook. One of the proposed routes runs in front of Tooele high school's "T". Establishing a negative lasting affect on the view of the mountain with the beloved high school historical marker placed there by the 1916 graduating class of Tooele High School. The "T" is a symbol to THS alumni of their alma mattor. Twice a year hundreds of high school seniors access the "T" lighting it at homecoming and graduation. The "T" has both historical and sentimental value to the residents of Tooele serving as a visual welcoming home sign to all for over a hundred years. My concerns are also safety when it comes to the "T", high schooler's are known for their pranks and dares especially at these two events. There has already been reported deaths by young people trying to climb these power lines.

At the Resolution Meeting we were told if RMP would suffer from expenses from delaying this project saying we will be hurting their employees and their 401k's. What about our 401k's? RMP has a knack at reversing the roles and reversing the outcome to present the "picture" from their perspective with no regard for our perspective. Which leads to my next point. Take a look at the pictures in the EIS that were used to represent Tooele City. The actual picture is far different than what was turned in to the Federal Government - people who have decided what will happen to us who have never been here and are relying on the "pictures" to make their decisions. Please refer to the packet attached and get the real "picture".

RMP is a monopoly of liars. They have pulled our chains and their representation at their meetings and the talk of promises to listen is all lies. They tell us we need to prepare an alternate route and they will look at it and

RESPONSE(S)

A PA executed by the project proponent, BLM, SITLA, SHPO, and other interested parties is in place that outlines the cultural resource management approach for the NEPA and Section 106 processes for the Project. In accordance with the PA, during the NEPA process an initial impact analysis was conducted using baseline data that consisted of Class I, Class II and viewshed inventories. The Class I data consisted solely of cultural resource sites that have been formally recorded on the IMACS site form accepted by the Utah SHPO and that are on file at the SHPO, BLM SLFO, or FFO. As such, cultural and historical sites that are known, but not formally documented, in the study area are not part of the baseline data that were analyzed. The "T" on the mountain above Tooele is an example of a known, but undocumented cultural resource site. The PA stipulates that once a final alternative has been selected an intensive level cultural resource study (Class III) will be conducted within the alternative corridor to identify specific historic properties that would be adversely affected by the Project. If the "T" is located within the inventory corridor of the selected alternative, it will be documented on the State of Utah IMACS site form, evaluated for eligibility to the NRRP, and if necessary, provide recommendations for mitigation. The results of the Class III survey will be submitted in a separate cultural resources technical report that will fulfill the requirements of the Section 106 process.

The structures proposed between Limber to Oquirrh and Limber to Terminal substations, are tubular steel, single-pole towers approximately 125 to 150 feet in height which are serviced by a hi-lift truck or crane. Base diameter of a single-pole tower is approximately 6 to 8 feet wide. It would be very difficult and nearly impossible to guarantee that the public will not be able to climb the structures. However, the Proponent is taking proactive steps to discourage the public from climbing the structures and potentially causing themselves harm. These steps include clearly posting warning signs on towers and designing towers to minimize the potential for climbing.

Comment noted. See response to Comment 38I.

38N

38O

38P

COMMENT(S)

38 KAYE PRATT (continued)

RESPONSE(S)

then they say it's too expensive and can't be done. We started over again and prepared an even better alternative route because we had studied and spent our personal time to live within every confine we had been presented in the EIS and from reading volumes of printed information. Since when is it our job to do their job? They are deceitful and have misled us down paths of unrealistic expectations.

At the so-called Resolution Meeting held Aug 11, 2009 which was an ambush and designed to put Tooele against Grantsville and create conflict within. Grantsville is behind in the game and it was a waste of our time to listen to the same brainwashing and redundant power hog wash. Grantsville had a few knowledgeable people there without their Mayor or City Council or enough representation to have an equal say. Then we were told by RMP (Aaron Gibson) the far West Route shouldn't have been on the maps during the EIS and it was a mistake by the BLM... This was after we had been told it was the one for sure Route and had spent endless hours trying to find the route that would have the least amount of impact on the least amount of people.

Where's the truth? Just how flawed is the EIS and the Federal Register? We believed, in the beginning it was an accurate document and we have tried with every fragment of our being to work within the rules and be good citizens. But what are the rules? They keep changing on us. We want answers and we want to remind everyone, the BLM and RMP and our elected government and governmental agencies, - We live in America. We live under a democracy. We the people elect our legislators and they are obligated to speak for us. We are asking and we want answers. We have put our money where our mouth is and followed the rules but the rules keep changing on us. God only put a few green areas with mountains in Tooele City. Why would we allow these power corridors to be put there? Of all the other places in Tooele County to choose from! Do you think power corridors of this magnitude

COMMENT(S)

38 KAYE PRATT (continued)

running through a city or a county is going to attract people to live here or interest businesses to locate here if they are greeted with a power corridor fence running across SR 36 or wrapping around the edge of our spectacular scenic mountain views and prime real estate areas? Of course not. Does the executives of RMP live under 500 or 345kv corridors? This brings me to another point. Once RMP is given a Right of Way, they can add lines and increase voltage "if and when needed" per the Federal Register. So once they are here they are a permanent fixture that can grow bigger and uglier forever.

38Q

The BLM right-of-way grant will specify the voltage and number of lines allowed in the right-of-way. Easements on private property will be negotiated between the Proponent and landowner.

Put the corridors where God didn't put any beauty in Tooele County. His pre-designed plan is as clear as day where God wanted them to go. This is a travesty and an injustice. You don't see them on the East side of Salt Lake or where Kennecott is opposing them in the South West. Salt Lake's elected officials have a plan they enforce that keeps industrial lines in industrial areas where people don't live. They do not allow them in residential areas.

38R

The West Side of Tooele County is less populated and has more dry land where the negative impact would be the least and where the greatest good would come from them. The West side of Tooele County is where the County has identified they want Industrial Growth. The County Commissioners said they lost a deal with a Paper Company who wanted to build on the West side of Grantsville because Tooele lacked the needed power. A new repackaging plant is under construction near Grantsville, Walmart Distribution Center, US MagCorp to name a few of the larger industries in Tooele County are all on the West Side and if they are the ones who need power, then put the power where they can access it.

38R Comment and route preference noted.

We need you to be united with Tooele, "The Master", so to speak, and stand with us the people, our City, County and the State elected officials to keep our camel, RMP in its place. Stay with a Plan that will benefit Tooele City and Tooele County now and in the future- if we don't plan, we're planning to fail.

RESPONSE(S)

COMMENT(S)

38 KAYE PRATT (continued)

RESPONSE(S)

We are asking for the support of all the governmental officials and governmental agencies who can reverse and change RMP's devastating path of destruction planned for Tooele City. TV Media, Channel 13 and Channel 2 News were present at our local government meetings and have helped make the public very aware of this problem. We are not going away, we are not going to be silent or let this happen without putting forth every effort and taking every legal stand to stop RMP.

There are better alternatives to the routes RMP has presented in the EIS. We know this for certain. We have prepared them for RMP. We are respectfully requesting your support to review our request and lend us your support as well. We want to be good citizens and support growth and change that is well thought out and necessary. We ask that you take a pro active role in supporting our request to find an acceptable alternative route for the power lines.

Sincerely,

Kaye and Brad Pratt 743 Deer Hollow Rd Tooele Utah

Attachments: Current Photos of Tooele Valley

To be delivered to Cindy Ledbetter at the BLM today

COMMENT(S)

38 KAYE PRATT (continued)

RESPONSE(S)

July 1, 2009

To: Tooele City Mayor Patrick Dunlavy and the Tooele City Council

Rocky Mountain Power with the assistance of the BLM have been coordinating plans to run high voltage transmission corridors through Tooele City in residential areas. We cannot allow this to happen. It is unacceptable and we adamantly oppose all routes through Tooele City. These types of electrical towers need to be placed in Industrial areas and not across our city's residential areas where they will have negative impacts on human lives and negatively impact our environment. They want to place them right through the "heart of our valley". They picked the most beautiful area in all of Tooele to deface. We can't let them ruin our very best with these ugly megalithic power lines and towers when there are better options to place them in a County as large as Tooele.

38S

38S

Comment and route preference noted.

We are not opposed to power, but we are opposed to RMP's proposed routes. We have coordinated efforts to notify the public of this injustice and in less than three weeks time we have organized a very large committee and mass numbers of citizens opposed to RMP proposed routes through Tooele City. Our knowledge of RMP's plans have grown and we appreciate your willingness to listen to our concerns and the input that we as citizens can contribute to resolving a better future for our city. We certainly won't be improving our way of life or attracting new people to live in Tooele with the 200 ft metal megaliths along the benches and foothills, or humming above Settlement Canyon Reservoir.

COMMENT(S)

38 KAYE PRATT (continued)

Chapter 5 of the Draft EIS provides a description of the methods employed for public participation, which included public scoping; consultation and coordination with agencies, tribes, and stakeholders; Proponent-initiated outreach activities; and public review of the Draft EIS.

RESPONSE(S)

38T

The citizens of Tooele were not notified in the proper process. Just ask anyone if they remember receiving notification from RMP or the BLM? The first time most residents had heard about RMP's plan was when they were asked to sign a Petition to oppose the Project; saw our committee's flyer, or read the article and Ad in the paper placed there by our committee. RMP sent a few residents a letter last fall asking permission to conduct a soil test on their property; we were one of them. We responded, firmly declining. Conveniently, we were taken off the list to receive future mailings regarding the project. Coincidentally, the other residents who responded in like form were taken off the list to receive further communication concerning the project.

38T

Time is a factor – The BLM filed the Federal Register on May 15, 2009. We have less than 45 days to make public comments and find justification why the project should be stopped or changed - or RMP can proceed with the project and commence construction. As a public utility they claim they can take imminent domain of our property. There are options to this process and we intend to make every effort to stop them using every possible resource available to do so.

At the BLM meeting June 23rd, we discovered the RMP project manager had not set foot on our mountains until that very morning. He was making an assessment without ever seeing the beautiful mountains and valley he would be destroying and the people whose homes and families he would be affecting. We showed pictures to the BLM representatives who were also unaware how close they were agreeing to placing these high voltage lines to homes with children. The last information the BLM had of the area didn't show homes that have been there for 8 to 10 years.

38U

See response to Comments 38J and 38K.

In researching the Environmental Impact Study (EIS), initial BLM maps were too broad and vague and the information presented in the final

38V

RESPONSE(S)

COMMENT(S)

38 KAYE PRATT (continued)

38V	<p>Environmental Impact Study (EIS) is inaccurate. The EIS states Tooele City doesn't have any plans for the future development of our City. The maps and pictures of the Tooele Valley used and presented by the BLM are not current. Why is our City's Master Plan for residential and industrial areas not included or better yet why were they left out? Other inconsistencies have been found in the EIS by our committee and we would like to address these areas with <u>you</u>.</p>	38V	See response to Comments 38D and 38J.
38W	<p>The EIS also says Tooele County's General Plan 2006 only covers protecting the best interest of the Desert Peak Complex and Miller Motorsports Park. We plan to address this with the County Commissioners. This should be of concern to the citizens that the Commissioners are more concerned over the views and interests of these two pet projects than they are over the best interests of the residents who voted for them. Or has this been misrepresented in the EIS as well?</p>	38W	See response to Comments 38A and 38C.
38X	<p>Adverse health hazards considered in the EIS Summary from electronic magnetic fields and sulfur hexafluoride gasses were stated as minimal, within or below guidelines. What exactly is this low number? One person in ten, one in a hundred, a thousand? The human being is the highest species of wildlife and should be given the utmost consideration. EMF is a documented cancer-causing agent by the World Health Organization since 2001 with new information and research refuting RMP's position. New studies show living near high voltage power lines increases the risks of leukemia in children, increases the cases of breast cancer & brain tumors all of which is at a greater proportion than RMP is presenting in the EIS.</p>	38X	See response to Comments 25F and 34B.
38Y	<p>If that isn't enough to make you oppose RMP's project, trust me, there are many, many more reasons. One of the proposed routes runs in front of Tooele high school's "T". Establishing a negative lasting affect on the view of the mountain with the beloved high school historical marker placed there by</p>	38Y	

COMMENT(S)
38 KAYE PRATT (continued)

RESPONSE(S)

the 1916 graduating class of Tooele High School. The “T” is a symbol to THS alumni of their alma matter. Twice a year hundreds of high school seniors access the “T” lighting it at homecoming and graduation. The “T” has both historical and sentimental value to the residents of Tooele serving as a visual welcoming home sign to all for over a hundred years. My concerns are also safety when it comes to the “T”, high schooler’s are known for their pranks and dares especially at these two events. There has already been reported deaths by young people trying to climb these power lines.

38Y See response to Comments 38N.

The EIS states construction activities increases the risk of wildfires. The proposed route would require approx. 128 miles of new access roads. Tooele City has a Volunteer Fire Department. Any additional risks of wildfires to the shrub and grassy dry mountainous areas in the late fall would increase the danger of the lives of the volunteer fire fighters and place the surrounding residential areas in potential danger and loss of human lives and destruction of personal property. The closest additional fire assistance is the County Fire Dept located 15 to 20 minutes north in Stansbury Park and is also a volunteer service.

38Z See response to 38O

38AA See response to Comment 24F

Antiquated, vague, inconsistent and incorrect information was filed with the Federal Government to present a biased view of our city which would grant RMP approval to proceed with a multi-billion dollar project that will negatively impact our valley to such a magnitude we will never be able to recover from it. Notice to citizens was not sufficient to present RMP’s project in enough detail and with enough information with limited time left to oppose it. RMP was hoping to “fly under the radar” hoping we wouldn’t notice them until it was too late, but this is not the case for them in Tooele. We have caught them in enough time to oppose their project before it was started and before it’s too late to stop their current proposed routes through our city and valley.

BLM has included the most up-to-date resource data, development plans, and aerial imagery (July 2009) for analysis and comparison of alternatives in the FEIS.

38AB

38AC See response to Comment 38T.

38AC

COMMENT(S)

38 KAYE PRATT (continued)

RESPONSE(S)

According to RMP, the power line is needed for the Salt Lake Valley. Tooele may need additional power and benefit from it in the future and that's only "if" we have anything left to build to. We need to protect our best interests the same as other cities along the Wasatch front who have denied RMP to build on their side of the mountain. Our personal property value will decrease if these lines are built next to our homes. Any improvement we have made will be of no value. If the value of our homes decreases; the amount we pay in property tax will go down as well. This will be an individual loss and an annual loss to the tax base we so desperately need to maintain our schools, streets and the money used to operate our city and county.

38AD

38AD

See response to Comment 23B.

We can't let a big corporation tear the heart out of our valley. We have given so much of our valley to other big corporations and to the government. It feels like we have given every other part of ourselves to nerve agents, toxic chemicals, chlorine gases, to name just a few – because we – the citizens of Tooele – didn't have the opportunity to stand up and say no – No we don't want them here - before the decision was made to bring those poisons here.

We don't want any more. The heart is all we have left and we want it to remain untouched and still beating so we can build a future here. If we allow these power corridors to be placed where RMP and the BLM propose wrapping around the city, we won't have a future, we will be strangled by electricity, choked to death with no room to grow or beauty left to enjoy and our heart will stop beating.

Sincerely,

Brad and Kaye Pratt 743 Deer Hollow Tooele, UT 84074

RESPONSE(S)

COMMENT(S)

39 DAN AND AMY OLSON

"Amy"
 <farmhouse@wirele
 ssbeehive.com>
 08/12/2009 04:01
 PM
 To
 <UT_M20TL_EIS@blm.gov>
 cc
 Subject
 Mona to Oquirrh Transmission Line

To Whom It May Concern:

We have carefully reviewed the Proponent's Proposed Route and Alternative Routes Map. We have several comments concerning the proposed and alternative routes and the map it self. Our comments are focused on the Limber to Oquirrh component of the plan but also address issues with the Limber to Terminal component as well. We have no comments on the Mona to Limber component as this portion of the project does not affect us directly therefore we will leave the comments to those with whom it affects.

First, the map seems to be rather old and out of date. Communities in the Erda, Overlake, Stansbury Park, Lake Point and Grantsville areas are missing from the map. There may very well be others as well. This seems to be a deliberate attempt to conceal the actual impact on the residents of the Tooele valley by deceptively showing how close the power lines will actually be to homes and communities. We would urge you to re-publish the map with current data of the communities involved.

Second, We do not support any routes that will impact current developments within Tooele valley. The alternatives that seem to fit this desire are alternative G for the Limber to Oquirrh component and alternative H for the Limber to Terminal component, although this is not completely clear on the map. We realize there are reliability issues running the two lines parallel to one another but we believe that those issues can be resolved.

Base maps used for the Draft EIS were topographic maps from the U.S. Geological Survey. The topographic base maps included the communities of Erda, Stansbury Park, Lake Point, and Grantsville. Overlake is a residential development within Tooele City.

Aerial photo maps were also included for readers to reference in the Draft EIS. More recent aerial imagery dated 2008 and 2009 has been obtained for the Final EIS and is depicted in Figures 2-4 through 2-8 and in Appendix C, Maps C-9 and C-10. Incorporated community boundaries have also been added to Figures 2-4 through 2-8.

39A

Comment and route preference noted.

39B

RESPONSE(S)

COMMENT(S)

39 DAN AND AMY OLSON (continued)

Third, we do not support any alignment that would follow the railroad tracks. It would pass through the Overlake development currently with hundreds of homes, hospital, assisted living and child care facilities, places of worship, and hundreds more planned. There are plans in Tooele City for some 700 more homes to be built in within ¼ mile of the railroad tracks on the north end of the city limits east of highway 36. Also the county expects to have several more developments on the east bench. The installation of a transmission line in this area would affect a majority of the residents of Tooele County. And finally it would pass near or over the new Utah State University Campus. We believe that places of higher learning should be free from the distractions a transmission line would cause.

39C

39C Comment and route preference noted.

Thank you for letting us comment on this project and we hope that the lines of communication will remain open. We look forward to you reply.

Thank you,

Dan and Amy Olson
Erda resident

COMMENT(S)

40 JIM WEBBER

BLM: Attention Cindy Ledbetter and Mike Nelson 8/11/09

EMFs AND CHILDHOOD LEUKEMIA/EMFs AND OTHER HEALTH RISKS

Hello, my name is Jim Webber. I am a physician here in Tooele. Specifically, I am the radiologist at Mountain West Medical Center and as such am the Radiation Safety Officer for the hospital. In this role, I am involved with radiation safety issues for the hospital. While electric and magnetic fields related to power lines are not directly related with my role at the hospital, I do feel I can speak authoritatively on the subject due to my training and background.

Electric and magnetic fields (EMFs) are invisible lines of force associated with the production, transmission, and use of electric power such as those associated with high voltage transmission lines and secondary power lines.

National Institute of Environmental Health Sciences scientists have concluded that there is an association between increasing exposure to EMFs and an increased risk of childhood leukemia. Epidemiologic studies have repeatedly shown associations between measures of residential power-line magnetic fields and childhood leukemia. The International Agency for Research on Cancer in 2002 designated EMFs as a class 2B carcinogen (meaning possibly able to be cancer causing) and concluded that high level magnetic fields are associated with a doubling of the risk of childhood leukemia.

More recently, in the lawsuit recently filed by Rocky Mountain Power against the city Of Willard, a consultant for the Willard city council, Cindy Sage of Sage Consultants in Santa Barbara, California, pointed out that since 1998 in the U.S. and since 2001 by

RESPONSE(S)

See response to comment 34B. Contrary to testimony by Cindy Sage, no scientific agency has classified magnetic fields as a cancer-causing agent. The World Health Organization and the International Agency for Research on Cancer (IARC) have designated magnetic fields as a “possible carcinogen” because of statistical data from some epidemiologic studies showing an association between childhood leukemia and average exposure to magnetic fields greater than 3 to 4 milligauss (mG). This statistical data means that childhood leukemia cases were more likely to have estimates of past exposure to magnetic fields greater than 3 to 4 mG, compared to groups of similar children that did not have leukemia. The scientific agencies concluded that experimental studies do not suggest increased cancer rates among highly exposed animals, nor do they demonstrate a consistent effect of magnetic fields on cells or tissues that is indicative of a disease process, including immunological effects. Because the evidence for carcinogenicity does not extend beyond the statistical data on childhood leukemia, magnetic fields were not designated as a “known carcinogen” (e.g., tanning beds and cigarette smoke) or a “probable carcinogen” (e.g., diesel engine exhaust). It is important to recognize that more than a quarter of the substances evaluated by the IARC are designated as “possible carcinogens,” including common exposures such as coffee and braken fern, because of the inexact and evolving nature of science.

40A

40A

RESPONSE(S)

COMMENT(S)

40 JIM WEBBER (continued)

the World Health Organization International Cancer Agency for Cancer Research, that EMFs have been documented as cancer-causing agents.

In the Journal of Pathophysiology, April 2009 edition, researchers Johansson, et al concluded that EMFs disturb immune system function through stimulation of various allergic and inflammatory responses, as well as effects on tissue repair processes. Such disturbances increase the risk of cancer. These effects were shown to occur at exposure levels significantly below most current national and international safety limits.

As a father of six children, and father friend to many children in the neighborhood where Rocky Mountain Power's proposed route for high voltage power lines are to be placed, I am very concerned about the increased risk of development of leukemia in my own children as well as other children in the area.

As a separate concern, my friend, Noel Nye, whom I went to college with at Weber State University, and who is a Family Practice physician in Kaysville lost his 15 year old son in October 2007, when he climbed a 70 foot tall metal tower associated with power lines in the Kaysville area and was electrocuted. Certainly, this risk will be present for any and all children who are curious about such power lines as have been proposed to be built.

In conclusion, I am not opposed to increased power being made available to the citizens of the state of Utah. I am, however, for reasons stated above, vehemently opposed to Rocky Mountain Power's proposed route and strongly suggest that the BLM continue to work with the Tooele community committee, headed by Brad and Kay Pratt, as well as with RMP to find an acceptable alternative route.

40A

40B

40C

40B See response to comment 38O.

40C Comment and route preference noted.

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