

Appendix C

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

Contents

Introduction..... C-1

- C.1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices C-8
- C.2 Applicant Committed Design Features to be Applied to the TWE Transmission Line C-20
- C.3 State and BLM Land Use Stipulations Applicable to Transmission Line ROWs C-26
 - C.3.1 State Stipulation References C-26
 - C.3.2 BLM Field Office Stipulation References C-28
- C.4 USFS Management Units crossed by TWE Project Alternatives C-101
 - C.4.1 Ashley National Forest..... C-101
 - C.4.2 Manti- La Sal National Forest C-101
 - C.4.3 Fishlake National Forest C-103
 - C.4.4 Uinta National Forest Planning Area C-105
 - C.4.5 Dixie National Forest..... C-106
 - C.4.6 National BMPs for Water Quality Management C-108
- C.5 Additional Mitigation Measures Prescribed for the TWE Project..... C-118

List of Tables

- Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices..... C-8
- Table C.2-1 Applicant Committed Design Features C-20
- Table C.3-1 State of Wyoming No Surface Use and Controlled Surface Use Restrictions C-26
- Table C.3-2 State of Wyoming Timing Restrictions C-26
- Table C.3-3 Rawlins Field Office No Surface Use and Controlled Surface Use Restrictions..... C-29
- Table C.3-4 Rawlins Field Office Timing Restrictions C-32
- Table C.3-5 Little Snake Field Office No Surface Use and Controlled Surface Use Restrictions C-34
- Table C.3-6 Little Snake Field Office Timing Restrictions C-37
- Table C.3-7 Grand Junction Field Office No Surface Use and Controlled Surface Use Restrictions C-40
- Table C.3-8 Grand Junction Field Office Timing Restrictions C-43
- Table C.3-9 White River Field Office No Surface Use and Controlled Surface Use Restrictions..... C-44
- Table C.3-10 White River Field Office Timing Restrictions C-50
- Table C.3-11 Vernal Field Office No Surface Use and Controlled Surface Use Restrictions C-51
- Table C.3-12 Vernal Field Office Timing Restrictions* C-57
- Table C.3-13 Moab Field Office No Surface Use and Controlled Surface Use Restrictions C-60
- Table C.3-14 Moab Field Office Timing Restrictions* C-65
- Table C.3-15 Price Field Office No Surface Use and Controlled Surface Use Restrictions C-68

Table C.3-16 Price Field Office Timing Restrictions* C-71

Table C.3-17 Richfield Field Office No Surface Use and Controlled Surface Use Restrictions C-73

Table C.3-18 Richfield Field Office Timing Restrictions* C-78

Table C.3-19 Salt Lake Field Office No Surface Use and Controlled Surface Use Restrictions C-82

Table C.3-20 Salt Lake Field Office Timing Restrictions C-83

Table C.3-21 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah . C-84

Table C.3-22 Fillmore Field Office No Surface Use and Controlled Surface Use Restrictions..... C-86

Table C.3-23 Fillmore Field Office Timing Restrictions C-87

Table C.3-24 Cedar City Field Office No Surface Use and Controlled Surface Use Restrictions C-89

Table C.3-25 Cedar City Field Office Timing Restrictions C-89

Table C.3-26 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah . C-90

Table C.3-27 Saint George Field Office No Surface Use and Controlled Surface Use Restrictions... C-92

Table C.3-28 Saint George Field Office Timing Restrictions C-93

Table C.3-29 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah 94

Table C.3-30 Ely Field Office No Surface Use and Controlled Surface Use Restrictions..... 95

Table C.3-31 Ely Field Office Timing Restrictions 97

Table C.3-32 Las Vegas Field Office No Surface Use and Controlled Surface Use Restrictions 98

Table C.3-33 Las Vegas Field Office Timing Restrictions 100

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands 108

Table C.5-1 Mitigation Measures 118

List of Figures

Figure C-1 Region I No Surface Use C-4

Figure C-2 Region II No Surface Use C-5

Figure C-3 Region III No Surface Use C-6

Figure C-4 Region IV No Surface Use C-7

Introduction

This appendix includes the following five sections:

Section C.1: Westwide Energy Corridor Final Programmatic EIS Best Management Practices

The table included in Section C-1 outlines the best management practices (BMPs) obtained from the Record of Decision (ROD) for the Westwide Energy Corridor (WVEC) that would be applied to all portions of the proposed transmission line within WVEC corridors to reduce impacts to resources. These practices are organized by resource tables and include resource subtopics and the project phase (planning, construction, operation, and decommissioning phases) during which each BMP would be implemented. The BMPs address specific environmental impacts or localized conditions, and would be prescribed on a case-by-case basis. Typically, the applicability of selective BMPs to a given action is determined in the course of the environmental analysis and during the engineering and design phase of a Project. BMPs listed for the planning phase have been considered and implemented as applicable by the TWE Project. The WVEC BMPs are presented separately from design features or other land use stipulations because WECC BMPs are mandatory for energy projects proposed within the Section 368 corridors and they cannot be modified from the original verbiage contained in the ROD.

Section C.2: Applicant-committed Design Features (DFs)

The table included in Section C-2 outlines the applicant-committed environmental protection measures or design features (DF) proposed by the Applicant, TWE, that are being taken into account to further reduce impacts to resources. These may be similar to or more restrictive than the BMPs or stipulations contained in the land use plans. The DFs presented in this section have revised to address Draft EIS public comment. TWE will continue to review BMPs in connection with the environmental and engineering studies for the proposed and alternative transmission line routes identified for the Project and prepare updated tables identifying generic and selective BMPs for the Project.

Section C.3: State and BLM Land Use Stipulations Applicable to Transmission Line ROWs

The tables in Section C-3 identify the following BLM or State use stipulations:

- No Surface Use (NSU) areas: These are where surface use would not be permitted, or areas where permanent structures are not allowed and include all identified ROW exclusion areas.
- Controlled Surface Use (CSU) areas: These stipulations include all identified ROW avoidance areas or other areas where surface is permitted but requires adherence to certain constraints (for example, use of certain construction methods, commitments for surveys, etc.).
- Timing Limitation (TL) areas: These stipulations identify areas where surface use is not allowed during time periods key to a specific resource. These stipulations may also include an avoidance buffer (for example, a restriction on surface use within a 0.25 mile from raptor nests during the nesting period).

The stipulations contained in this section were compiled from each BLM RMP through which the proposed transmission line passes. NSU, CSU, and TL stipulations are organized by management area (State or BLM Field Office [FO]). The 15 BLM FOs that the proposed transmission line corridor crosses are as follows:

- Wyoming: Rawlins FO.
- Colorado: Little Snake, Grand Junction, and White River FOs.

- Utah: Vernal, Moab, Price, Richfield, Salt Lake, Fillmore, Cedar City, and Saint George FOs.
- Nevada: Ely District/Caliente FO; Las Vegas FO.

In addition, **Figures C-1** through **C-4** identify NSU areas by Region. State and BLM land use plan stipulations were developed to address area-specific resources issues, and may not be appropriate for application throughout the Project. Therefore, these stipulations are only applied in the area for which they were developed (although, the protections from some land use plans may be applied to the entire Project as mitigation, see Section C.5, below). CSU stipulations are not mapped because surface use is not prohibited in these areas. It is important to note that each FO RMP contains other BMPs or Standard Design Practices to be applied to surface-disturbing activities. Due to the sheer number of these BMPs, Appendix C does not include a full BLM list by FO; however, each of the FO subsections contained in Section C-3 identifies the RMP and applicable appendices where these can be located. State and BLM land use plan stipulations may not be modified from their approved verbiage.

Section C.4: USFS Management Units Crossed by TWE Project Alternatives

The proposed transmission line crosses portions of five national forests within in Utah: Ashley, Manti-La Sal, Fishlake, Uinta-Wasatch-Cache, and Dixie. Within their respective forest plans (LRMPs), each national forest has developed management units to protect resources or specific opportunities. The LRMPs provide specific direction, goals, standards, and guidelines for each of those management units. In general, all alternatives are consistent with the Forest Plans with exceptions noted in Chapter 4 (Land Use Plan Amendments). More detail can be found on specific direction, goals, standards, and guidelines for each of the management units in the Forest Plan spreadsheets in the Project Record.

Section C.5: Additional Mitigation Measures Prescribed for the TWE Project

The TransWest Express EIS prescribes additional mitigation measures to minimize resource impacts. These mitigation measures go beyond the agency requirements listed in the previous sections and the applicable management plans. All proposed mitigation, unless otherwise specified in the measure, applies to the entire project, including private lands. Tribal entities or private landowners may, however, require compliance with additional stipulations beyond what is set forth in Appendix C.

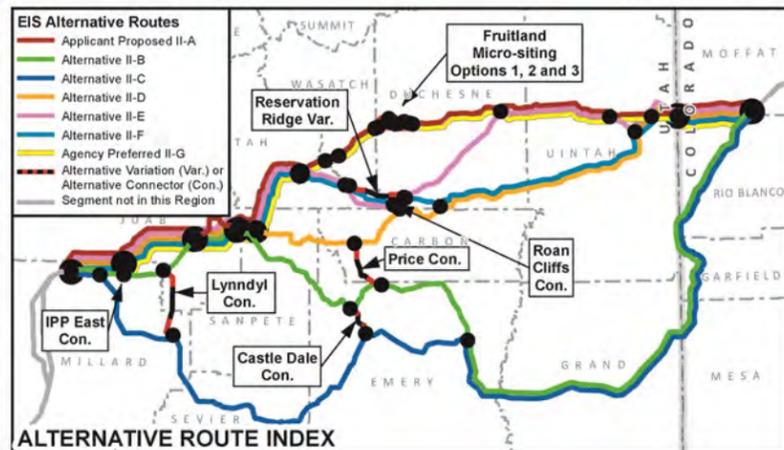
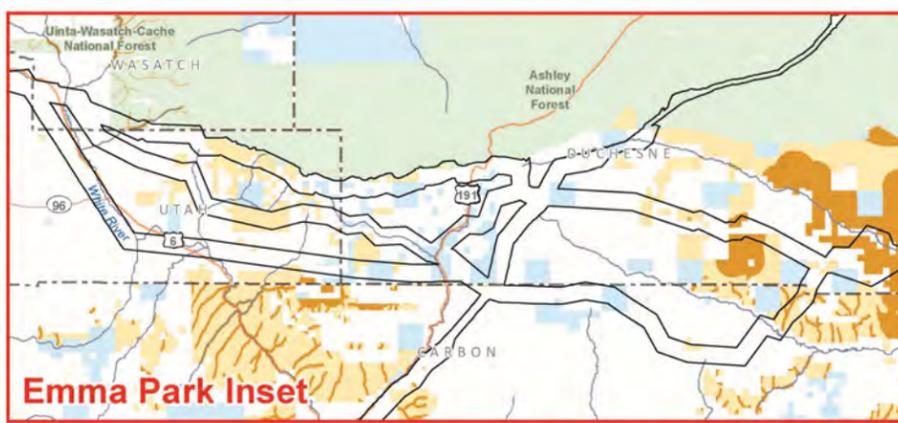
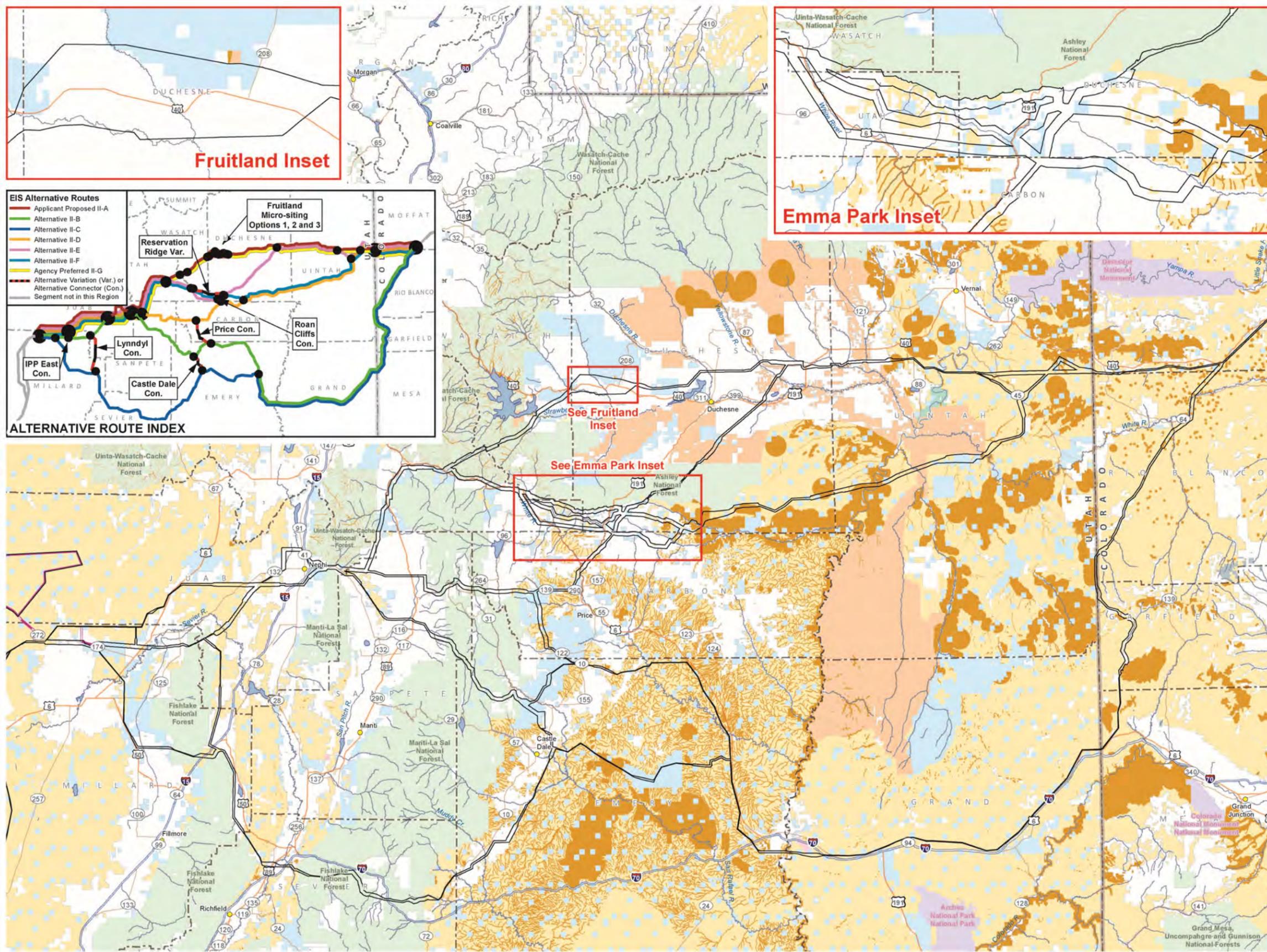
Section C-5 contains a comprehensive listing of the mitigation measures prescribed in the resource sections of the EIS.

To understand the full extent of resource protection for effects from project actions, the additional mitigation measures listed in **Table C.5-1** would be implemented in combination with BMPs, Design Features, and the Federal and State Stipulations identified in Sections C.1 through C.4. Examples of resource protection that are provided by BMPs, Stipulations, and Design Features include the following:

- Section 7 Compliance – Compliance with environmental laws and regulations such as the Clean Water Act and Section 7 of the ESA is stated in BMPs for the Westwide Energy Corridor Programmatic EIS, BLM FO stipulations, and Applicant Design Feature TWE-2.
- Disturbance to Colorado River Endangered Fish Species and Their Critical Habitat – Protection to the Colorado River federally endangered fish species and their critical habitat is provided by BLM stipulations in the Little Snake and Moab FOs, which restricts surface disturbance in the 100-year floodplain and critical habitat areas.
- Water Depletion Effects on Upper Colorado River Federally Endangered Fish Species – Compliance with the *Recovery Implementation Program for Endangered Fish Species in the Upper Colorado Basin* (Recovery Program) would require that water use in the Upper Colorado River Basin be evaluated to determine the potential effects of water depletions on Colorado River endangered fish species and their critical habitat. A one-time payment would be required to the Recovery Plan for new depletions that exceed 100-acre feet. Payments are used to

manage flows and restore habitat for the fish species. BLM stipulations by the Moab FO also require that Section 7 consultation is required to for water depletions in the Upper Colorado River Basin.

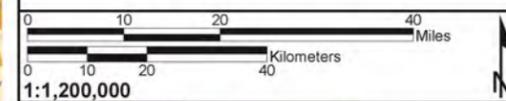
- Water Depletion Effects on Platte River Federally Listed Species - Compliance with the Platte River Recovery Implementation Program (PRRIP) would require that water use in the Platte River Basin be evaluated to determine the potential effects of water depletions on Platte River federally listed species and their critical habitat. If the proposed water-related activity will deplete more than 0.1 acre-feet in the Platte River system and will rely on surface water or hydrologically connected groundwater, an evaluation is required by the Wyoming State Engineer to determine whether the water use is a new or existing activity. If the activity is considered an existing water-related activity, the State Coordinator will determine whether any further action is required to be covered by the PRRIP. If further actions are required, a Wyoming Platte River Recovery Agreement will be executed between the water user and the Wyoming State Engineer.



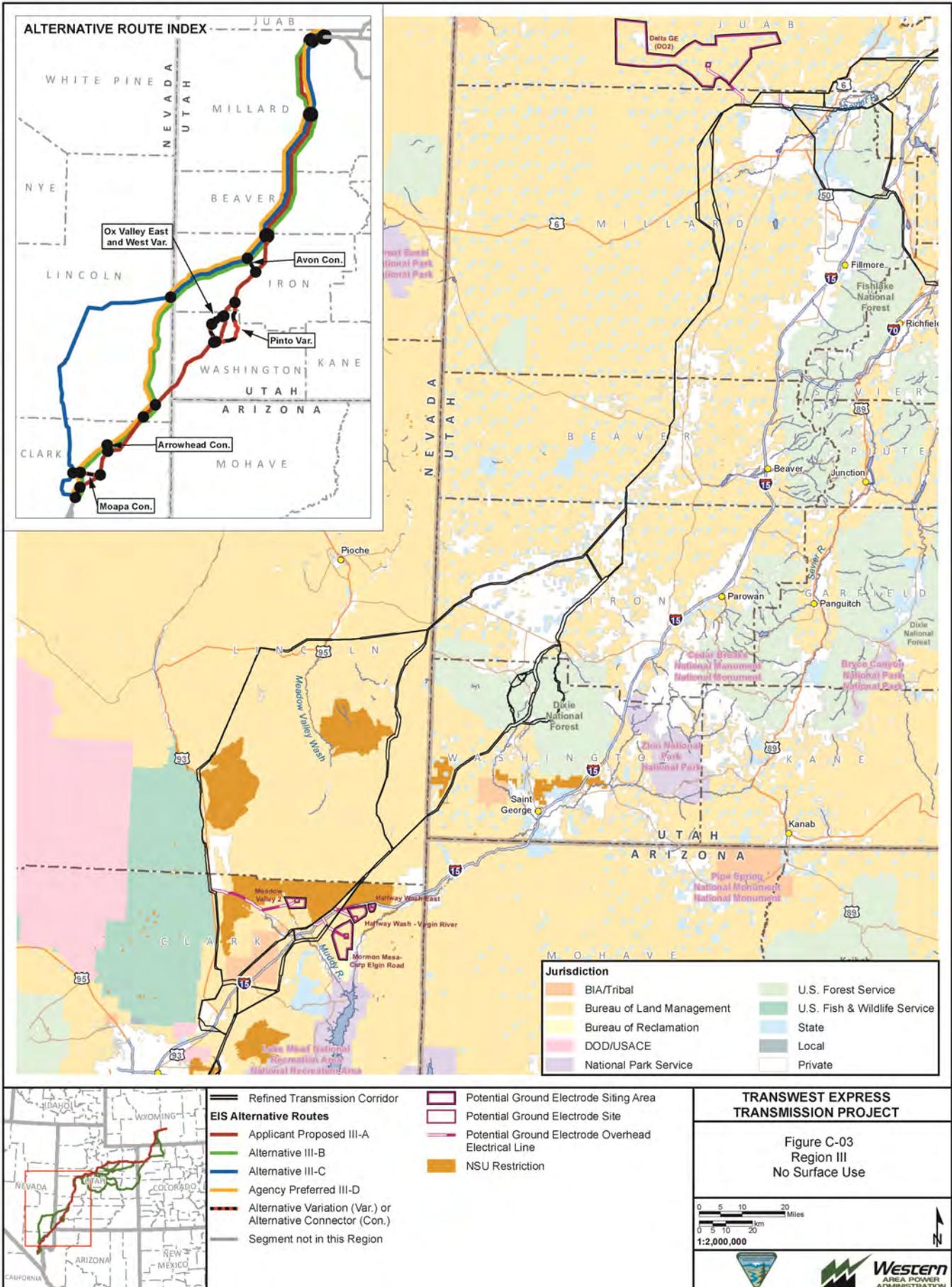
- EIS Alternative Routes**
- Applicant Proposed II-A
 - Alternative II-B
 - Alternative II-C
 - Alternative II-D
 - Alternative II-E
 - Alternative II-F
 - Agency Preferred II-G
 - Alternative Variation (Var.) or Alternative Connector (Con.)
 - Segment not in this Region
- Potential Ground Electrode Siting Area**
- Potential Ground Electrode Overhead Electrical Line**
- NSU Restriction**
- Jurisdiction**
- BIA/Tribal
 - Bureau of Land Management
 - Bureau of Reclamation
 - DOD/USACE
 - National Park Service
 - U.S. Forest Service
 - U.S. Fish & Wildlife Service
 - Other Fed
 - State
 - Local
 - Private

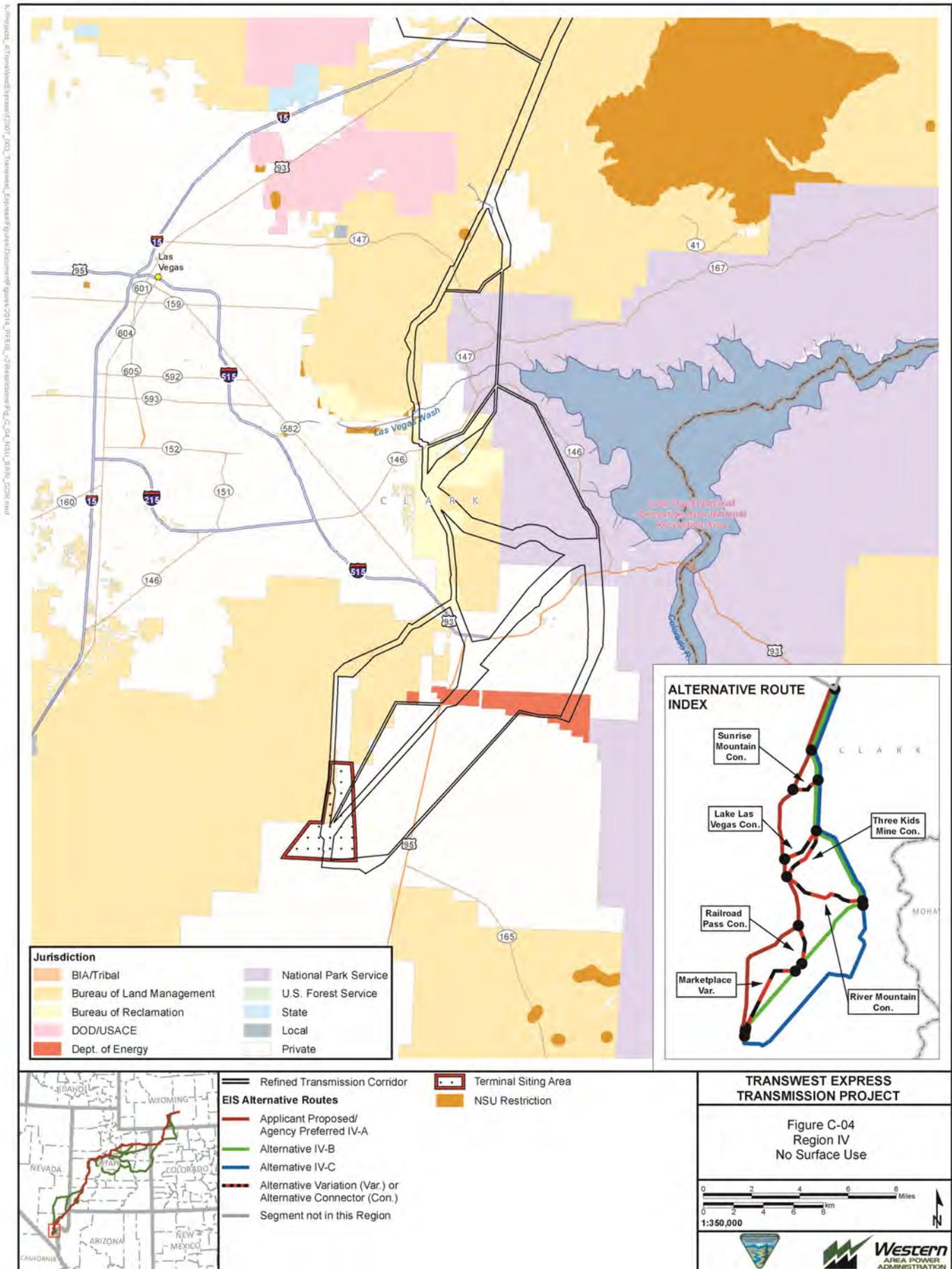
TRANSWEST EXPRESS TRANSMISSION PROJECT

Figure C-02 Region II No Surface Use



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C.1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
Regulatory Compliance			
RC-1	1	P	The appropriate agency, assisted by the applicant, must conduct project-specific NEPA analyses in compliance with Section 102 of NEPA. The scope, content, and type of analysis shall be determined on a project-by-project basis by the Agencies and the applicants.
RC-2	2	P	The appropriate agency, assisted by the project applicant, must comply with Section 106 of the NHPA on a project by-project basis. Consultation with SHPOs, any federally recognized Tribes, and other appropriate parties as per regulations (36 CFR 800) must begin early in the planning process and continue throughout project development and execution. The ACHP retains the option to comment on all undertakings (36 CFR 800.9).
RC-3	3	P	The appropriate agency, assisted by the project applicant, must consult with the USFWS and the NMFS as required by Section 7 of ESA. The specific consultation requirements, as set forth in regulations at 50 CFR Part 402, would be applied on a project-by-project basis. Applicants shall identify known occupied sites, such as nest sites, for threatened and endangered species and special status species.
RC-4	4	P	The appropriate agency, assisted by the project applicant, must coordinate and consult with NMFS regarding potential impacts to essential fish habitat (EFH) as required by the 1996 reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act.
Agency Coordination			
AC-1	1	P	Applicants seeking to develop energy transport projects within corridors located on or near DOD facilities or flight training areas (see Appendix L for applicable corridors) must, early in the planning process and in conjunction with the appropriate agency staff, inform and coordinate with the DOD regarding the characteristics and locations of the anticipated project infrastructure.
AC-2	2	P	Early in the planning process, applicants seeking ROW authorization within a Section 368 energy corridor that is located within five miles of a unit of the NPS should contact the appropriate Agency staff and work with the NPS regarding the characteristics and locations of anticipated project infrastructure. In those instances where corridors cross lands within the boundaries of a unit of the NPS, the National Park Service Organic Act and other relevant laws and policies shall apply.
AC-3	3	P	In those instances where projects using energy corridors are proposed to also cross National Wildlife Refuge System lands, the National Wildlife System Administration Act and other relevant laws and policies pertinent to national wildlife refuges shall apply.
AC-4	4	P	For electricity transmission projects, the applicant shall notify the Federal Aviation Administration (FAA) as early as practicable in the planning process in order to identify appropriate aircraft safety requirements.
AC-5	5	P	All project applications must consider applicable findings, mitigation, and/or standards contained in regional land management plans, such as the Northwest Forest Plan, when such regional plans have been incorporated into agency planning guidelines and requirements. Modification of some standards may be needed to reasonably allow for energy transport within a corridor.
Government-to-Government Coordination			
GG-1	1	P	The appropriate agency, assisted by the project applicant, must initiate government-to-government consultation with affected Tribes at the outset of project planning and shall continue consultation throughout all phases of the project, as necessary. Agencies should determine how to consult in a manner that reflects the cultural values, socioeconomic factors, and administrative structures of the interested Tribes.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
GG-2	2	P	The agency POC may require the project proponent to prepare an ethnographic study when Tribal consultation indicates the need. The study shall be conducted by a qualified professional selected in consultation with the affected Tribe.
General			
GEN-1	1	P	Applicants seeking to develop an electricity transmission or pipeline project will develop a project-specific plan of development (POD). The POD should display the location of the project infrastructure (i.e., towers, power lines) and identify areas of short- and long-term land and resource impacts and the mitigation measures for site-specific and resource-specific environmental impacts. The POD should also include notification of project termination and decommissioning to the agencies at a time period specified by the agencies.
GEN-2	2	P	Applicants, working with the appropriate agencies, shall design projects to comply with all appropriate and applicable Agency policies and guidance.
GEN-3	3	P	Project planning shall be based on the current state of knowledge. Where corridors are subject to sequential projects, project-related planning (such as the development of spill-response plans, cultural resource management plans, and visual resource management plans) and project-specific mitigation and monitoring should incorporate information and lessons learned from previous projects.
GEN-4	4	P	Applicants shall follow the best management practices for energy transport project siting, construction, and operations of the states in which the proposed project would be located, as well as federal agency practices.
GEN-5	5	P	Corridors are to be efficiently used. The applicant, assisted by the appropriate agency, shall consolidate the proposed infrastructure, such as access roads, wherever possible and utilize existing roads to the maximum extent feasible, minimizing the number, lengths, and widths of roads, construction support areas, and borrow areas.
GEN-6	6	P	When concurrent development projects are proposed and implemented within a corridor, the agency POCs shall coordinate among projects to ensure consistency with regard to all regulatory compliance and consultation requirements, and to avoid duplication of effort.
GEN-7	7	P	Applicants, assisted by the appropriate agency, shall prepare a monitoring plan for all project-specific mitigation activities.
GEN-8	8	P	Potential cumulative impacts to resources should be considered during the early stages of the project. Agency POCs must coordinate various development projects to consider and minimize cumulative impacts. A review of resource impacts resulting from other projects in the region should be conducted and any pertinent information be considered during project planning.
GEN-9	1	C	To avoid conflict with federal and nonfederal operations, the applicant shall be aware of liabilities pertaining to environmental hazards, safety standards, and military flying areas.
GEN-10	2	C	The applicant shall locate all stationary construction equipment (i.e., compressors and generators) as far as practicable from nearby residences.
GEN-11	3	C	Applicants will pay fair market value to the land management agency for any merchantable forest products that will be cut during ROW clearing. The local land management agency will determine the fair market value, which will be paid prior to clearing. The applicant will either remove the forest products from the area or will stack the material at locations determined by the local land management agency. Treatment of unmerchantable products will be determined by the local land management agency.
GEN-12	1	D	Where applicable, decommissioning activities will conform to agency standards and guidance for mitigation and reclamation (e.g., BLM's Gold Book [BLM and USFS 2007]).
GEN-13	2	D	Applicants shall locate desired projects within energy corridors to promote effective use of the corridors by subsequent applicants and to avoid the elimination of use or encumbrance of use of the corridors by ROW holders. Proposed projects should be compatible with identified energy transport modes and avoid conflicts with other land uses within a corridor.
GEN-14	3	D	Gravel work pads will be removed; gravel and other borrow material brought to the ROW during construction will be disposed of as approved by the agency.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
GEN-15	4	D	Any wells constructed on the ROW to support operations will be removed and properly closed in accordance with applicable local or state regulations.
GEN-16	5	D	All equipment, components, and aboveground structures must be cleaned and removed from the site for reclamation, salvage, or disposal; all below-ground components will be removed to a minimum depth of three feet to establish a root zone free of obstacles; pipeline segments and other components located at greater depths may be abandoned in place provided they are cleaned (of all residue) and filled with inert material to prevent possible future subsidence.
GEN-17	6	D	Dismantled and cleaned components will be promptly removed; interim storage of removed components or salvaged materials that is required before final disposition is completed will not occur on federal land.
GEN-18	7	D	At the close of decommissioning, applicants will provide the federal land manager with survey data precisely locating all below-grade components that were abandoned in place.
Project Design			
PD-1	1	P	Applicants shall locate desired projects within energy corridors to promote effective use of the corridors by subsequent applicants and to avoid the elimination of use or encumbrance of use of the corridors by ROW holders. Proposed projects should be compatible with identified energy transport modes and avoid conflicts with other land uses within a corridor.
PD-2	2	P	Applicant shall identify and delineate existing underground metallic pipelines in the vicinity of a proposed electricity transmission line project and design the project to avoid accelerating the corrosion of the pipelines and/or pumping wells.
Soils, Excavation, and Blasting			
SOIL-1	1	C	Applicants shall salvage, safeguard, and reapply topsoil from all excavations and construction activities during restoration.
VEG-1	2	C	All areas of disturbed soil shall be restored by the applicant using weed free native grasses, forbs, shrubs, and trees as directed by the agency. Restoration should not be unnecessarily delayed. If native species are not available, noninvasive vegetation recommended by agency specialists may be used.
SOIL-2	3	C	The applicant must not create excessive slopes during excavation. Areas of steep slopes, biological soil crusts, erodible soil, and stream channel crossings would often require site-specific and specialized construction techniques by the applicant. These specialized construction techniques should be implemented by adequately trained and experienced employees.
WAT-1	4	C	Blasting activities will be avoided or minimized in the vicinity of sole source aquifer areas to reduce the risk of releasing sediments or particles into the groundwater and inadvertently plugging water supply wells.
SOIL-3	5	C	The applicant must backfill foundations and trenches with originally excavated material as much as possible. Excess excavation materials should be disposed of by the applicant only in approved areas.
SOIL-4	6	C	The applicant shall obtain borrow (fill) material only from authorized sites. Existing sites should be used in preference to new sites.
PHS-1	7	C	The applicant shall prepare an explosives use plan that specifies the times and meteorological conditions when explosives will be used and specifies minimum distances from sensitive vegetation and wildlife or streams and lakes.
PHS-2	8	C	If blasting or other noisy activities are required during the construction period, the applicant must notify nearby residents in advance.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
Mitigation and Monitoring			
MIT-1	1	C	All control and mitigation measures established for the project in the POD and other required plans must be maintained and implemented by the applicant throughout construction. Necessary adjustments may be made with the concurrence of the appropriate agency.
MIT-2	1	O	All control and mitigation measures established for the project shall be maintained and implemented by the applicant throughout the operation of the project. Necessary adjustments may be made with the concurrence of the appropriate agency.
MIT-3	1	D	All control and mitigation measures established for the project in the POD and other required plans will be incorporated into a decommissioning plan that will be approved by the federal land manager(s); the decommissioning plan will include a site reclamation plan and a monitoring program and will be coordinated with owners and operators of other systems on the corridor to ensure no disruption to the operation of those systems.
Transportation			
TRAN-1	1	P	The applicant shall prepare an access road siting and management plan that incorporates relevant agency standards regarding road design, construction, maintenance, and decommissioning. Corridors will be closed to public access unless determined by the appropriate federal land manager to be managed as part of an existing travel and transportation network in a land use plan or subsequent travel management plan(s).
TRAN-2	2	P	The applicant shall prepare a comprehensive transportation plan for the transport of transmission tower or pipeline components, main assembly cranes, and other large equipment. The plan should address specific sizes, weights, origin, destination, and unique equipment handling requirements. The plan should evaluate alternative transportation routes and should comply with state regulations and all necessary permitting requirements. The plan should address site access roads and eliminate hazards from truck traffic or adverse impacts to normal traffic flow. The plan should include measures such as informational signage and traffic controls that may be necessary during construction or maintenance of facilities.
TRAN-3	3	P	Applicants shall consult with local planning authorities regarding increased traffic during the construction phase, including an assessment of the number of vehicles per day, their size, and type. Specific issues of concern (e.g., location of school bus routes and stops) should be identified and addressed in the traffic management plan.
TRAN-4	1	D	Additional access roads needed for decommissioning will follow the paths of access roads established during construction to the greatest extent possible; all access roads not required for the continued operation and maintenance of other energy systems present in the corridor shall be removed and their footprints reclaimed and restored.
Groundwater			
WAT-2	1	P	Applicants must identify and delineate all sole source aquifers in the vicinity of a proposed project and design the project to avoid disturbing these aquifers or to minimize potential risks that the aquifers could be contaminated by spills or leaks of chemicals used in the projects.
WAT-3	2	P	In instances where a project within an energy corridor crosses sole source aquifers, the applicant must notify the U.S. Environmental Protection Agency (EPA) and the agencies that administer the land as early as practicable in the planning process. Section 1424(e) of the Safe Drinking Water Act and other relevant laws and policies pertinent to the corridors that cross sole source aquifers shall apply.
Surface Water			
WAT-4	1	P	Applicants must identify all wild and scenic rivers (designated by act of Congress or by the Secretary of the Interior under Section 3(a) or 2(a)(ii) of the Wild and Scenic Rivers Act, respectively), congressionally authorized wild and scenic study rivers, and agency identified (eligible or suitable) wild and scenic study rivers in the vicinity of a proposed project and design the project to avoid the rivers or minimize the disturbance of the rivers and their vicinity.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
WAT-5	2	P	In instances where a project within an energy corridor crosses a wild and scenic river or a wild and scenic study river, the appropriate federal permitting agency, assisted by the project applicant, must coordinate and consult with the river-administrating agency regarding the protection and enhancement of their free-flowing condition, water quality, and outstandingly remarkable natural, cultural, and recreational values.
WAT-6	3	P	Applicants shall identify all streams in the vicinity of proposed project sites that are listed as impaired under Section 303(d) of the Clean Water Act and provide a management plan to avoid, reduce, and/or minimize adverse impacts on those streams.
WAT-7	1	D	A SWPPP permit will be obtained and its provisions implemented for all affected areas before any ground disturbance activities commence.
Surface Water and Groundwater Resources			
WAT-8	1	C	The applicant must safeguard the possibility of dewatering shallow groundwater and/or wetland in the vicinity of project sites during foundation excavations or excavations for buried pipelines.
WAT-9	2	C	The applicant must implement erosion controls complying with county, state, and federal standards, such as jute netting, silt fences, and check dams, and secure all necessary storm water pollution prevention plan (SWPPP) permits.
WAT-10	3	C	The applicant shall minimize stream crossings by access roads to the extent practicable. All structures crossing intermittent and perennial streams should be located and constructed so that they do not decrease channel stability, increase water velocity, or impede fish passage.
WAT-11	4	C	Applicants shall not alter existing drainage systems and should give particular care to sensitive areas such as erodible soils or steep slopes. Soil erosion should be reduced at culvert outlets by appropriate structures. Catch basins, roadway ditches, and culverts should be cleaned and maintained.
WAT-12	5	C	Applicants must not create hydrologic conduits between aquifers.
Paleontological Resources			
PAL-1	1	P	The applicant shall conduct an initial scoping assessment to determine whether construction activities would disturb formations that may contain important paleontological resources. Potential impacts to important paleontological resources should be avoided by moving or rerouting the site of construction or removing or reducing the need for surface disturbance. When avoidance is not possible, a mitigation plan should be prepared to identify physical and administrative protective measures and protocols such as halting work, to be implemented in the event of fossil discoveries. The scoping assessment and mitigation plan should be conducted in accordance with the managing agency's fossil management practices and policies.
PAL-2	2	P	If paleontological resources are known to be present in the project area, or if areas with a high potential to contain paleontological material have been identified, the applicant shall prepare a paleontological resources management and mitigation plan. If adverse impacts to paleontological resources cannot be avoided or mitigated within the designated corridors, the agency may consider alternative development routes to avoid, minimize, or mitigate adverse effects.
PAL-3	3	P	A protocol for unexpected paleontological discoveries should be developed. Unexpected discovery during construction should be brought to the immediate attention of the responsible federal agency's authorized officer. Work should be halted in the vicinity of the discovery to avoid further disturbance of the resource while the resource is being evaluated and appropriate mitigation measures are being developed.
PAL-4	1	C	Project construction activities will follow the protective measures and protocols identified in the paleontological resources mitigation plan.
PAL-5	2	C	All paleontological specimens found on federal lands remain the property of the U.S. government. Specimens, therefore, may only be collected by a qualified paleontologist under a permit issued by the managing agency and must be curated in an approved repository.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
Ecological Resources			
ECO-1	1	P	Applicants shall identify important, sensitive, or unique habitats and BLM sensitive, USFS sensitive, and state-listed species in the vicinity of proposed projects and, to the extent feasible, design the project to avoid, minimize, or mitigate impacts to these habitats and species.
ECO-2	2	P	To restore disturbed habitats, the applicant will prepare a habitat restoration plan that identifies the approach and methods to be used to restore habitats disturbed during project construction activities. The plan will be designed to expedite the recovery to natural habitats supporting native vegetation, and require restoration to be completed as soon as practicable after completion of construction, minimizing the habitat converted at any one time. To ensure rapid and successful restoration efforts, the plan will include restoration success criteria, including time frames, which will be developed in coordination with the appropriate agency and which must be met by the applicant. Bonding to cover the full cost of restoration will be required.
ECO-3	3	P	In consultation with the U.S. Army Corps of Engineers, the appropriate agency, assisted by the project applicant, will identify wetlands (including ephemeral, intermittent, and isolated wetlands), riparian habitats, streams, and other aquatic habitats in the project area and, to the extent feasible, design the project to avoid, minimize, or mitigate impacts to these habitats.
ECO-4	1	C	Areas that are known to support ESA-listed species, BLM-sensitive, USFS-sensitive, and state-listed species or their habitats must be identified and marked with flagging or other appropriate means to avoid direct impacts during construction activities. Construction activities upslope of these areas should be avoided to prevent indirect impacts of surface water and sediment runoff.
ECO-5	2	C	All construction activities that could affect wetlands or waters of the United States must be conducted in accordance with permit requirements identified in permits issued by the U.S. Army Corps of Engineers.
ECO-6	1	O	Applicants shall review existing information regarding plant and animal species and their habitats in the vicinity of the project area and identify potential impacts to the applicable agencies.
ECO-7	2	O	Project staff shall avoid harassment or disturbance of wildlife, especially during reproductive courtship, migratory, and nesting seasons.
ECO-8	3	O	Observations by project staff of potential wildlife problems, including wildlife mortality, will be immediately reported to the applicable agency authorized officer.
Vegetation Management			
VEG-2	1	P	Applicants shall develop an integrated vegetation management plan consistent with applicable regulations and agency policies for the control of unwanted vegetation, noxious weeds, and invasive species (E.O. 13112). The plan should address monitoring; ROW vegetation management; the use of certified weedseed-free hay, straw, and/or mulch mulching; the cleaning of vehicles to avoid the introduction of invasive weeds; education of personnel on weed identification; the manner in which weeds spread; and the methods for treating infestations (BLM 2006, 2007a,b, 2008).
Pesticide and Herbicide Use			
VEG-3	1	O	If pesticides are used, the applicant shall ensure that pesticide applications as specified in the integrated vegetation management plan are conducted within the framework of agency policies and entail only the use of EPA registered pesticides that are applied in a manner consistent with label directions and state pesticide regulations. Pesticide use should be limited to non persistent immobile pesticides and may be applied only in accordance with label and application permit directions and stipulations for terrestrial and aquatic applications (BLM 2007a).
VEG-4	2	O	Pesticide and herbicide uses must be avoided in the vicinity of sole source aquifer areas (BLM 2007a).

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
Cultural Resources			
CULT-1	1	P	Cultural resources management services and individuals providing those services shall meet the Secretary of the Interior's Standards for Archaeology and Historic Preservation.
CULT-2	2	P	The project applicant may, with the approval of the agency POC, assign a Cultural Resource Coordinator to ensure an integrated compliance process across administrated and jurisdictional boundaries. The Cultural Resource Coordinator will facilitate and coordinate compliance with multiple laws, policies, regulations, and existing pertinent agreements (PAs, MOAs, or MOUs) among multiple agencies and other entities, jurisdictions, and federally recognized Tribes. The coordinator may assist with development of pertinent agreements among concerned parties during the course of the project. The coordinator shall be a qualified professional with experience in cultural resource compliance. Where appropriate, the Cultural Resource Coordinator may also serve as the Tribal Coordinator. Alternatively, the agency POC may assign such coordinators, to be paid for through project cost-recovery funds. The agencies, through the POC, remain responsible for consultation.
CULT-3	3	P	The project applicant may, with the approval of the agency POC, assign a Tribal Coordinator to facilitate and coordinate consultation and compliance with multiple laws, agencies, and Tribes in order to ensure effective government-to- government consultation throughout the life of the project. Alternatively, the agency POC may assign such coordinators, to be paid for through project cost-recovery funds. The agencies, through the POC, remain responsible for consultation.
CULT-4	4	P	All historic properties in the Area of Potential Effect (APE) will be identified and evaluated. The APE shall include that area within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties and shall include a reasonable construction buffer zone and laydown areas, access roads, and borrow areas, as well as a reasonable assessment of areas subject to effects from visual, auditory, or atmospheric impacts, or impacts from increased access.
CULT-5	5	P	Project proponents must develop a cultural resources management plan (CRMP) to outline the process for compliance with applicable cultural resource laws during pre-project planning, management of resources during operation, and consideration of the effect of decommissioning. CRMPs should meet the specifications of the appropriate agency and address compliance with all appropriate laws. CRMPs should include the following, as appropriate: identification of the federally recognized Tribes, State Historic Preservation Offices (SHPOs), and consulting parties for the project; identification of long- and short-term management goals for cultural resources within the APE of the project; the definition of the APE; appropriate procedures for inventory, evaluation, and identification of effects to historic properties; evaluation of eligibility for the NRHP for all resources in the APE; description of the measures to avoid, minimize, or mitigate adverse effects to historic properties; procedures for inadvertent discovery; procedures for considering Native American Graves Protection and Repatriation Act (NAGPRA) issues, monitoring needs, and plans to be employed during construction; curation procedures; anticipated personnel requirements and qualifications; public outreach and interpretation plans; and discussion of other concerns. The draft CRMP should be reviewed and approved by the agency POC in consultation with historic preservation partners, including appropriate SHPOs, Tribes, and consulting parties. CRMPs must specify procedures that would be followed for compliance with cultural resource laws, should the project change during the course of implementation.
CULT-6	6	P	Project applicants will provide cultural resources training for project personnel regarding the laws protecting cultural resources, appropriate conduct in the field (such as procedures for the inadvertent discovery of human remains), and other project-specific issues identified in the CRMP. Training plans should be part of the CRMP and should be subject to the approval of the POC. When government-to-government consultation identifies the need and the possibility, Tribes may be invited to participate in or contribute to relevant sessions.
CULT-7	7	P	If adverse effects to historic properties will result from a project, a Historic Property Treatment Plan will be developed in consultation with the SHPO, the appropriate federally recognized Tribes, and any consulting parties. The plan will outline how the impacts to the historic properties would be mitigated, minimized, or avoided. Agency officials will give full consideration to the applicable mitigation measures found in Section 3.10.5.2 of the Final PEIS when consulting during the project preplanning stages to resolve adverse effects on historic properties.
CULT-8	8	P	As directed by the agency POC, project proponents will prepare a public education and outreach component regarding cultural resources such as a public presentation, a news article, a publication, or a display. Public education and outreach components will be subject to Agency approval and Tribal review and consultation when the content or format is of interest to affected Tribes.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
CULT-9	9	P	Cultural resources inventory, evaluation, and mitigation practices should incorporate modeling and sampling strategies to the extent practicable, in concurrence with SHPOs and other relevant parties, and as approved by the agency POC.
CULT-10	10	P	Project applicants shall provide all cultural resources reports and data in an electronic format that is approved by the Agency POC and integrated across jurisdictional boundaries, that meets current standards, and that is compatible with SHPO systems. The Agency will submit this data to the SHPO in a timely fashion. Project proponents should submit cultural resources data on a regular basis to ensure that SHPO systems are kept up to date for reference as the different phases of the project proceed. Paper records may also be required by the agency.
CULT-11	11	P	Cultural resources inventory procedures, specified in the CRMP, will include development of historic contexts based on the Secretary of the Interior’s Standards and Guidelines for Archeology and Historic Preservation (48 FR 44716) sufficient to support the evaluation of cultural resources encountered in the APE.
CULT-12	1	C	Project applicants shall provide all cultural resources reports and data in an approved electronic format that is integrated across jurisdictional boundaries, that meets current standards, and that is compatible with SHPO systems. Project proponents shall submit cultural resources data on a regular basis to ensure that SHPO systems are kept up to date for reference as the different phases of the project proceed.
CULT-13	2	C	When an area is identified as having a high potential for cultural resources but none are found during a pre-construction field survey, a professionally qualified cultural resources specialist will be required to monitor ground-disturbing activities during project construction, and to complete a report when the activities are finished. The protocol for monitoring should be identified in the CRMP.
CULT-14	3	C	When human remains, funerary objects, sacred objects, or objects of cultural patrimony are inadvertently discovered, the provisions of NAGPRA shall apply and the process identified in the CRMP must be followed.
Tribal Traditional Cultural Resources			
CULT-15	1	P	The appropriate agency, assisted by the applicant, must comply with all laws, policies, and regulations pertaining to government-to-government consultation with federally recognized Tribes. Agencies shall initiate consultation with affected Tribes at the outset of project planning and shall continue consultation throughout project planning, construction, operation, and decommissioning. Consultation shall include, but not be limited to, the following: (a) identification of potentially affected Tribes; (b) identification of appropriate Tribal contacts and the preferred means of communication with these Tribes; (c) provision to the Tribes of project specific information (e.g., project proponents, maps, design features, proposed ROW routes, construction methods, etc.) at the outset of project planning and throughout the life of the project; (d) identification of issues of concern specific to affected Tribes (e.g., potential impacts to culturally sensitive areas or resources, hazard and safety management plans, treaty reserved rights and trust responsibilities); (e) identification of areas and resources of concern to Tribes; and (e) resolution of concerns (e.g., actions to avoid, minimize, or mitigate impacts to important resources; Memoranda of Agreement stating what actions would be taken to mitigated project effects; or agreements for Tribal participation in monitoring efforts or operator training programs).
CULT-16	2	P	The appropriate agency, assisted by the applicant, must comply with all pertinent laws, policies, and regulations addressing cultural and other resources important to Tribes, including the NHPA, ARPA, NAGPRA, and other laws and regulations as listed in Table 3.11-2 of this EIS.
CULT-17	3	P	The agencies shall recognize the significance to many Tribes of traditional cultural places, such as sacred sites, sacred landscapes, gathering grounds, and burial areas, and shall seek to identify such areas through consultation with affected Tribes early in the project planning process. Agencies shall seek to avoid, minimize, or mitigate impacts to such places in consultation with the Tribes, project proponents, and other relevant parties. Where confidentiality concerning these areas is important to an affected Tribe, agencies shall honor such confidentiality unless the Tribe agrees to release the information.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
CULT-18	4	P	A protocol must be developed for inadvertent discovery of Native American human remains and funerary items to comply with the NAGPRA in consultation with appropriate federally recognized Tribes. Unexpected discovery of such items during construction must be brought to the immediate attention of the responsible federal agency's authorized officer. Work must be halted in the vicinity of the find of Native American graves and funerary items to avoid further disturbance to the resources while they are being evaluated and appropriate mitigation measures are being developed. The procedures for reporting items covered under NAGPRA must be identified in the CRMP.
Visual Resources			
VIS-1	1	P	Applicants shall identify and consider visual resource management (VRM) and scenery management (SMS) issues early in the design process to facilitate integration of VRM and scenery treatments into the overall site development program and construction documents. Visual/scenery management considerations, environmental analyses, mitigation planning, and design shall reference and be in accordance with the land management agency visual/scenery management policies and procedures applicable to the jurisdiction the project lies within. Applicants shall coordinate between multiple agencies on visual/scenery sensitive issues when projects transition from one jurisdiction to another, especially when transitions occur within a shared viewshed.
VIS-2	2	P	Applicants shall prepare a VRM or scenery management plan. The applicant's planning team shall include an appropriately trained specialist, such as a landscape architect with demonstrated VRM and/or SMS experience. The VRM/SMS specialist shall coordinate with the BLM/FS on the availability of the appropriate visual or scenic inventory data, VRM management class delineations, Scenic Integrity Objectives (SIOs), and federal agency expectations for preparing project plans and mitigation strategies to comply with RMP or LRMP direction related to scenery and/or visual resources. Applicants shall confirm that a current Visual Resource Inventory and/or Scenic Class inventory is available and that the resource management plan (RMP) or land resource and management plan (LRMP) VRM classifications or SIOs have been designated in the current land management plan. Project plans shall abide by the VRM class designations and SIOs and consider sensitivities defined within the visual or scenic resource Inventory. If visual or scenic management objectives are absent, then the proper inventory and classification process shall be followed to develop them in accordance with the BLM VRM manual and handbooks or FS SMS process, depending on the agency. When the VRM management classes or SIOs are absent, then the project alternatives must reflect a range of management options related to scenery and visual resources that reflect the values identified in the visual/scenic inventory. Responsibility for developing an inventory or VRM management classes (or in the case of the FS, Scenic Classes and SIOs) will remain with the respective agency, but how to accomplish these tasks will be determined by the Field Office Manager or Forest Supervisor, who will consider the applicant's role and financial participation in completing the work.
VIS-3	3	P	Visual and scenic mitigation planning/design and analysis shall be performed through integrated field assessment, applied global positioning system (GPS) technology, field photo documentation, use of computer-aided design and development software, 3-D modeling GIS software, and visual simulation software, as appropriate. Proposed activities, projects, and site development plans shall be analyzed and further developed using these technologies to meet visual and scenic objectives for the project area and surrounding areas sufficient to provide the full context of the viewshed. Visual simulations shall be prepared according to BLM Handbook H-8432-1, or other agency requirements, to create spatially accurate depictions of the appearance of proposed facilities, as reflected in the 3-D design models. Simulations shall depict proposed project appearance from sensitive/scenic locations as well as more typical viewing locations. Transmission towers, roads, compressor stations, valves, and other aboveground infrastructure should be integrated esthetically with the surrounding landscape in order to minimize contrast with the natural environment.
VIS-4	4	P	Applicants shall develop adequate terrain mapping on a landscape/viewshed scale for site planning/design, visual impact analysis, visual impact mitigation planning/design, and for full assessment and mitigation of cumulative visual impacts through applied, state-of-the-art design practices using the cited software systems. The landscape/ viewshed scale mapping shall be geo-referenced and at the same Digital Elevation Model (DEM) resolution and contour interval within the margin of error suitable for engineered site design. This level of mapping shall enable proper placement of proposed developments into the digital viewshed context. Final plans shall be field verified for compliance.
VIS-5	5	P	The full range of visual and scenic best management practices shall be considered, and plans shall incorporate all pertinent best management practices (BMPs). Visual and scenic resource monitoring and compliance strategies shall be included as a part of the project mitigation plans.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
VIS-6	6	P	Compliance with VRM/SMS objectives shall be determined through the use of the BLM Contrast Rating procedures defined in BLM Handbook H-8431-1 Visual Contrast Rating, or the FS SMS Handbook 701. Mitigation of visual impacts shall abide by the requirements of these handbooks.
VIS-7	1	C	A pre-construction meeting with BLM/FS landscape architects or other designated visual/scenic resource specialist shall be held before construction begins to coordinate on the VRM/SMS mitigation strategy and confirm the compliance-checking schedule and procedures. Applicants shall integrate interim/final reclamation VRM/SMS mitigation elements early in the construction, which may include treatments such as thinning and feathering vegetation along project edges, enhanced contour grading, salvaging landscape materials from within construction areas, special revegetation requirements, etc. Applicants shall coordinate with BLM/FS in advance to have BLM/FS landscape architects or other designated visual/scenic resource specialists onsite during construction to work with implementing BMPs.
VIS-8	1	O	Terms and conditions for VRM/SMS mitigation compliance shall be maintained and monitored for compliance with visual objectives, with adaptive management adjustments and modifications as necessary and approved by the BLM/FS landscape architect or other designated visual/scenic resource specialist.
Public Health and Safety			
PHS-3	1	P	An electricity transmission project shall be planned by the applicant to comply with FAA regulations, including lighting regulations, and to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips.
PHS-4	2	P	A health and safety program shall be developed by the applicant to protect both workers and the general public during construction, operation, and decommissioning of an energy transport project. The program should identify all applicable federal and state occupational safety standards, establish safe work practices for each task (e.g., requirements for personal protective equipment and safety harnesses, Occupational Safety and Health Administration [OSHA] standard practices for safe use of explosives and blasting agents, measures for reducing occupational electromagnetic field [EMF] exposures), and define safety performance standards (e.g., electrical system standards). The program should include a training program to identify hazard training requirements for workers for each task and establish procedures for providing required training to all workers. Documentation of training and a mechanism for reporting serious accidents to appropriate agencies should be established.
PHS-5	3	P	The health and safety program shall establish a safety zone or setback from roads and other public access areas that is sufficient to prevent accidents resulting from various hazards. It should identify requirements for temporary fencing around staging areas, storage yards, and excavations during construction or decommissioning activities. It should also identify measures to be taken during the operations phase to limit public access to those components of energy facilities that present health or safety risks.
PHS-6	4	P	Applicants will develop a comprehensive emergency plan that considers the vulnerabilities of their energy system to all credible events initiated by natural causes (earthquakes, avalanches, floods, high winds, violent storms, etc.), human error, mechanical failure, cyber attack, sabotage, or deliberate destructive acts of both domestic and international origin and the potential for and possible consequences of those events. Vulnerability, threat, and consequence assessment methodologies and criteria in the sector-specific plan (SSP) for energy will be used and appropriate preemptive and mitigative response actions will be identified. The applicant must coordinate emergency planning with state, local, and Tribal emergency and public safety authorities and with owners and operators of other energy systems collocated in the corridor or in adjacent corridors that could also be impacted.
PHS-7	5	P	In addition to directives contained in other IOPs in this chapter, the applicant must identify all federal, state, and local regulations pertaining to environmental protection, worker health and safety, public safety, and system reliability that are applicable throughout the construction, operation, and decommissioning phases of their facility's life cycle and must develop appropriate compliance strategies, including securing all necessary permits and approvals.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
Hazardous Materials Management			
PHS-8	1	P	Applicants for petroleum pipelines and projects involving oil-filled electrical devices shall develop a spill prevention and response plan identifying spill prevention measures to be implemented, training requirements, appropriate spill response actions, and procedures for making timely notifications to authorities. The spill prevention and response plan should include identification of any sensitive biotic resources and locations (such as habitats) that require special measures to provide protection, as well as the measures needed to provide that protection.
Hazardous Materials and Wastewater Management			
PHS-9	1	C	Any wastewater generated by the applicant in association with temporary, portable sanitary facilities must be periodically removed on a schedule approved by the agency, by a licensed hauler and introduced into an existing municipal sewage treatment facility. Temporary, portable sanitary facilities provided for construction crews should be adequate to support expected on-site personnel and should be removed at completion of construction activities.
PHS-10	2	C	All hazardous materials (including vehicle and equipment fuels) brought to the project site will be in appropriate containers and will be stored in designated and properly designed storage areas with appropriate secondary containment features. Excess hazardous materials will be removed from the project site after completion of the activities in which they are used.
PHS-11	1	O	The applicant shall provide secondary containment for all on-site hazardous materials and waste storage areas.
PHS-12	2	O	The applicant shall ensure that wastes are properly containerized and removed periodically for disposal at appropriate off-site permitted disposal facilities.
PHS-13	3	O	In the event of an accidental release to the environment, the applicant must initiate spill cleanup procedures and document the event, including a cause analysis; appropriate corrective actions taken; and a characterization of the resulting environmental or health and safety impacts. Documentation of the event should be provided to the land management agency's authorized officer and other federal and state agencies, as required.
Hazardous Materials and Waste Management			
PHS-14	1	D	All fuels, hazardous materials, and other chemicals will be removed from the site and properly disposed of or reused.
PHS-15	2	D	Incidental spills of petroleum products and other chemicals will be removed and the affected area cleaned to meet applicable standards.
PHS-16	3	D	Solid wastes generated during decommissioning will be accumulated, transported, and disposed in permitted off-site facilities in accordance with state and local requirements; no solid wastes will be disposed of within the footprint of the ROW or the corridor.
PHS-17	4	D	Hazardous wastes generated as a result of component cleaning will be containerized and disposed of in permitted facilities.
Fire Management			
FIRE-1	1	P	Applicants shall develop a fire management strategy to implement measures to minimize the potential for a human-caused fire during project construction, operation, and decommissioning. The strategy should consider the need to reduce hazardous fuels (e.g., native and non-native annual grasses and shrubs) and to prevent the spread of fires started outside or inside a corridor, and clarify who has responsibility for fire suppression and hazardous fuels reduction for the corridor.
FIRE-2	2	P	Applicants must work with the local land management agency to identify project areas that may incur heavy fuel buildups, and develop a long-term strategy on vegetation management of these areas. The strategy may include land treatment during project construction, which may extend outside the planned ROW clearing limits.

Table C.1-1 Westwide Energy Corridor Final Programmatic EIS Best Management Practices

PDEIS BMP No.	WVEC IOP No.	Phase(s) ¹	WVEC IOP Description
Fire Safety			
FIRE-3	1	C	The applicant must ensure that all construction equipment used is adequately muffled and maintained and that spark arrestors are used with construction equipment in areas with, and during periods of, high fire danger.
FIRE-4	2	C	Flammable materials (including fuels) will be stored in appropriate containers.
Air Emissions			
AIR-1	1	C	The applicant shall cover construction materials and stockpiled soils if these are sources of fugitive dust.
AIR-2	2	C	To minimize fugitive dust generation, the applicant shall water land before and during surface clearing or excavation activities. Areas where blasting would occur should be covered with mats.
Air Quality			
AIR-3	1	O	Dust abatement techniques (e.g., water spraying) shall be used by the applicant on unpaved, unvegetated surfaces to minimize airborne dust. Water for dust abatement should be obtained and used by the applicant under the appropriate state water use permitting system. Used oil will not be used for dust abatement.
Noise			
NOISE-1	1	C	The applicant shall limit noisy construction activities (including blasting) to the least noise-sensitive times of day (i.e., daytime only between 7 a.m. and 10 p.m.) and weekdays.
NOISE-2	1	O	The applicant shall ensure that all equipment has sound-control devices no less effective than those provided on the original equipment.
Restoration			
REST-1	1	D	Topsoil removed during decommissioning activities shall be salvaged and reapplied during final reclamation; all areas of disturbed soil shall be reclaimed using weed-free native shrubs, grasses, and forbs or other plant species approved by the land management agency; grades will be returned to pre-development contours to the greatest extent feasible.
REST-2	2	D	The vegetation cover, composition, and diversity shall be restored to values commensurate with the ecological setting, as approved by the authorizing officer.

¹ Phase definitions: P-Planning, C-Construction, O-Operation, D-Decommission

Note: This tabulation does not contain the resource-specific potential mitigation measures that are recommended in the WVEC Preliminary Final EIS.

Sources: DOE et al. 2008.

C.2 Applicant Committed Design Features to be Applied to the TWE Transmission Line

Table C.2-1 Applicant Committed Design Features

DEIS No.	Phase(s) ¹	Topic	Design Feature Description
General Design Features			
TWE-1	P	General, compliance with agency stipulations and RODs	The TWE Project will be planned, constructed, operated, and decommissioned in accordance with the agencies' Records of Decision (RODs), the BLM's ROW Grant stipulations, USFS Special Use Permit stipulations, and requirements of other permitting agencies.
TWE-2	P	General, compliance with laws and regulations	The Applicant will comply with all applicable environmental laws and regulations. Applicable laws and regulations may include, but are not limited to, the Clean Water Act (CWA) Section 303(d) and Section 404; the Wild and Scenic Rivers Act, Section 3(a) or 2(a) ii; the Endangered Species Act (ESA), Section 7; the National Historic Preservation Act (NHPA), Section 106; and the Native American Graves Protection and Repatriation Act (NAGPRA). Compliance with all applicable laws and regulations will be documented in the Final Plan of Development (POD)/Construction, Operation, and Maintenance (COM) Plan.
TWE-3	P	General, mitigation monitoring plan	The POD will include a mitigation monitoring plan that will address how each mitigation measure required by permitting agencies in their respective decision documents and permits will be monitored for compliance.
TWE-4	P	General, environmental training	Prior to construction, all personnel will be instructed on the protection of cultural, paleontological, ecological resources, and other natural resources in accordance with the POD provisions. To assist in this effort, the construction contract would address (a) federal, state, and tribal laws regarding cultural resources, fossils, plants, and wildlife, including collection and removal; and (b) the importance of these resources and the purpose and necessity of protecting them.
Project Design, Access, and Construction			
TWE-5	P	General, compliance with laws and regulations	The POD will display the location of Project infrastructure (i.e. towers, access roads, substations) and identify short-term and long-term land and resource impacts and the mitigation measures that will be implemented for site-specific and resource-specific environmental impacts.
TWE-6	P	General, Access Road Plan	The POD will include an Access Road Siting and Management Plan that incorporates relevant agency standards regarding road design, construction, maintenance, and decommissioning. The Access Road Siting and Management Plan will incorporate best management practices, stipulated by the agencies in their respective decision documents and permits.
TWE-7	P	Access, visual	The alignment of any new access roads will follow the designated area's landform contours where practical, providing that such alignment does not additionally impact resource values. This will minimize ground disturbance and reduce scarring (visual contrast).
TWE-8	P, C	Access, tower placements, surface water, vegetation management, drainage, dust control	Crossings of streams and waterways will be done in compliance with federal, state, and local regulations. Roads will be built as near as possible at right angles to the streams and washes (Arizona crossing). Culverts will be installed where necessary. All construction and maintenance activities will be conducted in a manner that will minimize disturbance to vegetation, drainage channels, and intermittent or perennial stream banks. In addition, road construction will include dust-control measures during construction in sensitive areas. All existing roads will be left in a condition equal to, or better than, their condition prior to the construction of the transmission line. Structures will be sited with a minimum distance of 200 feet from streams, wherever possible.
TWE-9	C, O	Access	All construction vehicle movement outside the ROW normally will be restricted to pre-designated access or public roads.
TWE-10	P, C	General ROW, visual	The area limits of construction activities will normally be predetermined, with activity restricted to and confined within those limits. No paint or permanent discoloring agents will be applied to rocks or vegetation to indicate survey or construction activity limits.
TWE-11	P, C	Access, visual	In construction areas where re-contouring is not required, vegetation will be left in place, wherever possible, and original contour will be maintained to avoid excessive root damage and to allow for re-sprouting.
TWE-12	P, C, O	Access, soils, vegetation, water, cultural visual resources	Except for repairs necessary to make roads passable, no widening or upgrading of existing access roads will be undertaken in the area of construction and operation, where soils or vegetation are sensitive to disturbance. In designated areas, structures will be placed to avoid sensitive features such as, but not limited to, riparian areas, water courses and cultural sites, or to allow conductors to clearly span the features within limits of standard structure design. This will minimize the amount of disturbance to the sensitive feature or reduce visual contrast.

Table C.2-1 Applicant Committed Design Features

DEIS No.	Phase(s) ¹	Topic	Design Feature Description
TWE-13	C	Vegetation management, restoration, erosion control	In construction areas (e.g., marshalling yards, structure sites, spur roads from existing access roads) where ground disturbance is significant or where re-contouring is required, surface restoration will occur as required by the landowner or land management agency. The method of restoration will normally consist of returning disturbed areas back to their natural contour, reseeding (if required), installing cross drains for erosion control, placing water bars in the road, and filling ditches.
TWE-14	P, C	General, soils, erosion control, visual	The POD will show the location of borrow sites, from which material will be obtained. Borrow pits will be stripped of topsoil to a depth of approximately six inches. Stripped topsoil will be stockpiled and, upon completion of borrow excavation, spread to a uniform depth of six inches over areas of borrow pits from which removed. Before replacing topsoil, excavated surfaces will be reasonably smooth and uniformly sloped. The sides of borrow pits will be brought to stable slopes with slope intersection shaped to carry the natural contour of adjacent undisturbed terrain into the pit to give a natural appearance. When necessary, borrow pits will be drained by open ditches to prevent accumulation of standing water.
TWE-15	C	Flagging, fencing, and signage	The POD will include a Flagging, Fencing, and Signage Plan. Except for permanent survey markers and material that locate proposed facilities, stakes, pins, rebar, spikes, and other material will be removed from the surface and within the top 15 inches of the topsoil as a part of final clean-up. Fences on ROW will be removed where necessary and replaced to the original condition or better when the work is finished. Where existing fences are removed to facilitate the work, temporary fence protection for lands adjacent to the ROW will be provided at all times during the continuation of the Contract. Such temporary fence protection will be adequate to prevent public access to restricted areas. Temporary fencing constructed on the ROW will be removed by the Contractor as part of the clean-up operations prior to final acceptance of the completed work.
TWE-16	C	Site restoration and clean-up, water resources, land use	Watering facilities (tanks, natural springs and/or developed springs, water lines, wells, etc.) will be repaired or replaced, if damaged or destroyed by construction activities, to their pre-disturbed condition as required by the landowner or land management agency.
TWE-17	C	Site restoration and clean-up	Existing vegetation such as landscape plants, gardens, and field crops, which are damaged by the application of the soil-applied herbicide, will be replaced by the Contractor at its expense.
TWE-18	C	Site clean-up	The Applicant will pay fair market value to the land management agency for any merchantable forest products that will be cut during ROW clearing. Merchantable forest products will either be removed or stacked at locations determined by the land management agency.
Geology and Soils			
TWE-19	C	Drainage, soil erosion control	The POD will include an Erosion Control Plan as part of the Stormwater Pollution Prevention Plan (SWPPP). Grading will be performed to provide adequate drainage around structure sites and sufficient clearance under conductors. Excavated material will be spread around the site from which excavated. Topsoil will be piled separately and replaced after work completion.
Groundwater, Surface Water, and Wetlands			
TWE-20	P	Water quality	As part of the CWA 404 Permit for the TWE Project, the POD will include a Water Resources Protection Plan, which will incorporate measures to avoid and minimize impacts to wetlands and waters of the U.S. to the extent practical. The POD will include a Storm Water Pollution Prevention Plan. The Applicant will identify all streams in the vicinity of the proposed project sites that are listed as impaired under Section 303(d) of the CWA and develop a management plan to avoid, reduce, and/or minimize adverse impacts to those streams.
TWE-21	P	Water quality	The Applicant will obtain a National Pollutant Discharge Elimination System (NPDES) permit from the USEPA prior to construction.
TWE-22	C	Water quality	Runoff from excavated areas, construction materials or wastes (including truck washing and concrete washes), and chemical products such as oil, grease, solvents, fuels, and pesticides will be controlled. Excavated material or other construction material will not be stockpiled or deposited near or on stream banks, lake shorelines, ditches, irrigation canals, or other areas where runoff could impact the environment.
TWE-23	C	Water quality	Washing of concrete trucks or disposal of excess concrete in any ditch, canal, stream, or other surface water will not be permitted. Concrete wastes will be disposed of in accordance with all federal, state and local regulations.

Table C.2-1 Applicant Committed Design Features

DEIS No.	Phase(s) ¹	Topic	Design Feature Description
TWE-24	C, O	Surface water, wetlands	Vehicle refueling and servicing activities will be performed in designated construction zones located more than 100 feet from wetlands and intermittent streams and more than 500 feet from perennial streams. Spill prevention and containment measures or practices will be incorporated as needed.
TWE-25	P	Dewatering	A dewatering permit will be obtained from the appropriate agencies if required for construction dewatering activities.
Vegetation and Soils Management			
TWE-26	P, C	Vegetation management and noxious weeds	The POD will include a Reclamation Plan and a Noxious Weed Management Plan. The Reclamation Plan will address plant removal and selective clearing. The Noxious Weed Management Plan will be developed in accordance with appropriate land management agencies' standards, consistent with applicable regulations and agency permitting stipulations for the control of noxious weeds and invasive species (Executive Order [E.O.] 13112). Included in the Noxious Weed Management Plan will be stipulations regarding construction, restoration, and operation (use of weed-free materials, washing of equipment, etc.).
TWE-27	C	Vegetation management	In construction areas where re-contouring is not required, vegetation will be left in place wherever possible and original contour will be maintained to avoid excessive root damage and allow for re-sprouting.
TWE-28	C	Vegetation management, visual	Clearing will be performed in a manner that minimizes the marring and scarring the countryside and preserve the natural beauty to the maximum extent possible. Except for danger trees, no clearing will be performed outside the limits of the ROW.
Ecological Resources			
TWE-29	P, C	Ecological, special status species	The POD will include a Wildlife and Plant Conservation Measures Plan, which will identify important, sensitive, or unique habitats and BLM sensitive, USFS sensitive, and state-listed species in the vicinity of the TWE Project. The POD will identify measures to be taken to avoid, minimize, or mitigate impacts to these habitats and species.
TWE-30	P	Ecological, raptors	In applicable areas, the TWE Project will be designed to meet or exceed the raptor safe design standards described in the <i>Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006</i> (Avian Power Line Interaction Committee [APLIC] 2006).
TWE-31	P, C, O	Ecological, special status species	Mitigation measures that will be developed during the consultation period with the BLM and the USFWS under Section 7 of the ESA will be adhered to, along with mitigation developed in conjunction with state authorities.
TWE-32	P, C, O, D	Ecological, special status species	Seasonal restrictions may be implemented in certain areas to mitigate impacts on wildlife. With the exception of emergency repair situations the activities of ROW construction, restoration, maintenance, and decommissioning will be modified or discontinued in designated areas during sensitive periods (e.g., nesting and breeding periods) for candidate, proposed or listed threatened and endangered, or other sensitive animal species, as required by permitting agencies. Potential seasonal restrictions and avoidance buffers for nesting raptors will be identified in the DEIS. The Wildlife and Plant Conservation Measures Plan will incorporate the seasonal restrictions and stipulations contained in the federal agency RODs.
TWE-33	P, C	Ecological, special status species and habitats	Prior to the start of construction, the Applicant will provide training to all Contractor and Subcontractor personnel and others involved in construction activities where/if there is a known occurrence of protected species or habitat in the construction area. Sensitive areas will be considered avoidance areas. Prior to any construction activity, avoidance areas will be marked on the ground and maintained through the duration of the Contract. The Applicant will remove markings during or following final inspection of the Project.
TWE-34	C	Ecological, special status species and habitats	If evidence of a protected species not previously identified or known is found in the Project area, the Contractor will immediately notify the appropriate land management agencies and provide the location and nature of the findings.
Cultural Resources – Historic, Archaeological, and Tribal Traditional			
TWE-35	P, C	Cultural resources	In consultation with the appropriate land management agencies and state historic preservation officers (SHPOs), and in accordance with the Programmatic Agreement (PA), a Cultural Resources Protection and Management Plan will be prepared as part of the POD to address the specific mitigation measures for cultural resources that will be developed and implemented to mitigate any identified adverse effects. These may include Project modifications to avoid adverse impacts, monitoring of construction activities, and data recovery studies.

Table C.2-1 Applicant Committed Design Features

DEIS No.	Phase(s) ¹	Topic	Design Feature Description
TWE-36	P, C	Native American cultural resources	The Applicant will comply with all laws, policies, and regulations pertaining to consultations with federally recognized Tribes.
TWE-37	P	General, cultural	Prior to construction, all construction personnel will be instructed on the protection of cultural resources, including the provisions of federal, state, and tribal laws regarding cultural resources, including prohibition of collection and removal; and the importance of these resources and the purpose and necessity of protecting them.
Paleontological Resources			
TWE-38	P, C, O	Paleontology	If paleontological resources are known to be present in the Project area, or if areas with a high potential to contain paleontological material has been identified through the NEPA process and DEIS, the Applicant will prepare a Paleontological Resources Management and Mitigation Plan as part of the POD.
TWE-39	P	Paleontology	Paleontological mitigation may be required in areas of greatest disturbance and areas likely to have significant fossils. Preconstruction surveys of such areas may be conducted as agreed upon by the land-managing and lead federal agency.
Land Use and Visual Resources			
TWE-40	P, C, O	Land Use, agriculture	On agricultural land, the ROW will be aligned, in so far as practical, to reduce the impacts to farm operations and agricultural production.
TWE-41	C	Land Use, agriculture	In cultivated agricultural areas, soils that have been compacted by construction activities will be disked to uncompact soils.
TWE-42	C	Land Use, ranching	In grazing areas, excessive amounts of pine needles left by clearing of trees, will be removed from the ROW and disposed of in a location to prevent harm to grazing domestic animals.
TWE-43	C	Access, land use, gates	The POD will include a Flagging, Fencing, and Signage Plan. If they are damaged or destroyed by construction activities, fences and gates will be repaired or replaced to their original pre-disturbed condition as required by the landowner or the land management agency. Temporary gates will be installed only with the permission of the landowner or the land management agency, and will be restored to their original pre-disturbed condition following construction. Cattle guards will be installed where new permanent access roads cut through fences, at the request of the land management agency.
TWE-44	P, C, O	Visual	Non-specular conductors and shield/ground wires will be used to reduce potential visual impacts.
TWE-45	P, C, O	Structure design and public safety	Structures and/or shield/ground wire will be marked with high-visibility devices where required by governmental agencies (Federal Aviation Administration [FAA]). Structure heights will be less than 200 feet, where feasible, to minimize the need for aircraft obstruction lighting.
TWE-46	P, C, O	Visual resources	The Applicant will comply with federal permitting agency stipulations regarding visual resources through development of a Visual Resources Management Plan.
Air Quality			
TWE-47	P, C	Air quality, dust control	The POD will include a Dust Control and Air Quality Plan. Requirements of those entities having jurisdiction over air quality matters will be adhered to and dust control measures will be developed. Open burning of construction trash will not be allowed unless permitted by local authorities.
TWE-48	P, C	Air quality, emissions	The Contractor and Subcontractor(s) will be required to have and use air emissions control devices on construction machinery, as required by federal, state or local regulations or ordinances.
Corona Effects			
TWE-49	P, C, O	Corona	Transmission line materials will be designed to minimize corona. The proposed hardware and conductor will limit the audible noise, radio interference, and TV interference due to corona. Tension will be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution will be exercised during construction to avoid scratching or nicking the conductor surface that may provide points for corona to occur.

Table C.2-1 Applicant Committed Design Features

DEIS No.	Phase(s) ¹	Topic	Design Feature Description
TWE-50	O	TV, radio interference	The Applicant will respond to complaints of line-generated radio or television interference by investigating the complaints and implementing appropriate mitigation measures. The transmission line will be patrolled on a regular basis so that damaged insulators or other line materials that could cause interference are repaired or replaced.
Public Health and Safety			
TWE-51	P, C, O	Safety standards	The TWE Project will be designed, constructed, and operated to meet or exceed the requirements of the National Electrical Safety Code (NESC), U.S. Department of Labor, Occupational Safety and Health Administration standards, and the Applicant's requirements for safety and protection of landowners and their property.
TWE-52	O	Induced currents	The Applicant will apply necessary mitigation to eliminate problems of induced currents and voltages onto conductive objects sharing ROW, to the mutual satisfaction of the parties involved.
TWE-53	P, C	Blasting	The POD will include a Blasting Plan, which will identify methods and mitigation measures to minimize the effects of blasting, where applicable. The Blasting Plan will document the proposed methods to achieve the desired excavations, proposed methods for blasting warning, use of non-electrical blasting systems, and provisions for controlling fly rock, vibrations, and air blast damage.
TWE-54	P, C, O	Noise, electrostatic, and EMF	Research studies performed to determine the effects of audible noise and electrostatic and electromagnetic fields (EMF) will be regularly monitored by the Applicant to ascertain whether these effects are significant.
TWE-55	P, C, O	FAA regulations	The TWE Project will be designed to comply with FAA regulations, including lighting regulations, to avoid potential safety issues associated with proximity to airports, military bases or training areas, or landing strips.
TWE-56	P	Worker health and safety	As part of the POD, the Applicant will provide a Health and Safety Plan, which will outline measures to protect workers and the general public during construction, operation, and decommissioning of the TWE Project. The Health and Safety Plan will identify applicable federal and state occupational safety standards, establish safe work practices, and define safety performance standards.
Hazardous Materials, Waste, and Wastewater Management			
TWE-57	P	Hazardous materials	As part of the POD, the Applicant will provide a Spill Prevention and Response Plan. The Plan will address compliance with all applicable federal, state, and local regulations, and will include: spill prevention measures, notification procedures in the event of a spill, employee awareness training, and commitment of manpower, equipment, and materials to respond to spills, if they occur.
TWE-58	P	Hazardous materials	As part of the POD, the Applicant will provide a Pesticide Use Plan as a component of the Noxious Weed Management Plan. The Plan will address compliance with all applicable federal, state and local regulations.
TWE-59	P	Hazardous materials	As part of the POD, the Applicant will provide a Hazardous Materials Management Plan that has been approved by applicable federal, state or local environmental regulatory agencies. The plan will address on-site excavation of contaminated soils and debris and will include identification of contaminants, methods of excavation, personnel training, safety and health procedures, sampling requirements, management of excavated soils and debris, and disposal methods.
TWE-60	C	Waste management	No non-biodegradable debris will be deposited in the ROW. Slash and other biodegradable debris will be left in place or disposed of in accordance with agency requirements.
TWE-61	C, O	Hazardous materials, waste management	As part of the POD, the Applicant will provide a Hazardous Materials Management Plan. Hazardous materials will not be drained onto the ground or drainage areas. Totally enclosed containment will be provided for all trash. All construction waste including trash and litter, garbage, other solid waste, petroleum products, and other potentially hazardous materials will be removed to a disposal facility authorized to accept such materials.
TWE-62	C, O	Hazardous materials	If a reportable release of hazardous substance occurs at the work site, the Contractor will immediately notify the Applicant and all environmental agencies, as required by law. The Contractor will be responsible for the clean-up.

Table C.2-1 Applicant Committed Design Features

DEIS No.	Phase(s) ¹	Topic	Design Feature Description
Fire Protection			
TWE-64	P, C	Fire, safety	<p>The POD will include a Fire Protection Plan. The Applicant or its Contractor(s) will notify the BLM of any fires and comply with all rules and regulations administered by the BLM and USFS concerning the use, prevention, and suppression of fires on federal lands, including any fire prevention orders that may be in effect at the time of the permitted activity. The Applicant or its Contractor(s) may be held liable for the cost of fire suppression, stabilization, and rehabilitation. In the event of a fire, personal safety will be the first priority of the Applicant or its Contractor(s). The Applicant or its Contractor(s) will:</p> <ul style="list-style-type: none"> • Operate all internal and external combustion engines on federally managed lands per 36 CFR 261.52(j), which requires all such engines to be equipped with a qualified spark arrester that is maintained and not modified; • Carry shovels, water, and fire extinguishers that are rated at a minimum as ABC-10 pound on all equipment and vehicles. If a fire spreads beyond the suppression capability of workers with these tools, all workers will cease fire suppression action and leave the area immediately via pre-identified escape routes; • Initiate fire suppression actions in the work area to prevent fire spread to or on federally administered lands. If fire ignitions cannot be prevented or contained immediately, or it may be foreseeable that a fire would exceed the immediate capability of workers, the operation must be modified or discontinued. No risk of ignition or re-ignition will exist upon leaving the operation area; • Notify the appropriate fire center immediately of the location and status of any escaped fire; • Review weather forecasts and the potential fire danger prior to any operation involving potential sources of fire ignition from vehicles, equipment, or other means. Prevention measures to be taken each workday will be included in the specific job briefing. Consideration will be given to additional mitigation measures or temporary discontinuance of the operation during periods of extreme wind and dryness; • Operate all vehicles on designated roads. Vehicle parking to be restricted to areas free of vegetation on roads or within the permitted ROW and designated work areas; • Operate welding, grinding, or cutting activities in areas cleared of vegetation within range of the sparks for that particular action. A spotter will be required to watch for ignitions; and • Use only diesel-powered vehicles in areas where excessive heat from vehicle exhaust systems could start brush or grass fires.

¹ Phase definitions: P-Planning, C-Construction, O-Operation, D-Decommission

C.3 State and BLM Land Use Stipulations Applicable to Transmission Line ROWs

C.3.1 State Stipulation References

The following section details the stipulations references to the State NSU, CSU, and TL stipulations applicable to proposed transmission line corridor.

C.3.1.1 State of Wyoming

Reference: Wyoming Executive Order 2012-019.

Table C.3-1 State of Wyoming No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	Sage grouse	Sage-grouse leks inside core/connectivity areas	Surface occupancy and/or disruptive activities are prohibited on or within a six tenths (0.6) mile radius of the perimeter 1 of occupied sage-grouse leks. Other actions <i>may</i> be consistent with the State's strategy when authorized (e.g., buried power and flowlines) with adherence to seasonal restrictions in nesting/early brood-rearing habitat and/or winter concentration areas, where the action(s) would not result in adverse impacts to core sage-grouse populations.	NSU	0.6 mile
Wildlife-SSS	Sage grouse	Sage-grouse outside core/connectivity areas	Surface occupancy and/or disruptive activities are prohibited on or within a 0.25 mile radius of the perimeter of occupied sage-grouse leks. Other actions <i>may</i> be consistent with the State's strategy when authorized (e.g., buried power and flowlines) with adherence to seasonal restrictions in nesting/early brood-rearing habitat and/or winter concentration areas, where the action(s) would not result in adverse impacts to core sage-grouse populations.	CSU	0.25 mile

Table C.3-2 State of Wyoming Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-SSS	Sage grouse	Sage-grouse nesting/early brood-rearing habitat in core areas	Surface disturbing and/or disruptive activities are prohibited from March 15 through June 30 to protect sage-grouse nesting and early brood rearing habitat. Apply this restriction to all nesting and early brood-rearing habitats inside core areas regardless of distance from the lek. Where credible data support different timeframes for this seasonal restriction, dates may be expanded by up to 14 days prior to or subsequent to the above dates.	TL	3/15 – 6/30	None

Table C.3-2 State of Wyoming Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-SSS	Sage grouse	Sage-grouse nesting/early brood-rearing habitat in connectivity areas	Surface disturbing and/or disruptive activities are prohibited from March 15 through June 30 to protect nesting and early brood-rearing habitats within 4 miles of the lek or lek perimeter of any occupied sage-grouse lek within identified connectivity areas. Where credible data support different timeframes for this seasonal restriction, dates may be expanded by 14 days prior or subsequent to the above dates.	TL	3/15 – 6/30	4 miles
Wildlife-SSS	Sage grouse	Sage-grouse nesting/early brood-rearing habitat outside core or connectivity areas	Surface disturbing and/or disruptive activities are prohibited from March 15 through June 30 to protect sage-grouse nesting and early brood rearing habitats within 2 miles of the lek or lek perimeter of any occupied lek located outside core or connectivity areas. Where credible data support different timeframes for this restriction, dates may be expanded by 14 days prior or subsequent to the above dates.	TL	3/15 – 6/30	2 miles
Wildlife-SSS	Sage grouse	Sage-grouse late brood-rearing and Winter Concentration Areas (WCAs):	Surface disturbing and/or disruptive activities in sage-grouse WCAs are prohibited from December 1 through March 14 to protect core populations of sage-grouse that use these winter concentration habitats. While the bulk of winter and late brood rearing habitat necessary to support core area populations is available within core population areas, it may be necessary to protect additional areas of winter concentration that are not located within the current core area boundaries. Appropriate seasonal timing restrictions and habitat protection measures must be considered and evaluated where WCAs or important late brood-rearing areas are identified as supporting populations of Greater Sage-Grouse that attend leks within core areas.	TL	12/1 – 3/14	No buffer

C.3.1.2 State of Utah

None.

C.3.1.3 State of Colorado

Reference: Colorado Greater Sage-Grouse Conservation Plan (2008), Appendix B - Greater Sage-grouse Disturbance Guidelines (Colorado Greater Sage-grouse Steering Committee 2008).

The plan makes the following recommendations to protect greater sage-grouse habitat¹ and avoid disturbance within greater sage-grouse seasonal habitats.

- Breeding Habitat – Lek Habitat: Powerlines (transmission, service lines – Whenever possible, avoid the construction of powerlines in lek habitat [0.6 mile] (page B-12).
- Breeding Habitat – Nesting and Early-Brood-Rearing Habitat, Summer-Fall Habitat, and Winter Habitat: Powerlines—If possible, powerlines should be avoided in these seasonal habitats. (page B-14).

The Plan further states that “on federal lands, the 0.6 mile radius area around a lek in breeding habitat could be defined as an area of No Surface Occupancy (NSO) or Avoidance Area (AA). Every possible opportunity to avoid or minimize the impact should be exhausted to prevent development in this area, but allowances are provided in these guidelines. The 4-mile [breeding habitat] radius is not an NSO or AA. It is an area of consideration where the disturbance guidelines should be applied when, and if, possible.” However, the Plan also acknowledges that in some cases, in some cases, adherence to these guidelines may not be possible.

C.3.1.4 State of Nevada

None.

C.3.2 BLM Field Office Stipulation References

The following section details the stipulations and references to the BLM Field Office NSU, CSU, and TL stipulations applicable to the proposed transmission line corridor.

C.3.2.1 Rawlins Field Office, Wyoming

References: Record of Decision and Approved Rawlins Resource Management Plan for Public Lands Administered by the Bureau of Land Management Rawlins Field Office, December 2008 (BLM 2008a). Chapter 2, Management Decision by Resource; Appendix 1—Wyoming Bureau of Land Management Mitigation Guidelines for Surface Disturbing and Disruptive Activities; Appendix 9—Exception, Modification, and Waiver Criteria; Appendix 13—Reducing Nonpoint Source Pollution with Best Management Practices; Appendix 14—Programmatic Biological Opinion For The Wyoming Bureau of Land Management’s Rawlins Resource Management Plan; Appendix 15—Best Management Practices for Reducing Surface Disturbance and Disruptive Activities; and Appendix 34—Designated Right-of-Way Corridor Criteria.

¹ Per the Plan, breeding habitat is considered to be sagebrush communities within the 4-mile radius. Summer-fall habitat includes sagebrush communities, wet meadows, and agricultural fields within the 4-mile radius. The plan defines winter habitat as sagebrush areas... within currently occupied habitat that: 1) have sagebrush available above the snow for GrSG to use in average and extreme winters; and 2) meets the structural habitat guidelines for winter habitat in Appendix A, “GrSG Habitat Structural Guidelines”(Colorado Greater Sage-grouse Steering Committee 2008).

Table C.3-3 Rawlins Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Cultural Resources		Historic trails	Surface disturbance and disruptive activities will be prohibited within either 0.25 mile or the visual horizon (whichever is closer) of historic trails.	NSU	0.25 mile
Cultural Resources		NRHP-eligible sites	Surface disturbing activities will not be allowed within 0.25 mile of a cultural property or the visual horizon, whichever is closer, if the setting contributes to NRHP eligibility.	NSU	0.25 mile
Lands and Realty		Transmission line corridor	CIG/Entrega/WIC Transmission line corridor-Buried utilities only. 1, 320-foot width.	CSU	No buffer
Soils		Erodible, fragile soils and unstable soils	Surface disturbing activities will be avoided on unstable areas, such as landslides, slumps, and areas exhibiting soil creep. Reclamation practices and BMPs will be applied as appropriate for surface disturbing activities (Appendix 13).	CSU	No buffer
Soils		Slopes > 25%	Surface disturbance will be prohibited in slopes in excess of 25 percent.	NSU	No buffer
Visual		VRM Class I and II areas	Surface disturbance will be prohibited within important scenic areas (Class I and II Visual Resource Management Areas).	NSU	No buffer
Water Resources		100-year floodplains	Surface disturbing activities will be avoided in identified 100-year floodplains	CSU	No buffer
Water Resources		All surface water	Surface disturbance will be prohibited within 500 feet of surface water. Stream crossings for roads and pipelines will be constructed during the period of lowest flow (i.e., late summer or fall) and perpendicular to flow. No surface water or shallow ground waters in connection with surface waters will be utilized for proposed projects. Proper erosion control techniques, such as water bars, netting, rip-rap, etc.	NSU	500 feet
Water Resources		Ephemeral drainages	Surface disturbing activities will be avoided within 100 feet from the inner gorge of ephemeral channels.	CSU	100 feet
Wildlife-Raptors	Bald eagle	Roosts	No ground disturbing activities will be permitted within 0.5 miles of active bald eagle communal winter roost sites year-round. This buffer zone restriction may be adjusted based on site-specific information through coordination with (including written concurrence) the Service, Wyoming Field Office.	NSU	0.5 mile
Wildlife-Raptors	Ferruginous hawk	Nests	Year round, well locations, roads, ancillary facilities, and other surface structures requiring a repeated human presence will not be allowed within 1,200 feet of active ferruginous hawks nests. Distance may vary depending on factors such as nest activity, natural topographic barriers, and line-of-sight distances.	NSU, CSU	1,200 feet
Wildlife-Raptors	Bald eagle	Nests	Surface disturbing and disruptive activities potentially disruptive to nesting raptors are prohibited within a 1-mile buffer (no seasonal buffer).	NSU	1 mile

Table C.3-3 Rawlins Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	Black-footed ferret	White-tailed prairie dog towns/ complexes >200 acres in size	All white-tailed prairie dog towns/complexes greater than 200 acres in size will be avoided. If avoidance is not possible, these areas will be assessed and mapped at the proposed project level. Associated burrow densities of potentially affected towns will be determined, and, when habitat is present, a black-footed ferret survey will be conducted pursuant to the Service and Bureau-approved techniques. If prairie dog towns/complexes suitable as black-footed ferret habitat are present, attempts will be made to avoid locating surface disturbing activities within 164 feet (50 meters) of a town. If a black-footed ferret non-block cleared town/complex cannot be avoided, then a black-footed ferret survey is required (Appendix 14). (Continental Divide non-block cleared complex criterion: > 1,000 acre in size, 27 burrows/ acre, and towns within .09 miles of each other).	CSU	164 feet
Wildlife-SSS	Western boreal toad	Known habitat	Any action that would result in stream channel instability, erosion, and sedimentation within known Western boreal toad habitat will be avoided.	CSU	No buffer
Recreation		Recreation sites, developed and undeveloped	Lands within 0.25 mile of developed and undeveloped recreation sites (17,590 acres) are closed to locatable mineral entry, mineral material disposals, and operation of the public land laws, including sale (Map 3-7). Withdrawals will be pursued. Buried utilities will be allowed with adequate reclamation of the surface. Above-ground facilities will be avoided unless adequately mitigated to protect the recreation site viewshed.	CSU	0.25 mile
Recreation – SRMAs	NA	Upper Platte SRMA	Surface disturbing activities on public lands within 0.25 mile on either side of the river will be intensively managed to maintain the quality of the visual resource OHV use is limited to designated roads or vehicle routes. Open to oil and gas leasing with an NSO stipulation. Existing oil and gas leases will be intensively managed. Surface disturbing and disruptive activities will be restricted to maintain the quality of the visual resource.	CSU	0.25 mile
Special Designations-Wildlife Habitat Management Area		Red Rim-Daley Wildlife Habitat Management Area	Surface disturbing and disruptive activities will be intensively managed to prevent loss of significant habitat. Management will be applied on a case-by-case basis. Developments, uses, and facilities will be managed to avoid damage to vegetation and wildlife habitat. Off-road motor vehicle use for “necessary tasks” (as defined in the Glossary) is allowed. OHV use is limited to designated roads and vehicle routes and closed to over-the-snow vehicles.	CSU	No buffer
Special Designations-Wildlife Habitat Management Area		Upper Muddy Creek Watershed/Grizzly WHMA	Upper Muddy Creek Watershed/Grizzly WHMA is a ROW avoidance area. Surface disturbing and disruptive activities will be intensively managed to prevent loss of significant habitat. Surface disturbing activities will avoid identified 100-year floodplains, 500 feet from perennial surface water and/or wetland and riparian areas, and 100 feet from ephemeral channels. Exceptions to this would be granted by the BLM based on an environmental analysis and site-specific engineering and mitigation plans. Only those actions within areas that cannot be avoided and that provide protection for the aquatic resources in the Muddy Upper Muddy Creek Watershed/Grizzly WHMA will be approved. Surface disturbing and disruptive activities in aspen communities will be avoided.	CSU	No buffer

Table C.3-3 Rawlins Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Vegetation-SSS	Blowout penstemon	Known blowout penstemon habitat	All proposed rights-of-way projects (powerlines, pipelines, roads, etc.) will be designed and locations selected at least 0.25 mile from any known blowout penstemon habitat to minimize disturbances. If the avoidance of adverse affects is not possible, the Bureau will re-initiate consultation with the Service.	CUS	0.25 mile
Vegetation-SSS	Colorado butterfly plant	Known Colorado butterfly plant habitat	All proposed rights-of-way projects (powerlines, pipelines, roads, etc.) will be designed and locations selected at least 0.25 miles from any known Colorado butterfly plant habitat to minimize disturbances. If the avoidance of adverse effects is not possible, the Bureau will re-initiate consultation with the Service. All proposed projects will be designed and locations selected to minimize disturbances to known Colorado butterfly plant populations, and if the avoidance of adverse effects is not possible, the Bureau will re-initiate consultation with the Service.	CSU	0.25 mile
Vegetation-SSS	Ute ladies'-tresses	0.25 miles from any known orchid habitat	All proposed rights-of-way projects (powerlines, pipelines, roads, etc.) will be designed and locations selected at least 0.25 miles from any known orchid habitat to minimize disturbances. If avoidance of adverse effects is not possible, the Bureau will re-initiate consultation with the Service.	CSU	0.25 mile
Wildlife-Raptors	Bald eagle	Nests	Well locations, roads, and ancillary facilities, and other surface structures requiring a repeated human presence, will not be allowed within 0.5 mile of active bald eagle nests. The distance may vary depending on factors such as nest activity, nest topographic barriers, and line-of-sight distance. Surface disturbing and other identified activities, as well as habitat alterations, that may disturb bald eagles will be restricted within suitable habitats that occur within the following bald eagle buffer zones: Zone 1: This area is intended to protect active and alternative nests located within ½ mile of the proposed surface disturbing activity. Between February 1 and August 15, minimal human activity levels will be allowed during the period of first occupancy to two weeks after fledging in this area. Zone 2: This area is intended to protect bald eagle primary use areas located within ½-1 mile of the proposed surface disturbing activity. Light human activity levels will be allowed in this area. Zone 3: This area is designated to protect foraging/concentration areas year-round and would include one of two larger areas, depending on habitat types: a) 2.5 miles extending in all directions from the nest or b) ½ mile from the stream-bank of all streams within 2.5 miles of the nest. Site-specific habitat types and foraging areas will be evaluated to determine which Zone 3 buffer applies. Zone delineation depends on habitat types. No ground disturbing activities will be permitted within 1 mile of active roost sites year round. Other activities that may disturb bald eagles within 1 mile of known communal winter roosts will be restricted during the period of November 1 through April 1.	CSU	825 feet
Wildlife-Raptors	Raptors, all	Nests	Year-round, well locations, roads, ancillary facilities, and other surface structures requiring a repeated human presence will not be allowed within 825 feet of active raptor nests (ferruginous hawks, 1,200 feet). Distance may vary depending on factors such as nest activity, species, natural topographic barriers, and line-of-sight distances.	CSU	825 feet
Wildlife-SSS	Sage grouse	Leks	High-profile structures (overhead power lines) will be authorized on a case by-case basis from 0.25 mile to 1 mile of an occupied greater sage-grouse and sharp-tailed grouse lek.	CSU	0.25 mile to 1 mile

Table C.3-3 Rawlins Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	Sage grouse	Leks	"Controlled surface use" stipulation will be applied to a 0.50 mile radius of active sage-grouse strutting grounds, including no aboveground facilities (power lines, storage tanks, fences, etc.).	CSU	0.5 mile

Table C.3-4 Rawlins Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	All unspecified	Nests	Seasonal buffer of February 1 to July 15.	TL	2/1 – 7/15	0.5 to 1.0 mile
Wildlife-Raptors	All unspecified	Nests	To protect important raptor nesting habitat, activities or surface use will not be allowed from February 1 to July 31. Areas encompassed by the authorization (.05 or 1 mile of raptor nests) may be shortened, depending on nesting chronology of individual species, nest site location, and topography).	TL	2/1 – 7/31	0.5 to 1 mile
Wildlife-Raptors	All unspecified	Winter concentration areas	Activities or surface use will not be allowed from November 15 to April 30.	TL	11/15 – 4/30	No buffer
Wildlife-Raptors	Barn owl	Nests	Seasonal buffer of February 1 to July 15.	TL	2/1 – 7/15	0.75 mile
Wildlife-Raptors	Burrowing owl	Nests	Seasonal buffer April 15 to September 15.	TL	4/15 – 9/15	0.75 mile
Wildlife-Raptors	Cooper's hawk	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-Raptors	Ferruginous hawk	Nests	Seasonal buffer of March 1 to July 31.	TL	3/1 – 7/31	1.0 mile
Wildlife-Raptors	Golden eagle	Nests	Seasonal buffer of February 1 to July 15.	TL	2/1 – 7/15	1.0 mile
Wildlife-Raptors	Great horned owl	Nests	Seasonal buffer of February 1 to July 15.	TL	2/1 – 7/15	0.75 mile
Wildlife-Raptors	Kestrel	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-Raptors	Long-eared owl	Nests	Seasonal buffer of March 1 to July 31.	TL	3/1 – 7/31	0.75 mile
Wildlife-Raptors	Merlin	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-Raptors	Northern goshawk	Nests	Seasonal nest buffer of April 1 to August 31.	TL	4/1 – 8/31	0.75 mile
Wildlife-Raptors	Northern harrier	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-Raptors	Osprey	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-Raptors	Peregrine falcon	Nests	Seasonal buffer of March 1 to July 31.	TL	3/1 – 7/31	0.75 mile
Wildlife-Raptors	Prairie falcon	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile

Table C.3-4 Rawlins Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Red-tailed hawk	Nests	Seasonal buffer of February 1 to July 15.	TL	2/1 – 7/15	0.75 mile
Wildlife-Raptors	Screech owl	Nests	Seasonal buffer of March 1 to July 31.	TL	3/1 – 7/31	0.75 mile
Wildlife-Raptors	Sharp-shinned hawk	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-Raptors	Short-eared owl	Nests	Seasonal buffer of March 1 to July 31.	TL	3/1 – 7/31	0.75 mile
Wildlife-Raptors	Swainson's hawk	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-Raptors	Swainson's hawk	Nests	Seasonal nest buffer of April 1 to July 31.	TL	4/1 – 7/31	0.75 mile
Wildlife-SSS	Sage grouse	Leks, nesting and early brood rearing habitat	Nesting/early brood-rearing habitat: Avoid surface disturbing and disruptive activities, geophysical surveys, and organized recreational activities (events) that require a special use permit in suitable greater sage-grouse and sharp-tailed grouse nesting and early brood rearing habitat within 2 miles of the perimeter of an occupied greater sage-grouse lek, and within 1 mile of the perimeter of a sharp-tailed grouse lek, or in identified greater sage-grouse and sharp-tailed grouse nesting and early brood rearing habitat, from March 1 to July 15. Avoidance of surface disturbance or other disruptive activity from March 1 through July 15 within 2 miles from an "active" lek or in suitable greater sage-grouse nesting and early brood rearing habitat.	TL	3/1 – 7/15	1 mile sharp-tailed, 2 miles greater sage grouse
Wildlife-SSS	Sage grouse	Nesting habitat	To protect important sage and sharp-tailed grouse nesting habitat, activities or surface use will not be allowed from February 1 to July 31 within certain areas encompassed by the authorization.	TL	2/1 – 7/31	None specified
Wildlife-SSS	Sage grouse	Winter concentration areas	Surface disturbing and disruptive activities potentially disruptive to delineated greater sage-grouse and sharp-tailed grouse winter concentration areas are prohibited during the period of November 15 to March 14 for the protection of greater sage-grouse and sharp-tailed grouse winter concentration areas.	TL	11/5 – 3/14	No buffer
Wildlife-SSS	Yellow-billed cuckoo	Identified habitat	Surface disturbing or other disruptive activities will be prohibited within 0.5 mile of identified habitat during the period April 15 to August 15 for the protection of nesting Western yellow-billed cuckoos.	TL	4/15 – 8/15	0.5 mile

C.3.2.2 Little Snake Field Office, Colorado

References: Record of Decision and Approved Resource Management Plan for Public Lands Administered by the Bureau of Land Management Little Snake Field Office, October 2011 (BLM 2011) (Chapter 2, Management Decision by Resource; Appendix D—Special Status Species Conservation Measures and Recommendations), Water and Mineral stipulations.

Table C.3-5 Little Snake Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Lands and Realty		WWEC corridor	Designated WWEC corridor is for buried utilities only.	NSU	No buffer
Recreation		Recreation sites, developed	Developed recreation sites (40-acre blocks) are NSU.	NSU	No buffer
Recreation-SRMAs		Juniper Canyon SRMA	NSO, ROW avoidance area; portions are VRM II.	CSU	No buffer
Recreation-SRMAs		Little Yampa SRMA	Portion of Little Yampa Canyon SRMA (within line of sight from the river within the SRMAs)-VRM II, NSO; ROW avoidance areas.	CSU	No buffer
Soils	NA	Erodible, fragile soils and unstable soils	Fragile soils: areas rated as highly or severely erodible by wind or water as described by the Natural Resources Conservation Service (NRCS) in the Area Soil Survey Report or as described by onsite inspection. Fragile soil criteria are also slopes greater than or equal to 35 percent if they have one of the other following soil characteristics: surface texture that is sand, loamy sand, very fine sandy loam, silty clay, or clay; a depth to bedrock of less than 20 inches; an erosion condition rated as "poor"; or a K factor greater than 0.32. Surface disturbing activities will be allowed on isolated sites that meet fragile soil criteria, but only when performance standards and objectives can be met. Surface occupancy on public land will be permitted only where adherence to performance objectives for surface disturbing activities within fragile-soil areas is assured.	CSU	No buffer
Special Designations-Wilderness Study Areas (WSA)		Cross Mountain WSA	WSAs will be managed to preserve their wilderness values according to the IMP (BLM-H-8550-1) and will continue to be managed in that manner until Congress either designates them as wilderness or releases them for other uses. While managed as WSAs, these areas will be managed with a VRM Class I designation. The areas will be closed to oil and gas operations, recommended for withdrawal from mineral location, closed to mineral material sales and non energy leasables, and will not be available for coal leasing. They will be managed as ROW exclusion areas, and will be closed to OHV use. If Congress releases Cross Mountain from wilderness study, it would be managed as an ACEC and would be a ROW exclusion area unless associated with valid existing rights.	NSU	No buffer
Special Designations-WSR		Yampa River segment 1	Manage Yampa River segment 1 (2.8 miles from River Mile #126 to Milk Creek area) as suitable for inclusion in the NWSR System, with the tentative classification of "recreational." Manage to protect the outstandingly remarkable values, including recreation and fish. Specific management prescriptions within 0.25 miles of each side of the river include OHV limited to designated roads and trails, NSO for oil and gas operations, recommended for withdrawal from locatable minerals, and will not be available for coal leasing.	NSU	0.25 mile

Table C.3-5 Little Snake Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Special Designations-WSR		Yampa River segment 2	Yampa segment 2 (Milk Creek to Duffy Tunnel, scenic) Manage Yampa River segment 2 (15.9 miles from Milk Creek to Duffy Tunnel) as suitable for inclusion in the NWSR System, with the tentative classification of "scenic." Manage to protect the outstandingly remarkable values, including recreation and fish. Specific management prescriptions within 0.25 miles of each side of the river include OHV limited to designated roads and trails, NSO for oil and gas operations, recommended for withdrawal from locatable minerals, and will not be available for coal leasing.	NSU	0.25 mile
Vegetation-SSS	All	Occupied habitat	There will be CSU stipulations on habitat areas containing special status species, such as federally listed, proposed, and candidate species.	CSU	No buffer
Vegetation-SSS	Utes ladies'-tresses	Known habitat	All proposed ROW projects (powerlines, pipelines, roads, etc.) will be designed and locations selected at least 0.25 miles from any known Ute ladies'-tresses orchid habitat to minimize disturbances. If avoidance of adverse effects is not possible, the Bureau will re-initiate consultation with the Service.	CSU	0.25 mile
Water Resources		Perennial streams	Establish no surface occupancy (NSO) stipulations for up to 0.25 mile from perennial water sources, if necessary, depending on type and use of the water source, soil type, and slope steepness.	NSU	0.25 mile
Wildlife-Aquatic Species-SSS	Colorado River fishes	Critical or occupied habitat	Require NSO stipulations within critical or occupied habitat of Colorado pikeminnow (<i>Ptychocheilus lucius</i>), razorback sucker (<i>Xyrauchen texanus</i>), humpback chub (<i>Gila cypha</i>), and bonytail (<i>Gila elegans</i>).	NSU	No buffer
Wildlife-Raptors	All except bald eagle and peregrine falcon	Nests	0.25 miles from nest sites raptors (golden eagle, osprey, all accipiters, falcons [except the kestrel], hawks, and owls, and not including special status species raptors Bald Eagle and Peregrine Falcon).	NSU	0.25 mile
Wildlife-Raptors	Bald eagle	Nests, abandoned	NSO within 100 meter radius of abandoned nests (unoccupied for 5 consecutive years, but with all or part of the nest remaining).	NSU	328 feet
Wildlife-Raptors	Bald eagle	Nests, occupied and unoccupied	Year-round NSO will be applied within a 0.25 mile radius of roost sites and both occupied and unoccupied nests. The definition of an "occupied nest" (from the Northern States Bald Eagle Recovery Plan 1983, page D4) includes (a) young were observed, (b) eggs were laid (eggs or eggshell fragments observed), (c) one adult was observed in incubating ("sitting low") posture on the nest during the incubation period, (d) two adults were observed at an empty nest or within the breeding area, or (e) one adult eagle and one eagle in immature plumage were observed at or near a nest, especially if mating or reproductive behavior (display flights, copulation, nest repair, etc.) was observed.	NSU	0.25 mile
Wildlife-Raptors	Bald eagle	Roosts	New roads and bridges on BLM lands should be located at least 0.5 mile from critical night roosts.	CSU	0.5 mile
Wildlife-Raptors	Peregrine Falcon	Cliff nesting complexes	NSO will be allowed within a 0.25 mile radius of cliff nesting complexes. NSO areas may be altered depending upon the active status of the nesting complex or upon the geographical relationship of topographical barriers and vegetation screening.	NSU	0.25 mile

Table C.3-5 Little Snake Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	All	T&E and candidate species habitat	There will be CSU stipulations on habitat areas containing special status species, such as federally listed, proposed, and candidate species.	CSU	No buffer
Wildlife-SSS	Black-footed ferret	Black-footed ferret reintroduction areas	Active white-tailed prairie dog colonies will continue to be avoidance areas for surface disturbing activities within the black-footed ferret reintroduction area.	CSU	No buffer
Wildlife-SSS	Black-footed ferret	Occupied habitat	Occupied black-footed ferret habitat is designated as a ROW avoidance area. ROWs on public land with the potential to disturb occupied black-footed ferret habitat will be rerouted to avoid those prairie dog towns.	CSU	No buffer
Wildlife-SSS	Black-footed ferret	Prairie dog towns	ROWs on public land with the potential to disturb occupied black-footed ferret habitat will be rerouted to avoid those prairie dog towns.	CSU	No buffer
Wildlife-SSS	Canada lynx	Mapped lynx habitat	NSO will be applied to all mapped lynx habitat.	NSU	No buffer
Wildlife-SSS	Mexican spotted owl	PACs	NSO will be applied to all protected activity centers (PAC). Other surface disturbing activities within protected or restricted habitats, such as prescribed fires and fuels reduction, may occur in specific cases but will require separate Section 7 consultation.	NSU	No buffer
Wildlife-SSS	Mountain plover	Plover nest site	Establish 0.125 mile NSO stipulations around all plover nest sites. The boundaries of the stipulated area may be modified if the authorized officer determines that surface occupancy will not harm the integrity of the nest or nest location.	NSU	0.125 mile
Wildlife-SSS	Prairie dog, white-tailed	Colonies	Surface disturbing activities occurring over more than 1 acre will not be permitted in active prairie dog towns less than 10 acres in size. These activities will be relocated to the edge of the active prairie dog town.	NSU	No buffer
Wildlife-SSS	Columbian sharp-tailed grouse	Leks	NSO will be allowed within a 0.25 mile radius of a lek site. The NSO area may be altered depending upon the active status of the lek or the geographical relationship of topographical barriers and vegetation screening to the lek site.	NSU	0.25 mile
Wildlife-SSS	Sage grouse, greater	Leks	To reduce potential impacts on greater sage-grouse lek integrity, NSO will be applied within a 0.6 mile radius of a lek site. The NSO area may be altered depending upon the active status of the lek, habitat characteristics, or the geographical relationship of topographical barriers and vegetation screening to the lek site.	NSU	0.6 mile
Wildlife-SSS	Yellow-billed cuckoo	Suitable habitat	Prohibit permanent surface disturbing activities within 0.25 mile of any suitable yellow-billed cuckoo habitat. Exceptions should be evaluated on a case-by-case basis to avoid adverse impact.	NSU	0.25 mile
Wildlife-Waterfowl	Waterfowl	Waterfowl habitat management areas and rookeries	NSO will be allowed on significant production areas, such as waterfowl habitat management areas and rookeries. NSO areas may be altered depending upon the active status of the production areas or upon the geographical relationship of topographical barriers and vegetation screening.	NSU	No buffer

Table C.3-6 Little Snake Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Livestock Grazing	Domestic sheep	Lambing grounds	Exploration (including seismic exploration, drilling, or other development or production activity) will generally not be allowed on domestic sheep lambing grounds during lambing activity. Lambing activities usually fall between April 10 and June 30 and last for approximately 6 weeks. Dates for the six week closure will be determined for each operation as local conditions dictate.	TL	4/1 – 6/30	No buffer
Wild Horses		Entire HMA	No oil- and gas related helicopter or motor vehicle use will be allowed in the wild horse HMA during foaling season, which runs from March 1 to June 30.	TL	3/1 – 6/30	No buffer
Wild Horses		Water sources	No drilling or development operations will be permitted within a 1 mile radius from wild horse water sources from March 1 to December 1.	TL	3/1 – 12/1	1 mile
Wildlife-Big Game	All	Winter habitat, crucial	Crucial winter habitat will be closed to surface disturbing activities from December 1 to April 30, with the intent that this stipulation will be applied after the big game hunting season.	TL	12/1 – 4/30	No buffer
Wildlife-Big Game	Big horn sheep	Parturition areas	Bighorn sheep lambing areas will be closed to surface disturbing activities from May 1 to July 15.	TL	5/1 – 7/15	No buffer
Wildlife-Big Game	Elk	Parturition areas	Elk calving areas will be closed to surface disturbing activities from April 16 to June 30.	TL	4/16 – 6/30	No buffer
Wildlife-Big Game	Pronghorn	Parturition areas	Pronghorn antelope fawning areas will be closed to surface disturbing activities from May 1 to July 15.	TL	5/1 – 7/15	No buffer
Wildlife-Fish	Colorado River fishes	Critical or occupied habitat	No work in the active river channel will take place between July 1 and September 30 to prevent adverse effects from sedimentation during spawning; also, no work will take place when larval fishes are drifting in the river channel. Other than pipelines, controlled surface uses crossing any critical or occupied habitat of the Colorado River fishes will require separate Section 7 consultation.	TL	7/1 – 9/30	No buffer
Wildlife-Raptors	Bald eagle	Critical night roosts	Human activity within 0.5 miles of bald eagle critical night roosts on BLM land should be restricted from November 15 to March 15. Buffers can be reduced to 0.25 miles for night roosts if the activity is visually screened by vegetation or topography. Development may be permitted at other periods. If periodic visits, such as those that occur with oil well maintenance work, are required within the buffer zone after development, such activity should be restricted to between the hours of 10 a.m. and 2 p.m. during the period November 15 to March 15.	TL	11/15 – 3/15	0.5 mile
Wildlife-Raptors	Bald eagle	Critical night roosts	If BLM chooses to construct a road or bridge within 0.5 mile of critical night roosts, then the road must be closed to all use from November 15 to March 15. If topography or vegetation provides a visual screen, the buffer can be reduced to 0.25 mile, but the seasonal closure would still be required.	TL	11/15 – 3/15	No buffer

Table C.3-6 Little Snake Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Bald eagle	Nests, occupied	No human activity or surface disturbance will be allowed within a 0.5 mile radius of occupied nests from November 15 through July 31.	TL	11/15 – 7/31	0.5 mile
Wildlife-Raptors	Bald eagle	Winter hunting perches	Human activity within 0.25 miles of known bald eagle winter hunting perches should be restricted from November 15 to March 15. Buffers can be reduced to 0.125 miles for hunting perches if the activity is visually screened by vegetation or topography. Development may be permitted at other periods. If periodic visits, such as those that occur with oil well maintenance work, are required within the buffer zone after development, such activity should be restricted to between the hours of 10 a.m. and 2 p.m. during the period November 15 to March 15.	TL	11/15 – 3/15	0.25 mile
Wildlife-Raptors	Ferruginous hawk	Nesting and fledgling habitat	From February 1 to August 15, a 1 mile buffer around nesting and fledgling habitat will be closed to surface disturbing activities to avoid nest abandonment.	TL	2/1 – 8/15	1 mile
Wildlife-Raptors	Osprey	Nesting and fledgling habitat	Osprey nesting and fledgling habitat will be closed to surface disturbing activities from April 1 to August 31. This closure will apply to a 0.5 mile buffer zone around the habitat to avoid nest abandonment.	TL	4/1 – 8/15	0.5 mile
Wildlife-Raptors	Peregrine falcon	Nesting complex	Peregrine falcon cliff nesting complexes will be closed to surface disturbing activities from March 16 to July 31 within a 0.5 mile buffer area around the nesting complex to prevent abandonment and desertion of established territories. However, during years when a nest is unoccupied, or unoccupied by or after May 15, the seasonal stipulation may be excepted. The stipulations may also be excepted once the young have fledged and dispersed from the nest.	TL	3/16 – 7/31	0.5 mile
Wildlife-Raptors	Raptors (golden eagle, osprey, all accipiters, falcons [except the kestrel], buteos, and owls)	Nests	Raptor nesting and fledgling habitat will be closed to surface disturbing activities from February 1 to August 15 within a 0.25 mile buffer zone around the nest site. However, during years when a nest site is unoccupied, or unoccupied by or after May 15, these seasonal limitations may be excepted; they may also be excepted once the young have fledged and dispersed from the nest.	TL	5/1 – 8/15	0.25 mile
Wildlife-SSS	Columbian sharp-tailed grouse	Nesting Habitat	Nesting habitat will be closed to surface disturbing activities from March 1 to June 30.	TL	3/1 – 6/30	No buffer
Wildlife-SSS	Columbian sharp-tailed grouse	Winter habitat, crucial	Crucial winter habitat will be closed from December 16 to March 15.	TL	12/16 – 3/15	No buffer

Table C.3-6 Little Snake Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-SSS	Greater sage-grouse	Leks	To prevent disturbing up to 75 percent of nesting birds, between March 1 and June 30, greater sage-grouse nesting and early brood-rearing habitat (Map 5) will be stipulated as CSU for oil and gas operations and avoidance areas for other surface disturbing activities within a 4 mile radius of the perimeter of a lek. All surface disturbing activities will avoid only nesting and early brood-rearing habitat within the 4 mile radius of the lek during this time period. Exceptions, modification, or waivers will be granted according to criteria established in Appendix B. The actual area to be avoided will be determined on a case-by-case basis, depending on applicable scientific research and site-specific analysis and in coordination with commodity users and other appropriate entities.	TL	3/1 – 6/30	4 mile
Wildlife-SSS	Greater sage-grouse	Winter habitat, crucial	Crucial winter habitat will be closed from December 16 to March 15. In addition, exceptions would be granted according to criteria established in Appendix B.	TL	12/16 – 3/15	No buffer
Wildlife-SSS	Greater sandhill crane	Nesting and staging habitat	Nesting and staging habitat areas will be closed to surface disturbing activities from March 1 to October 16.	TL	3/1 – 10/16	No buffer
Wildlife-SSS	Mexican spotted owl	PACs	Activities in PACs that are not surface disturbing will avoid the Mexican spotted owl breeding season, which runs from March 1 through August 31.	TL, CSU	3/1 – 8/31	No buffer
Wildlife-SSS	Mountain plover	Nest sites	Prohibit surface occupancy and use from April 1 to July 15 within 0.25 mile of all plover nest sites.	TL	4/1 – 7/15	0.25 mile
Wildlife-SSS	Prairie dog, white-tailed	Prairie dog towns	To protect prairie dog pups, surface disturbing activities will not be permitted in prairie dog towns between April 1 and June 15.	TL	4/1 – 6/15	No buffer
Wildlife-SSS	Yellow-billed cuckoo	Suitable habitat	Construction of roads, pipelines, and powerlines through riparian habitat should be placed near the edge of the current YBC habitat. This construction should not occur from June 1 through August 1. Roads, new trails, and rights of way (ROW) should be combined where possible, and stream crossings should be at right angles to YBC habitat to minimize impacts.	TL	6/1 – 8/1	No buffer

C.3.2.3 Grand Junction Field Office, Colorado

References: Grand Junction Resource Area Resource Management Plan and Record of Decision, January 1987 (Management Decisions by Resource; Chapter 2, Resource Decisions; Appendix B—Standard Design Practices; Appendix D—Oil and Gas Leasing Stipulations) (BLM 1987a).

Table C.3-7 Grand Junction Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Cultural Resources		Indian Creek, Rough Canyon, Cactus Park, Sieber Canyon, McDonald Creek, 5ME1358, Ladder Springs and Transect 7	Actively managed cultural resource sites (Indian Creek, Rough Canyon, Cactus Park, Sieber Canyon, McDonald Creek, 5ME1358, Ladder Springs and Transect 7) are NSO and unsuitable for utilities.	NSU	No buffer
Lands and Realty		Black Ridge corridor	No surface-disturbing activities shall be allowed within the Black Ridge corridor. Designated as unsuitable for public utilities.	NSU	No buffer
Recreation		Recreation sites, developed	Developed recreation sites (Mud Springs, Miracle Rock, Dominguez, The Falls, Island Acres, Vega Reservoir, and Highline Reservoir) are NSO and unsuitable for public utilities.	NSU	No buffer
Soils		Slopes > 40%	No surface-disturbing activities shall be allowed on lands with 40 percent slope or greater; allow other surface disturbing activities only after analyzing site-specific conditions and potential for safety hazards and reclamation. In order to avoid or mitigate unacceptable impacts to soil, water, and vegetation resources on these lands, special design practices may be necessary and higher than normal costs may result. Where impacts cannot be mitigated to the satisfaction of the authorized office, no surface-disturbing activities shall be allowed. Designated as public utility sensitive area.	CSU	No buffer
Soils	Baxter Pass, Douglas Pass, and Plateau Creek	Erodible, fragile soils and unstable soils	No surface-disturbing activities shall be allowed on unstable and slumping soils in the areas of Baxter Pass, Douglas Pass, and Plateau Creek; allow other surface disturbing activities only after analyzing site-specific conditions and potential for safety hazards and reclamation. Designated as public utility unsuitable area.	NSU	No buffer
Soils	Cactus Park	Erodible, fragile soils and unstable soils	No surface-disturbing activities shall be allowed on critically eroding soils (Cactus Park).	NSU	No buffer
Special Designations-ACEC		Badger Wash ACEC	ROW avoidance area.	CSU	No buffer
Special Designations-ACEC		Rabbit Valley paleontological site RNA	No surface-disturbing activities shall be allowed in Rabbit Valley paleontological site RNA. Also designated as unsuitable for utilities.	NSU	No buffer
Special Designations-Wilderness Study Areas (WSA)		Demaree WSA	WSA, however, is not deemed as suitable for wilderness and not ID'd as utility unsuitable area.	NSU, CSU	No buffer

Table C.3-7 Grand Junction Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Vegetation		Black Ridge Angiosperm areas	Designated as unsuitable for public utilities.	NSU	Vegetation
Vegetation		Pine Mountain Roadside	Designated as public utility sensitive area.	CSU	No buffer
Vegetation-SSS	All	SSS known habitat	Known habitat designated as public utility sensitive areas. The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation-of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.	CSU	No buffer
Vegetation-SSS	<i>Crypanthaelata</i>	<i>Crypanthaelata</i> site	Identified <i>Crypanthaelata</i> sites are designated as public utility sensitive areas. The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation-of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.	CSU	No buffer
Vegetation-SSS	Spineless hedgehog cactus	Occupied habitat	Leasing stipulations and designated as public utility sensitive areas. The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation-of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.	CSU	No buffer
Vegetation-SSS	Uinta basin hookless cactus	Occupied habitat	Leasing stipulations and designated as public utility sensitive areas. The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation-of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.	CSU	No buffer
Visual		VRM Class I and II within Grand Junction FO	Class I and II visual resource management areas (Juanita Arch, The Goblins, Ruby Canyon, Dolores River corridor, Gunnison River corridor, Mount Garfield cliffs, Bang's Canyon cliffs, Sinbad Valley cliffs, Granite Creek cliffs, Unaweep Canyon cliffs, Hunter/Garvey Canyons cliffs, Vega Reservoir viewshed) and black ridge corridor are NSO and unsuitable for utilities.	NSU	No buffer

Table C.3-7 Grand Junction Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Visual		VRM Class III areas with outstanding scenic and landscape values within Grand Junction FO	<p>Special design and reclamation measures may be required to protect the outstanding scenic and natural landscape values of located on the following areas:</p> <ul style="list-style-type: none"> a. Gunnison River corridor valley bottoms and benches. b. South Shale Ridge. c. Grand Mesa slopes. d. Bang's Canyon benches and mesa tops. e. Sinbad Valley, valley floor, benches. f. Granite Creek benches and mesa tops. g. Unaweep Canyon valley bottoms. h. Hunter/Garvey Canyons benches and mesa tops. i. Face of the Book Cliffs. j. Highway corridors (I-70, 50, 139, 141, and Baxter Pass road). k. Little Book Cliffs Wild Horse Range. l. BLM campground viewshed (Mud Springs, Miracle Rock, and Dominguez). <p>Special design and reclamation measures may include transplanting trees and shrubs, fertilization, mulching, special erosion control structures, irrigation, site recontouring to match the original contour, buried tanks and low profile equipment, and painting to minimize visual contrasts. Surface-disturbing activities may be denied in sensitive areas, such as unique geologic features and rock formations, visually prominent areas, and high recreation use areas.</p>	CSU	No buffer
Water Resources		Municipal/culinary/ public water/reservoirs	All proposed activities will avoid interference with the Jerry Creek Reservoirs' watershed. This may include the relocation of proposed uses, facilities, or application of appropriate mitigation measures.	CSU	No buffer
Water Resources		Municipal/culinary/ public water/reservoirs	All proposed activities will avoid interference with the Palisade municipal watershed. This may include the relocation of proposed uses, facilities, or application of appropriate mitigation measures.	CSU	No buffer
Water Resources		Municipal/culinary/ public water/reservoirs	No surface-disturbing activities shall be allowed on Grand Junction municipal watershed.	CSU	No buffer
Water Resources		Perennial streams	No surface-disturbing activities shall be allowed on Lands within 100 feet of perennial streams, except for essential roads and utility crossings. Designated as public utility sensitive area.	CSU	100 feet
Water Resources		Riparian areas	No surface-disturbing activities shall be allowed on riparian areas.	NSU	No buffer
Water Resources, area specific		Badger Wash Study Area	No surface-disturbing activities shall be allowed on Badger Wash hydrologic study area. Designated as public utility unsuitable area.	NSU	No buffer
Water Resources, area specific		Indian Wash Dam	No surface-disturbing activities shall be allowed on Indian Wash dam. Designated as public utility unsuitable area.	NSU	No buffer

Table C.3-7 Grand Junction Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-Aquatic Species	Colorado cutthroat trout	Colorado cutthroat trout	Leasing stipulations and designated as public utility sensitive areas. The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation-of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.	CSU	No buffer
Wildlife-Big Game		Skipper's Island and Rough Canyon	No surface-disturbing activities shall be allowed on Skipper's Island and Rough Canyon wildlife habitat areas. Designated as unsuitable for public utilities; NSO.	NSU	No buffer
Wildlife-Big Game	All	Badger Wash uplands	Badger Wash uplands is designated as public utility sensitive area.	CSU	No buffer
Wildlife-Big Game	Elk	Elk calving areas	No surface-disturbing activities shall be allowed on elk calving sites. Designated as sensitive for public utilities.	NSU, CSU	No buffer
Wildlife-SSS	Black-footed ferret	Black-footed ferret habitat	Leasing stipulations and designated as public utility sensitive areas. The lessee/operator shall submit a plan for avoidance or mitigation of impacts on the identified species to the authorized officer. This may require completion of an intensive inventory by a qualified biologist. The plan must be approved prior to any surface disturbance. The authorized officer may require additional mitigation measures such as relocation-of proposed roads, drilling sites, or other facilities. Where impacts cannot be mitigated to the satisfaction of the authorized officer, surface occupancy on that area must be prohibited.	CSU	No buffer

Table C.3-8 Grand Junction Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wild Horses		Coal Canyon wintering and foaling areas	Prohibit disturbing activities in the Coal Canyon area from December 1 to July 1 to protect the wild horse wintering and foaling areas.	TL	12/1 to 7/1	No buffer
Wild Horses		Winter range	During periods critical to wild horses, the following restrictions will be applied: 1) No new construction activities will occur; 2) All activities will be conducted during daylight hours only; 3) Vehicular access on a daily basis will be limited to a single trip. Critical periods are December 1 to May 1.	TL	12/1 to 5/1	No buffer
Wildlife-Big Game	Big horn sheep	Winter range	During periods critical to bighorn sheep the following restrictions will be applied: 1) No new construction activities will occur; 2) All activities will be conducted during daylight hours only; 3) Vehicular access on a daily basis will be limited to a single trip. Critical periods are: Bighorn winter range - December 1 to May 1.	TL	12/1 to 5/1	No buffer

Table C.3-8 Grand Junction Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/ Avoidance Area
Wildlife-Big Game	Mule deer, elk	Winter range	During periods critical to deer, elk, the following restrictions will be applied: 1) No new construction activities will occur; 2) All activities will be conducted during daylight hours only; 3) Vehicular access on a daily basis will be limited to a single trip. Critical periods are December 1 to May 1.	TL, CSU	12/1 – 5/1	No buffer
Wildlife-Big Game	Elk	Parturition areas	In elk Calving areas the following restrictions will be applied: 1) No new construction activities will occur; 2) All activities will be conducted during daylight hours only; 3) Vehicular access on a daily basis will be limited to a single trip. Critical periods are May 15 to June 15.	TL, CSU	5/15 – 6/15	No buffer
Wildlife-Raptors	Bald eagle	Winter concentration areas	Protect bald eagle concentration areas from surface-disturbing activities from December 1 to April 1.	TL	12/1 – 4/1	No buffer
Wildlife-Raptors	Peregrine falcon	Nest (only includes active nest buffer area)	Protect active peregrine falcon nests from surface-disturbing activities from March 15 to July 1.	TL	3/15 – 7/1	No buffer
Wild Horses		Foaling areas	During periods critical to wild horses, the following restrictions will be applied: 1) No new construction activities will occur; 2) All activities will be conducted during daylight hours only; 3) Vehicular access on a daily basis will be limited to a single trip. Critical periods are March 1 to July 1.	TL	3/1 – 7/1	No buffer

C.3.2.4 White River Field Office, Colorado

References: White River Field Office Record of Decision and Approved Resource Management Plan, July 1997 (Chapter 2, Resource Management Decisions; Appendix A—Surface Stipulations Applicable to All Surface Disturbing Activities; Appendix B—Conditions of Approval) (BLM 1997a).

Table C.3-9 White River Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Lands and Realty		Dragon Trail-Atchee Ridge corridor	Dragon Trail-Atchee Ridge corridor follows the route once proposed as the Rangely loop segment of the Northwest Pipeline Expansion Project. It runs south from Rangely, to the vicinity of Baxter Pass, is approximately 1-mile wide, and will accommodate all buried linear facilities.	CSU	No buffer
Soils		Erodible, fragile soils and unstable soils	Identified soils are considered unstable and subject to slumping and mass movement. Surface occupancy will not be allowed in such areas delineated from USDA SCS Order III Soil Surveys.	NSU	No buffer

Table C.3-9 White River Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Special Designations-ACEC		Coal Oil Rim ACEC	These ACECs are known to contain, or have acres potential to contain, T/E plants or plants that are candidates for listing as T/E. State of Colorado plant -White River species of concern, BLM sensitive plants, remnant Riparian (950 vegetation associations, and/or unique plant acres) communities. A plant inventory will be conducted prior to approving any surface disturbing activities within the ACEC boundaries. Surface disturbance will not be allowed within mapped locations of these plants. The presence of the above listed plants would require relocating surface disturbance or facilities more than 200 meters. The timing required for (18,260 acres) conducting the plant inventories may require deferring activities longer than 60 days. NSO stipulations will be attached to all use authorizations encompassing these areas. Motorized vehicle travel within designated ACECs will be allowed only on designated roads and trails.	CSU	No buffer
Special Designations-ACEC		Oil Spring Mountain ACEC	These ACECs are known to contain, or have acres potential to contain, T/E plants or plants that are candidates for listing as T/E. State of Colorado plant -White River species of concern, BLM sensitive plants, remnant Riparian (950 vegetation associations, and/or unique plant acres) communities. A plant inventory will be conducted prior to approving any surface disturbing activities within the ACEC boundaries. Surface disturbance will not be allowed within mapped locations of these plants. The presence of the above listed plants would require relocating surface disturbance or facilities more than 200 meters. The timing required for (18,260 acres) conducting the plant inventories may require deferring activities longer than 60 days. NSO stipulations will be attached to all use authorizations encompassing these areas. Motorized vehicle travel within designated ACECs will be allowed only on designated roads and trails.	CSU	No buffer
Special Designations-ACEC		White River Riparian ACEC	Managed for recreation as roadless natural. These ACECs are known to contain, or have acres potential to contain, T/E plants or plants that are candidates for listing as T/E. State of Colorado plant -White River species of concern, BLM sensitive plants, remnant Riparian (950 vegetation associations, and/or unique plant acres) communities. A plant inventory will be conducted prior to approving any surface disturbing activities within the ACEC boundaries. Surface disturbance will not be allowed within mapped locations of these plants. The presence of the above listed plants would require relocating surface disturbance or facilities more than 200 meters. The timing required for (18,260 acres) conducting the plant inventories may require deferring activities longer than 60 days. NSO stipulations will be attached to all use authorizations encompassing these areas. Motorized vehicle travel within designated ACECs will be allowed only on designated roads and trails.	CSU	No buffer
Vegetation-SSS	All	BLM sensitive plants and RVAs	No surface occupancy will be allowed within known populations of BLM sensitive plants and remnant vegetation associations (RVAs). Motorized travel within known locations of sensitive plants and high priority RVAs that are located outside ACECs is limited to designated roads and trails.	NSU, CSU	No buffer

Table C.3-9 White River Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Vegetation-SSS	All	Federally listed species known and potential habitat	No Surface Occupancy (NSO) stipulation will be placed on known and potential habitat of federally listed and candidate T/E plants. New T/E plant habitat mapped as a result of future surveys will also be protected by a NSO stipulation. This stipulation will apply to all surface disturbing activities within these areas. All known and potential T/E habitat, including ACECs, will be exclusion areas for new Rights-of-Way authorizations. Land use authorizations will be denied in exclusion areas, with the exception of short-term land use permits involving no development, and projects that are consistent with management objectives for the area.	NSU	No buffer
Water Resources		Riparian areas	Surface disturbing activities would be required to avoid riparian habitat.	CSU	No buffer
Wildlife-Raptors	Bald eagle	Nests	Surface Occupancy is not allowed within 0.25 mile of Bald Eagle nests. Prior to authorizing surface disturbance within Nest, Roost, and Perch habitat, and pending conferral consultation with the USFWS as required by the Endangered Species Act, the Area Manager may require the proponent/applicant to submit a plan of development that would demonstrate that: 1) involvement of cottonwood stands or cottonwood regeneration areas have been avoided to the extent practicable; 2) special reclamation measures or design features are incorporated that would accelerate recovery and/or reestablishment of affected cottonwood communities: 3) the pre-development potential of affected floodplains to develop or support riverine cottonwood communities has not been diminished: and 4) the current/future utility of such cottonwood substrate for bald eagle use would not be impaired.	NSU, CSU	0.25 mile
Wildlife-Raptors	Bald eagle	Roosts	Surface Occupancy is not allowed within 0.25 mile of Bald Eagle Roost/Concentration Areas. Prior to authorizing surface disturbance within Nest, Roost, and Perch habitat, and pending conferral consultation with the USFWS as required by the Endangered Species Act, the Area Manager may require the proponent/applicant to submit a plan of development that would demonstrate that: 1) involvement of cottonwood stands or cottonwood regeneration areas have been avoided to the extent practicable; 2) special reclamation measures or design features are incorporated that would accelerate recovery and/or reestablishment of affected cottonwood communities: 3) the pre-development potential of affected floodplains to develop or support riverine cottonwood communities has not been diminished: and 4) the current/future utility of such cottonwood substrate for bald eagle use would not be impaired.	NSU, CSU	0.25 mile
Wildlife-Raptors	Raptors, non-SSS	Nests	Disruptive surface occupation or adverse habitat modification will be prohibited within 1/8 mile of non-listed members (i.e. not listed, proposed, candidate, and BLM sensitive) of the raptor group.	NSU	0.125 mile
Wildlife-Raptors	Raptors, SSS (listed, proposed, candidate, and BLM sensitive)	Nests	Disruptive surface occupation or adverse habitat modification will be prohibited within 1/4 mile of functional nest sites of special status species (i.e. listed, proposed, candidate, and BLM sensitive).	NSU	0.25 mile
Wildlife-SSS	Sage grouse	Leks	This area encompasses sage grouse leks. Surface Occupancy is not allowed within 1/4 mile of identified lek sites.	NSU	0.25 mile

Table C.3-9 White River Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Special Designations-Wilderness Study Areas (WSA)		Bull Canyon WSA	Bull Canyon WSA will be managed under the Interim Management Policy For Lands Under Wilderness Review. Except for certain valid existing rights, activities will not be allowed to occur in WSAs that will impair wilderness values or the area's suitability for preservation as wilderness. WSAs are ROW exclusion areas. Land use authorizations will be denied in exclusion areas, with the exception of short-term land use permits involving no development, and projects that are consistent with management objectives for the area.	NSU, CSU	No buffer
Special Designations-Wilderness Study Areas (WSA)		Willow Creek WSA	Skull Mountain WSA will be managed under the Interim Management Policy For Lands Under Wilderness Review. Except for certain valid existing rights, activities will not be allowed to occur in WSAs that will impair wilderness values or the area's suitability for preservation as wilderness. WSAs are ROW exclusion areas. Land use authorizations will be denied in exclusion areas, with the exception of short-term land use permits involving no development, and projects that are consistent with management objectives for the area.	NSU, CSU	No buffer
Special Designations-Wilderness Study Areas (WSA)		Skull Mountain WSA	Skull Mountain WSA will be managed under the Interim Management Policy For Lands Under Wilderness Review. Except for certain valid existing rights, activities will not be allowed to occur in WSAs that will impair wilderness values or the area's suitability for preservation as wilderness. WSAs are ROW exclusion areas. Land use authorizations will be denied in exclusion areas, with the exception of short-term land use permits involving no development, and projects that are consistent with management objectives for the area.	NSU, CSU	No buffer
Cultural Resources		Canyon Pintado National Historic District	This is a controlled surface use area for the protection of cultural resources. The Area Manager may approve actions within this area if an environmental analysis and inventory indicates that the proposed action is compatible with the intent of the Historic District, and can comply with Historic District cultural resource protection requirements. All proposed actions will be reviewed for conflicts with known archaeological or historical resources. In areas of conflicts, a pedestrian inventory of the proposed project area will be completed by a qualified archaeologist using standards specified by the BLM. The Area Manager may require that a qualified archaeologist be present to monitor operations during surface disturbing activities. If archaeological resources are located during the inventory, the proposed action will be relocated to avoid and protect the cultural values. Proposed actions that produce vibrations will be located a distance far enough away from rock art or structural features to allow full attenuation of the vibration before it gets to the resource of concern. All inventories are required to be submitted to the BLM in report form and are subject to review by the Colorado State Historic Preservation Office and the Advisory Council on Historic Preservation prior to approval of the proposed action. Surface Occupation may not be allowed to occur in order to protect cultural resources.	CSU	No buffer
Soils		Saline Soils derived from Manco shale	Surface disturbing activities will be allowed in these areas only after an engineered soils derived construction/reclamation plan is submitted by the operator and approved by the Area Manager.	CSU	No buffer
Soils		Slopes > 35%	Surface disturbing activities will be allowed in fragile soils on Slopes >35% only after an engineered soils derived construction/reclamation plan is submitted by the operator and approved by the Area Manager.	CSU	No buffer

Table C.3-9 White River Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Vegetation		Aspen, serviceberry and chokecherry communities	Blue Mountain Deciduous Browse/Aspen/Serviceberry/Chokecherry Communities are a controlled surface use area in order to maintain and the distribution, condition, and functional capacity of deciduous browse and aspen communities integral to high priority big game and blue grouse habitats. Prior to authorizing activities in this area, the proponent/applicant would be required to submit a plan of development that would demonstrate that: 1) involvement of aspen, serviceberry, and chokecherry associations have been avoided to the extent possible: 2) special reclamation measures or design features would promote accelerated recovery or establishment of desirable plant community components: 3) the potential or capacity of the area to support viable, self-sustaining aspen, serviceberry, and chokecherry communities has not been diminished; 4) involvement of community derived values are mitigated through project life commensurate with projected impacts. Surface disturbance or occupation within aspen, serviceberry, and chokecherry communities may be prohibited.	CSU	No buffer
Visual		VRM Class II and III areas within White River FO	Measures may be required to protect scenic and natural landscape values. These design and measures may include transplanting trees and shrubs, mulching and fertilizing disturbed areas, use of low profile permanent facilities, and painting to minimize visual contrasts. Surface disturbing activities may be moved up to 200 meters to avoid sensitive areas or to reduce the visual effects of the proposal. These measures would be applied to the following VRM Class II and III areas: Canyon Pintado National Historic District; Highways 13, 40, 64, and 139 corridors; Viewsheds in the Blue Mountain/Moosehead GRA; White River Corridor; Douglas and Baxter Pass divide; Cathedral Bluffs; and VRM Class II areas around Meeker. These measures may also be applied to other areas on a case by case basis.	CSU	No buffer
Wildlife-Aquatic Species	Colorado cutthroat trout	Aquatic trout habitat (habitats occupied by populations of Colorado River cutthroat trout)	Prior to authorizing surface disturbance of occupied stream reaches or within watersheds contributing to occupied habitats, the Area Manager may require the proponent/applicant to submit a plan of development that would demonstrate that the proposed action would not: 1) increase stream gradient: 2) result in a net increase in sediment contribution; 3) decrease stream channel sinuosity: 4) increase the channel width to depth ratio; 5) increase water temperature; 6) decrease vegetation derived stream shading; and 7) degrade existing water quality parameters, including specific conductance, turbidity, organic/inorganic contaminant levels, and dissolved oxygen in occupied reaches or contributing perennial or intermittent tributaries. If approvals are granted and development results in these standards being exceeded, additional measures would be required to correct the deficiencies.	CSU	No buffer
Wildlife-Avian	Avian	Nest sites of all special status and tree-nesting species	Permitted land use activities within 1/4 mile of functional nest sites of cavity, cliff, and ground-nesting species, and within 1/2 mile of functional nest sites of special status and tree-nesting species, will be subject to relocation or design modifications to preclude, or reduce to acceptable levels, long-term reduction or deterioration.	CSU	No buffer

Table C.3-9 White River Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Wildlife-SSS	Black-footed ferret	Potential habitat for wild or reintroduced populations	Lands within this lease parcel involve prairie dog ecosystems that constitute potential habitat for wild or reintroduced populations of the federally endangered black footed ferret. Conservation and recovery efforts for the black-footed ferret are authorized by the Endangered Species Act of 1973 (as amended). The successful lessee may be required to perform special conservation measures prior to and during lease development. These measures may include one or more of the following: 1. Performing site-specific habitat analysis and/or participating in ferret surveys. 2. Participating in the preparation of a surface use plan of operations with BLM, USFWS, and COW, which integrates and coordinates long term lease development with measures necessary to minimize adverse impacts to black-footed ferrets or their habitat. 3. Abiding by special daily and seasonal activity restrictions on construction, drilling, product transport, and service activities. 4. Incorporating special modifications to facility siting, design, construction, and operation. 5. Providing in-kind compensation for habitat loss and/or displacement (e.g. special on-site rehabilitation/revegetation measures or off-site habitat enhancement).	CSU	No buffer
Wildlife-SSS	Black-footed ferret	Black-footed ferret Reintroduction Area	Prior to authorizing activities in this area, the Area Manager will confer or consult with the USFWS as required by Section I of the Endangered Species Act. Depending on the scope of the proposed action, a plan of development may be required that demonstrates how the proposed activities would be conducted or conditioned to: 1) avoid the direct or indirect loss of black-footed ferrets; or 2) avoid affecting the capability of the site to achieve reestablishment objectives. The Area Manager may impose land use measures and limitations derived from a site specific ferret reintroduction and management plan. The measures and limitations would be designed to avoid, or reduce to acceptable levels, the short and long term adverse effects on ferret survival, behavior, reproductive activities, and/or the area's capacity to sustain ferret population objectives.	CSU	No buffer
Wildlife-SSS	Sage grouse	Sage grouse habitat	Conversion or adverse modification of the following sage grouse habitats will be avoided: 1) sagebrush stands with ≤50 percent canopy and ≤30" in height, and ≤2 miles from a lek; 2) sagebrush stands with ≤30 percent canopy and ≤30" in height; >2 miles from a lek on occupied summer ranges; 3) any sagebrush stand on slopes ≤0 20 percent in defined winter concentration areas; and 4) sagebrush stands on slopes ≤20 percent showing evidence of winter use.	CSU	2 mile

Table C.3-10 White River Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wild Horses		Foaling areas	During periods critical to wild horses, the following restrictions will be applied: 1) No new construction activities will occur; 2) All activities will be conducted during daylight hours only; 3) Vehicular access on a daily basis will be limited to a single trip. Critical periods are March 1 to July 1.	TL	3/1 – 6/15	No buffer
Wild Horses		Foaling areas	In order to protect wild horses within this area, intensive development activities may be delayed for a specified 60 day period within the spring foaling period between March 1 and June 15.	TL	3/1 – 6/15	No buffer
Wildlife-Big Game	All	Winter range, severe	No development activity in big game severe winter range is allowed from December 1 through April 30. Exceptions apply.	TL	12/1 – 4/30	No buffer
Wildlife-Big Game	Mule deer, elk	Summer range	This stipulation will not take effect until direct and indirect impacts to suitable summer range habitats exceed 10% of that available within the individual Game Management Units. When this threshold has been reached, no further development activity will be allowed from May 15 through August 15. Exceptions apply.	TL	5/15 – 8/15	No buffer
Wildlife-Big Game	All	Parturition areas	All surface disturbing activities restricted from May 1 through June 30 in designated parturition areas.	TL	5/1 – 6/30	No buffer
Wildlife-Raptors	All listed, candidate T/E &/ BLM sensitive species except bald eagle and ferruginous hawks)	Nests	No development activities are allowed within ½ mile of identified nest sites from February 1 through August 15, or until fledgling and dispersal of young. Exceptions apply.	TL	2/1 – 8/15	0.25 mile
Wildlife-Raptors	All raptors other than T/E and candidate T/E species	Nests	No development activities are allowed within ¼ mile of identified nests from February 1 through August 15, or until fledgling and dispersal of young. Exceptions apply.	TL	2/1 – 8/15	0.125 mile
Wildlife-Raptors	Bald eagle	Nests	No development is allowed within 0.5 mile of identified nests from December 15 through July 15, or until fledgling and dispersal of young.	TL	12/15 – 7/15	0.5 mile
Wildlife-Raptors	Bald eagle	Roosts, winter concentration areas	No development is allowed within ½ mile of identified sites from November 15 through April 15. Exceptions apply.	TL	11/15 – 4/15	0.5 mile
Wildlife-Raptors	Ferruginous hawk	Nests	No development is allowed within 1 mile of identified nests from February 1 through August 15, or until fledgling and dispersal of young. Exceptions apply.	TL	2/1 – 8/15	1.0 mile

Table C.3-10 White River Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-SSS	Sage grouse	Leks	If direct and indirect impacts to suitable nesting cover exceeds 10 percent of the habitat available within 2 miles of identified leks, further development will not be allowed from April 15 through July 7. (Development can occur until 10 percent of the habitat associated with a lek is impacted, from then on, additional activity can occur from July 8 through April 14).	TL	4/15 – 7/7	2 miles
Wildlife-SSS	Sage grouse	Winter habitat	This area encompasses sagebrush habitats that are occupied by wintering concentrations of grouse, or represent the only habitats that remain available for use during periods of heavy snowpack. No development activity will be allowed between December 16 and March 15.	TL	12/16 – 3/15	No buffer

C.3.2.5 Vernal Field Office, Utah

References: Vernal Field Office Record Of Decision And Approved Resource Management Plan, October 2008 (Management Decision by Resource; Appendix A—Best Management Practices for Raptors and Their Associated Habitats In Utah, Utah BLM 2006, Appendix A, August 2006²; Appendix K—Surface Stipulations Applicable to all Surface-Disturbing Activities; Appendix L—Utah’s Threatened and Endangered Species Lease Notices for Oil and Gas Development and BLM-committed Conservation Measures; Appendix R—Fluid Minerals BMPs) (BLM 2008b).

Table C.3-11 Vernal Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Cultural Resources		Little Hole and Devils Hole area	The Little Hole and Devils Hole areas will be open for oil and gas leasing, subject to controlled surface-use (CSU) stipulations to protect cultural sites that include lithic scatters, burials, tool manufacturing sites, structures, and rock shelters.	CSU	No buffer
Cultural Resources		Upper Willow Creek area of the Book Cliffs	To preserve the unique representation of the Archaic period, the surface disturbing activities would be subject to timing and controlled surface use stipulations.	CSU, TL	No buffer

² Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah” (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

Table C.3-11 Vernal Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Cultural Resources		Four Mile Wash area (Section 18, T10S, R19E)	To protect traditional sacred properties, the area would be open for oil and gas leasing and other surface disturbing activities subject to timing and controlled surface-use stipulations or NSO. <i>[Per the RMP, ROWs exclusion and avoidance areas are consistent with areas closed to oil and gas leasing or with a no surface occupancy stipulation, respectively.]</i>	CSU	No buffer
Cultural Resources		Uinta foothills area	The area would be open for oil and gas leasing and other surface disturbing activities subject to timing and controlled surface-use stipulations or NSO. <i>[Per the RMP, ROWs exclusion and avoidance areas are consistent with areas closed to oil and gas leasing or with a no surface occupancy stipulation, respectively.]</i>	CSU	No buffer
Lands and Realty		ROW corridors	Future ROWs that cross the Lower or Upper Green River will be placed in the Four Mile Bottom Area or at the Head of Little Swallow Canyon.	CSU	No buffer
Recreation		Recreation sites, developed	All developed recreation sites within VFO will be closed to all forms of surface-disturbing activities not directly related to recreation development. Developed recreation sites would be closed to the shooting of firearms, grazing, and all forms of surface-disturbing activities. An exemption would be granted if the disturbance were related to recreational infrastructure support.	NSU	No buffer
Soils		Slopes between 21-40%	If surface-disturbing activities cannot be avoided on slopes from 21-40% a plan would be required. The plan would be approved by BLM prior to construction and maintenance and include: • An erosion control strategy• GIS modeling• Proper survey and design by a certified engineer. The surface operating standards for oil and gas exploration and development (Gold Book) would be used as a guide for surface-disturbing proposals on steep slopes/hillsides (BLM and USFS 2007).	CSU	No buffer
Soils		Slopes > 40%	For slopes greater than 40%, allow NSO. If after an environment analysis the authorized officer determines that it would cause undue or unnecessary degradation to pursue other placement alternatives, surface occupancy in the NSO area may be authorized. Additionally a plan would be submitted by the operator and approved by BLM prior to construction and maintenance and include: • An erosion control strategy; • An erosion control strategy; • Proper survey and design by a certified engineer. Modifications also may be granted if a more detailed analysis, i.e. Order I, soil survey conducted by a qualified soil scientist finds that surface disturbance activities could occur on slopes greater than 40% while adequately protecting the area from accelerated erosion.	CSU	No buffer
Special Designations-ACEC		Lears Canyon ACEC (1,375 ac)	ROW avoidance area. Leasing NSO in Lears Canyon ACEC to protect relict vegetation areas, OHV use will be closed or limited to designated routes. VRM II.	NSU	No buffer

Table C.3-11 Vernal Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Special Designations-ACEC		Lower Green River ACEC - (8,470 acres)	ROW avoidance area. Leasing NSO allowed within line of sight or up to 0.5 mile from the centerline of the river, whichever is less. OHV use will be limited to designated routes. VRM Class II. Approximately 71 acres will be open to leasing subject to moderate constraints such as TLs and CSU. Approximately 8,079 acres will be open to leasing subject to major constraints such as NSO stipulations. No areas open to standard tips, no areas unavailable for leasing. Future facilities would be placed within the existing ROW corridor near the Four Mile Bottom area where an existing pipeline crosses the Green River. 8,079 NSO; 71 CSU/TL.	CSU	No buffer
Special Designations-ACEC		Nine Mile Canyon ACEC	ROW avoidance area. Managed to enhance cultural and special status plant FO species while enhancing scenic vistas, recreation, and wildlife resource values. A comprehensive integrated activity plan will be developed /implemented. OHV use will be limited to designated routes.	CSU	No buffer
Special Designations-National Monuments		Areas adjacent to Dinosaur National Monument	Minimize noise and light pollution adjacent to Dinosaur National Monument using best available technology such as installation of multi-cylinder pumps, hospital sound reducing mufflers, and placement of exhaust systems to direct noise away from the monument. Additionally, there would be a requirement to reduce light pollution by using methods such as limiting height of light poles, timing of lighting operations (meaning limiting lighting to times of darkness associated with drilling and work over or maintenance operations), limiting wattage intensity, and constructing light shields. However, this requirement is not applicable if it affects human health and safety. Movement of operations to mitigate sound and light impacts would be required to be at least 200 m from the Monument boundary for VRM Classes II, III and IV. Exception: An exception may be granted if a determination is made that natural barriers or view sheds would meet these mitigation objectives or if human health and safety were adversely affected.	CSU	200 meters (656 feet)
Special Designations-WSR		Lower Green River from the public land boundary south of Ouray to the Carbon County line	The segment of the Lower Green River from the public land boundary south of Ouray to the Carbon County line will continue to be managed as previously recommended as a suitable scenic segment to protect its outstandingly remarkable values. Management will include: Oil and Gas Leasing – NSO; Mineral Materials – Closed; OHV – Closed and limited to designated routes; VRM – Classes I and II.	NSU	No buffer

Table C.3-11 Vernal Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Vegetation-SSS	Clay reed-mustard	Occupied habitat	Clay reed-mustard conservation measures: 4. Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: a. Where standard surveys are technically infeasible, infrastructure and activities will avoid all suitable habitat (avoidance areas) and incorporate 300-foot buffers, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat; b. Follow the above recommendations (#3) for project design within suitable habitats; c. To avoid water flow and/or sedimentation into occupied habitat and avoidance areas, silt fences, hay bales, and similar structures or practices will be incorporated into the project design; appropriate placement of fill is encouraged; d. Construction of roads will occur such that the edge of the right of way is at least 300 feet from any plant and 300 feet from avoidance areas; f. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat; and k. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat. Roads will be graveled within occupied habitat.	CSU	300 feet
Vegetation-SSS	Shrubby reed-mustard	Occupied habitat	Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: a. Follow the above (#3) recommendations for project design within suitable habitats; b. Construction of roads will occur such that the edge of the right of way is at least 300 feet from any plant.; d. The edge of the well pad should be located at least 300 feet away from plants; g. Before and during construction, areas for avoidance should be visually identifiable in the field (e.g., flagging, temporary fencing, rebar, etc.); h. Where technically and economically feasible, use directional drilling or multiple wells from the same pad, ;i. Designs will avoid concentrating water flows or sediments into occupied habitat; j. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat. Roads will be graveled within occupied habitat.	CSU	300 feet from plants
Vegetation-SSS	Ute ladies'-tresses	Occupied habitat	Within occupied habitat, project infrastructure will be designed to avoid direct disturbance and minimize indirect impacts to populations and to individual plants: a. Follow the above (#3) recommendations for project design within suitable habitats; b. Buffers of 300 feet minimum between right of way (roads and surface pipelines) or surface disturbance (well pads) and plants and populations will be incorporated; c. Surface pipelines will be laid such that a 300-foot buffer exists between the edge of the right of way and the plants, using stabilizing and anchoring techniques when the pipeline crosses habitat to ensure the pipelines don't move towards the population; f. Designs will avoid altering site hydrology and concentrating water flows or sediments into occupied habitat; g. Place produced oil, water, or condensate tanks in centralized locations, away from occupied habitat, with berms and catchment ditches to avoid or minimize the potential for materials to reach occupied or suitable habitat.	CSU	300 feet

Table C.3-11 Vernal Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Water Resources		100-year floodplains, municipal/culinary/public water/reservoirs, riparian areas	Allow no new surface-disturbing activities within active flood plains, public water reserves, or 100 meters of riparian areas unless there are no practical alternatives, impacts will be fully mitigated, and the action is designed to enhance the riparian resources. The following mitigation measures could be included as applicable: • Keep construction of all new stream crossings to a minimum. Stream crossings with culverts will be designed and constructed to allow fish passage, where needed. All stream crossings will be designed and constructed to keep impacts to riparian and aquatic habitat to a minimum. • Relocate existing routes out of riparian areas where feasible or necessary to restore watershed and riparian stability.	NSU	100 meters (328 feet)
Wildlife-Aquatic species-SSS	Bonytail, Colorado pikeminnow, humpback chub, and razorback sucker	Colorado, Green, Duchesne, Price, White, and San Rafael rivers.	Colorado Pikeminnow, Humpback Chub, and Razorback Sucker Conservation Measures: 3.b. Surface-disturbing activities [other than oil and gas activities] maybe restricted within 0.25 mile of the channel centerline of the Colorado, Green, Duchesne, Price, White, and San Rafael Rivers.	NSU	0.25 miles of channel centerline
Wildlife-Big Game	Deer	Crucial deer winter range	Within crucial deer winter range, no more than 10% of such habitat will be subject to surface disturbance and remain un-reclaimed at any given time. (Exception: This stipulation may be excepted if either the resource values change or the lessee/operator demonstrates to BLMs satisfaction that impacts can be mitigated.)	CSU	No buffer
Wildlife-Big Game	Deer	Crucial deer winter range – recommendation only	It is preferred that surface-disturbing actions within crucial deer winter range will be located in pinyon juniper rather than browse where both vegetation types occur.	CSU	No buffer
Wildlife-SSS	Canda Lynx	Occupied denning habitat	Avoid all surface disturbing actions within occupied denning habitat. Limit disturbance to and within suitable habitat by staying on approved access routes. Limit new access routes created by the project. Dirt and gravel roads traversing lynx habitat (particularly those that could become highways) should not be paved or otherwise upgraded (e.g., straightening of curves, widening of roadway etc.) in a manner that is likely to lead to significant increases in traffic volume, traffic speed, increased width of the cleared ROW, or would foreseeably contribute to development or increases in human activity in lynx habitat. When these types of upgrades are proposed, a thorough analysis of potential direct and indirect impacts to lynx and lynx habitat should be conducted. Minimize impacts to habitats that support lynx prey.	CSU	No buffer

Table C.3-11 Vernal Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	Mexican spotted owl	Nests or PACs	<p>No actions will occur within 0.5 mile of identified nest site. -If nest site is unknown, no activity will occur within the designated Protected Activity Center (PAC). -Avoid placing permanent structures within 0.5 mile of suitable habitat unless surveyed and not occupied. -Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5mile from suitable habitat, including canyon rims (Delaney et al 1999). Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims. -Limit disturbances to and within suitable owl habitat by staying on designated routes. - Limit new access routes created by the project. A permanent action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances, i.e., creation of a permanent structure.</p> <p>For all temporary actions that may impact owls or suitable habitat:</p> <ul style="list-style-type: none"> - If action occurs entirely outside of the owl breeding season, and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey. - If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity should be delayed until outside of the breeding season. - Eliminate access routes created by a project through such means as raking out scars, revegetation, gating access points, etc. Temporary activities are defined as those that are completed prior to the start of the following raptor breeding season, leaving no permanent structures and resulting in no permanent habitat loss. 	NSU	0.5 mile
Wildlife-SSS	Prairie dog, white-tailed	White-tailed prairie dogs	<p>No surface-disturbing activities within 660 feet of prairie dog colonies identified within prairie dog habitat. No permanent aboveground facilities are allowed within the 660-foot buffer. Exception: An exception may be granted by the AO if the applicant submits a plan that indicates that impacts of the proposed action can be adequately mitigated or, if due to the size of the town, there is no reasonable location to develop a lease and avoid colonies the AO will allow for loss of prairie dog colonies and/or habitat to satisfy terms and conditions of the lease. The AO may modify the boundaries of the stipulation area if portions of the area does not include prairie dog habitat or active colonies are found outside the current defined area, as determined by the BLM.</p>	NSU	660 feet from colonies
Wildlife-SSS	Sage grouse	Leks	No surface-disturbing activities within 0.25 mile of active Sage-grouse leks will be allowed year round.	NSU	0.25 mile
Wildlife-SSS	Sage grouse	Leks	No permanent facilities or structures will be allowed within 2 miles of active sage grouse leks when possible.	CSU	2 miles
Wildlife-SSS	Sage grouse	Leks	Within 0.5 mile of known active leks, the best available technology will be used to reduce noise, e.g., installation of multi-cylinder pumps, hospital sound-reducing mufflers, and placement of exhaust systems.	CSU	0.5 mile

Table C.3-12 Vernal Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Vegetation-SSS	Clay reed-mustard	Occupied habitat	Construction activities not related to oil and gas development may be restricted from May 1 through June 5 within occupied habitat; the operator is encouraged to apply water for dust abatement to such areas from May 1 to June 5 (flowering period); dust abatement applications will be comprised of water only.	TL, CSU	5/1 – 6/5	No buffer
Vegetation-SSS	Shrubby reed-mustard	Occupied habitat	Construction activities not related to oil and gas development may be restricted from April 15 through May 30 within occupied habitat. The operator is encouraged to apply water for dust abatement to such areas from April 15 to May 30 (flowering period); dust abatement applications will be comprised of water only.	TL, CSU	4/15 – 5/30	No buffer
Wildlife- Big Game	Deer, elk	Parturition areas	In order to protect crucial elk calving and deer fawning habitat, exploration, drilling, and other development activity will not be allowed from May 15 through June 30. Maintenance of producing wells will be allowed. Specific exceptions may be granted by the BLM if the proposed activity will not seriously disturb wildlife habitat values being protected. This determination will be made by a BLM wildlife biologist in coordination with the UDWR and, if appropriate, the USFS. Such a determination may result if fawning is completed early and the fawning area is abandoned earlier to allow for disturbing activities for fluid mineral leasing and exploration to start earlier than July 31.	TL	5/15 – 6/30	No buffer
Wildlife- Big Game	Deer, elk	Winter habitat, crucial	Activities that will result in adverse impacts to deer and elk within crucial winter range will not be allowed from December 1 through April 30. This restriction will not apply if deer and/or elk are not present, or if it is determined through analysis and coordination with UDWR that impacts will be mitigated. Factors to be considered will include snow depth, temperature, snow crusting, location of disturbance, forage quantity and quality, animal condition, and expected duration of disturbance. The stipulation could be modified based on findings of collaborative monitoring and analysis. For example, the winter range configuration and time frames could be changed if current animal use patterns are determined to be inconsistent with the dates and boundaries established. This stipulation could be waived if it is determined through collaborative monitoring and analysis that the area is not crucial winter range or that timing restrictions are unnecessary.	TL	12/1 – 4/30	No buffer
Wildlife- Big Game	Pronghorn	Parturition areas	Do not allow activities that will result in adverse impacts to antelope from May 1 through June 30 to minimize stress and disturbance during crucial antelope birthing time. An exception may be granted to these dates by the authorized officer if the operator submits a plan which demonstrates that impacts from the proposed action can be adequately mitigated or if it is determined the habitat is not being utilized for fawning in any given year. The authorized officer may modify the boundaries of the stipulation area if a portion of the area is not being used as fawning grounds or if habitat is being utilized outside of stipulation boundaries as crucial fawning grounds and needs to be protected. May be granted if the fawning grounds are determined to be unsuitable or unoccupied and there is no reasonable likelihood of future use of the fawning grounds.	TL	5/1 – 6/30	No buffer

Table C.3-12 Vernal Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Bald eagle	Nests	No surface disturbance within a 1 mile buffer of active nests from January 1 through August 31, unless the area has been surveyed according to protocol and determined to be unoccupied.	TL	1/1 – 8/31	1 mile
Wildlife-Raptors	Boreal owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through July 31.	TL	2/1 – 7/31	0.25 mile
Wildlife-Raptors	Burrowing owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	California condor	Nests	No surface disturbance within 1 mile buffer of active nests during breeding season (undefined).	TL	undefined	1.0 mile
Wildlife-Raptors	Cooper's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Ferruginous hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 1.	TL	3/1 – 8/1	0.5 mile
Wildlife-Raptors	Flammulated owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through September 30.	TL	4/1 – 9/30	0.25 mile
Wildlife-Raptors	Golden eagle	Nests	No surface disturbance within a 0.5 mile buffer of active nests from January 1 through August 31.	TL	1/1 – 8/31	0.5 mile
Wildlife-Raptors	Great horned owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from December 1 through September 31.	TL	12/1 – 9/31	0.25 mile
Wildlife-Raptors	Long-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through August 15.	TL	2/1 – 8/15	0.25 mile
Wildlife-Raptors	Merlin	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Mexican spotted owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	Northern goshawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 15.	TL	3/1 – 8/15	0.5 mile
Wildlife-Raptors	Northern harrier	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 15.	TL	4/1 – 8/15	0.5 mile

Table C.3-12 Vernal Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Northern pygmy owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 1.	TL	4/1 – 8/1	0.25 mile
Wildlife-Raptors	Northern saw-whet owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	Osprey	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Peregrine falcon	Nests	No surface disturbance within a 1 mile buffer of active nests from February 1 through August 31.	TL	2/1 – 8/31	1 mile
Wildlife-Raptors	Prairie falcon	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.25 mile
Wildlife-Raptors	Red-tailed hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Sharp-shinned hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Short-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 1.	TL	3/1 – 8/1	0.25 mile
Wildlife-Raptors	Swainson's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.5 mile
Wildlife-Raptors	Turkey vulture	Nests	No surface disturbance within a 0.5 mile buffer of active nests from May 1 through August 15.	TL	5/1 – 8/15	0.5 mile
Wildlife-Raptors	Western screech owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 15.	TL	3/1 – 8/15	0.25 mile
Wildlife-SSS	Black-footed ferret	Known home ranges	Activities involving the development or construction of temporary or permanent surface disturbances would be prohibited within 1/8 mile boundaries of known home ranges of female ferrets during the "critical" period from May 1 through July 15. Exceptions: Ephemeral surface disturbance (disturbance in prairie dog habitat for less than six months, after which it again becomes or can be made suitable for prairie dog use), such as prescribed fire or herbicide treatment, may be conducted within 1/8 mile of the boundary of the home range of a female from March 1 to May 1. In general, the disturbance should be completed before the critical period begins. The Service, UDWR, and the land management agencies would determine if this exemption applies. Normal travel and surveying activities would not be restricted.	TL	5/1 – 7/15	0.125 mile

Table C.3-12 Vernal Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-SSS	Canada lynx	Potential denning habitat	Avoid construction and surface disturbing actions in proximity to potential denning habitat during the breeding season (mid-April to July). Avoid construction and surface disturbing actions in proximity to potential denning habitat during the breeding season (mid-April to July). Activities involved with routine maintenance and operation will only occur during daytime hours, when lynx are least active.	TL	Mid-April – July	No buffer
Wildlife-SSS	Sage grouse	Leks	No surface-disturbing activities within two miles of active Sage-grouse leks will be allowed from March 1 through June 15.	TL	3/1 – 6/15	2 miles

* Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah” (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

C.3.2.6 Moab Field Office, Utah

References: Record of Decision for the Approved Moab Resource Management Plan, October 2008 (BLM 2008c) (Management Decisions by Resource; Appendix A—Stipulations and Environmental Best Practices Applicable to Oil and Gas Leasing and Other Surface-disturbing Activities; Appendix Q—Conservation Measures for Threatened and Endangered Species of Utah from the Use Plan Programmatic BAs and Section 7 Consultation; Appendix R—Best Management Practices for Raptors and their Associated Habitats in Utah³, Maintenance Forms.

Table C.3-13 Moab Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Minerals		Three Rivers and Westwater mineral withdrawal area	There will be no surface-disturbing activities within the area of the Three Rivers and Westwater mineral withdrawals which includes suitable Wild and Scenic River segments. Where the NSO area is physically inaccessible to oil and gas drilling by current directional drilling technology (1 mile from outside the NSO area), it will be closed to oil and gas leasing. However, these lands remain NSO for all other surface-disturbing activities.	NSU	No buffer

³ Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah” (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

Table C.3-13 Moab Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Minerals-Split estate		Thompson Springs	No surface-disturbing activities are allowed on private surface/Federal minerals within Thompson springs. An exception could be granted if it can be demonstrated that the action would not result in any surface use conflicts.	NSU	No buffer
Water Resources		100-year floodplains	No surface disturbing activities within 100 year floodplains.	NSU	No buffer
Water Resources		Municipal/culinary/public water/ reservoirs	No surface disturbing activities within public water reserves.	NSU	No buffer
Water Resources		Riparian areas	No surface disturbing activities within 100 meters of riparian areas.	NSU	100 meters (328 feet)
Water Resources		Springs	No surface disturbing activities within 100 meters of springs.	NSU	100 meters (328 feet)
Wildlife-Aquatic species-SSS	Colorado River fishes	100-year floodplain of the Colorado River, Green River, and at the Dolores/Colorado River confluence	Surface-disturbing activities within the 100 year floodplain of the Colorado River, Green River, and at the Dolores/Colorado River confluence will not be allowed. In areas adjacent to 100-year floodplains, particularly in systems prone to flash floods, BLM will analyze the risk for flash floods to impact facilities. Potential techniques may include the use of closed loop drilling and pipeline burial or suspension as necessary to minimize the potential for equipment damage and resultant leaks or spills.	NSU, CSU	No buffer
Wildlife-Aquatic species-SSS	Colorado River fishes	Colorado, Green, Duchesne, Price, White, and San Rafael rivers	Surface-disturbing activities will be restricted within ¼ mile of the channel centerline of the Colorado, Green, Duchesne, Price, White, and San Rafael Rivers.	NSU	0.25 of channel centerline
Wildlife-Kit fox	Kit fox	Kit fox habitat	No surface disturbance within 200 meters of kit fox dens in suitable habitat.	NSU	200 meters (656 feet)
Wildlife-Raptors	Bald eagle	Nests	No permanent structures allowed within 1.0 mile of nest sites. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances, i.e., creation of a permanent structure.	NSU	1.0 mile
Wildlife-Raptors	California condor	Nests	No surface disturbance within a 1 mile buffer of active nests. No permanent structures allowed within 1.0 mile of nest sites.	NSU, CSU	1.0 mile

Table C.3-13 Moab Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	Mexican spotted owl	MSO habitat and nest sites	For all permanent actions that may impact owls or suitable habitat: <ul style="list-style-type: none"> - Survey two consecutive years for owls according to established protocol prior to commencing of activity. - If owls are found, no actions will occur within 0.5 mile of identified nest site. - If nest site is unknown, no activity will occur within the designated Protected Activity Center (PAC). - Avoid placing permanent structures within 0.5 mi of suitable habitat unless surveyed and not occupied. - Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims (Delaney et al. 1999). Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims. - Limit disturbances to and within suitable owl habitat by staying on designated routes. - Limit new access routes created by the project. A permanent action continues for more than one breeding season and/or causes a loss of owl habitat or displaces owls through disturbances, i.e., creation of a permanent structure. 	NSU, CSU	0.5 mile
Wildlife-SSS	Mexican spotted owl	MSO habitat and nest sites	For all temporary actions that may impact owls or suitable habitat: <ul style="list-style-type: none"> - If action occurs entirely outside of the owl breeding season, and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey. - If action will occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity should be delayed until outside of the breeding season. - Eliminate access routes created by a project through such means as raking out scars, revegetation, gating access points, etc. Temporary activities are defined as those that are completed prior to the start of the following raptor breeding season, leaving no permanent structures and resulting in no permanent habitat loss. 	NSU, CSU	No buffer
Wildlife-SSS	Prairie dog, white-tailed	Colonies	No surface disturbing activities within 660 feet of prairie dog colonies within prairie dog habitat. No permanent above ground structures within the 660 foot buffer.	NSU, CSU	660 feet
Wildlife-SSS	Southwestern willow flycatcher	Suitable riparian habitats	Activities will maintain a 300 feet buffer from suitable riparian habitat year long.	NSU	300 foot
Wildlife-SSS	Southwestern willow flycatcher	Suitable riparian habitats	All surface-disturbing activities should be restricted within a 0.25 mile buffer from suitable riparian habitats.	NSU	0.25 mile
Soils		Slopes > 30%	A controlled surface use stipulation is applied in the Approved RMP to protect fragile soils on steep slopes from erosion. This stipulation prohibits construction on slopes greater than 30% unless an engineering plan can demonstrate that erosion on these slopes would be prevented.	CSU	No buffer

Table C.3-13 Moab Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Vegetation-SSS	All	Listed or candidate plants or animals	As required by the Endangered Species Act, the protection of habitat for listed and non-listed plant and animal species will be considered prior to authorizing any actions that could alter or disturb such habitat. No management action will be permitted on public lands that will jeopardize the continued existence of plant or animal species that are listed or are officially proposed or are candidates for listing as T&E. Surveys of habitat or potential habitat for special status species (including any sensitive species under consideration for formal designation as T&E will be made prior to taking any action that could affect these species. Surveys will be conducted using protocols established for potentially affected species.	CSU	No buffer
Visual		VRM Class II areas within Moab FO	Within VRM II areas (rims of Canyon Rims SRMA, Wilson Arch, the Kane Creek Corridor, and the Gemini Bridges area), surface-disturbing activities must meet the objectives of VRM II class objectives. The level of change to the landscape should be low; management activities may be seen, but should not attract attention of the casual observer. Any change to the landscape must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape. Surface-disturbing activities that are determined to be compatible and consistent with the protection or enhancement of the resource values are exempted. Recognized utility corridors are exempted only for utility projects which would be managed according to VRM III objectives.	CSU	No buffer
Wildlife-Aquatic species-SSS	Colorado River fishes	Current populations and known habitats	Designs must avoid as much direct disturbance to current populations and known habitats as is feasible. Designs should include: protections against toxic spills into rivers and floodplains; plans for sedimentation reduction; minimization of riparian vegetation loss or degradation; pre-activity flagging of critical areas for avoidance; design of stream-crossings for adequate passage of fish; and measures to avoid or minimize impacts on water quality at the 25-year frequency runoff.	CSU	No buffer
Wildlife-Aquatic species-SSS	Colorado River fishes	Floodplains or riparian areas	Surface-disturbing activities proposed to occur within floodplains or riparian areas will be avoided unless there is no practical alternative or the development would enhance riparian/aquatic values. If activities must occur in these areas, construction will be designed to include mitigation efforts to maintain, restore, and/or improve riparian and aquatic conditions. If conditions could not be maintained, offsite mitigation strategies should be considered.	CSU	No buffer
Wildlife-Aquatic species-SSS	Colorado River fishes	Upper Colorado River drainage basin above Lake Powell	Water depletions from any portion of the Upper Colorado River drainage basin above Lake Powell are considered to adversely affect and adversely modify the critical habitat of these endangered fish species. Section 7 consultation will be completed with the Service prior to any such water depletions.	CSU	No buffer
Wildlife-Raptors	Bald eagle	Roosts	No permanent structures allowed within 0.5 miles of winter roost areas. A permanent action continues for more than one breeding or roosting season and/or causes a loss of eagle habitat or displaces eagles through disturbances, i.e., creation of a permanent structure.	CSU	0.5 mile
Wildlife-Raptors	California condor	Roosts	No permanent structures allowed within 0.5 miles of established roost areas or sites.	CSU	0.5 mile

Table C.3-13 Moab Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	Mexican spotted owl	MSO habitat and nest sites	BLM will require monitoring of activities in designated critical habitat, identified PACs, or breeding habitats, wherein it has been determined that there is a potential for take. If any adverse impacts are observed to occur in a manner, or to an extent that was not considered in the project-specific Section 7 Consultation, then consultation must be reinitiated. Monitoring results should document what, if any, impacts to individuals or habitat occur during project construction/implementation. In addition, monitoring should document successes or failures of any impact minimization, or mitigation measures. Monitoring results would be considered an opportunity for adaptive management, and as such, would be carried forward in the design and implementation of future projects. For all survey and monitoring actions: - Reports must be provided to affected field offices within 15 days of completion of survey or monitoring efforts. -Report any detection of Mexican spotted owls during survey or monitoring to the authorized officer within 48 hours.	CSU	No buffer
Wildlife-SSS	Mexican spotted owl	MSO habitat and nest sites	BLM will, as a condition of approval (COA) on any project proposed within identified PACs, designated critical habitat, or within spatial buffers for Mexican spotted owl nests (0.5 mile), ensure that project proponents are notified as to their responsibilities for rehabilitation of temporary access routes and other temporary surface disturbances, created by their project, according to individual BLM Field Office standards and procedures, or those determined in the project-specific Section 7 Consultation.	CSU	0.5 mile
Wildlife-SSS	Mexican spotted owl	MSO habitat and nest sites	BLM will, in areas of designated critical habitat, ensure that any physical or biological factors (i.e., the primary constituent elements), as identified in determining and designating such habitat, remains intact during implementation of any BLM-authorized activity. For all BLM actions that "may adversely affect" the primary constituent elements in any suitable Mexican spotted owl habitat, BLM will implement measures as appropriate to minimize habitat loss or fragmentation, including rehabilitation of access routes created by the project through such means as raking out scars, revegetation, gating access points, etc. Prior to surface-disturbing activities in Mexican spotted owl PACs, breeding habitats, or designated critical habitat, specific principles should be considered to control erosion. These principles include: <ul style="list-style-type: none"> - Conduct long-range transportation planning for large areas to ensure that roads will serve future needs. This will result in less total surface disturbance. - Avoid surface disturbance in areas with high erosion hazards to the greatest extent possible. Avoid mid-slope locations, headwalls at the source of tributary drainages, inner valley gorges, and excessively wet slopes such as those near springs. In addition, avoid areas where large cuts and fills would be required. - Locate roads to minimize roadway drainage areas and to avoid modifying the natural drainage areas of small streams. Project developments should be designed, and located to avoid direct or indirect loss or modification of Mexican spotted owl nesting and/or identified roosting habitats. Water production associated with BLM authorized actions should be managed to ensure maintenance or enhancement of riparian habitats. 	CSU	No buffer
Wildlife-SSS	Southwestern willow flycatcher	Suitable riparian habitats	Permanent surface disturbances should be avoided within 0.5 mile of suitable Southwestern willow flycatcher habitat.	CSU	0.5 mile

Table C.3-14 Moab Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Soils		Saline soils in Mancos Shale (330,142 acres)	No surface-disturbing activities are allowed during the period from December 1 to May 31. This restriction includes heavy equipment traffic on existing roads associated with drilling operations.	TL	12/1 – 5/31	No buffer
Wildlife-Big Game	All	Parturition areas	All surface disturbing activities restricted from May 1 through June 15 in designated parturition areas.	TL	5/1 to 6/15	No buffer
Wildlife-Raptors	Bald eagle	Nests	No surface disturbance within a 1-mile buffer of active nests from January 1 through August 31.	TL	1/1 – 8/31	1.0 mile
Wildlife-Raptors	Bald eagle	Roosts, winter concentration areas	Temporary activities or habitat alterations that may disturb bald eagles will be restricted within 0.5 mile of known winter concentration areas [winter roost areas (cottonwood galleries)] from November 1 to March 31st unless the area has been surveyed according to protocol and determined to be unoccupied. Additionally, where daily activities must occur within these spatial buffers, and are approved through subsequent consultation, activities should be properly scheduled to occur after 9 a.m. and terminate at least one hour before official sunset to ensure that bald eagles using these roosts are allowed the opportunity to vacate their roost in the morning and return undisturbed in the evening. A temporary action is completed prior to the following breeding or roosting season leaving no permanent structures and resulting in no permanent habitat loss.	TL	11/ 1 – 3/31	0.5 mile
Wildlife-Raptors	Boreal owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through July 31.	TL	2/1 – 7/31	0.25 mile
Wildlife-Raptors	Burrowing owl	Nests	No surface disturbance or occupancy within a 0.25 mile buffer of active nests during breeding/nesting season (from March 1 through August 31).	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	California condor	Nests	Temporary activities will not occur within 1.0 mile of occupied nest sites during breeding season. A temporary action is completed prior to the following important season of use, leaving for habitat functionality.	TL	breeding season (undefined)	1.0 mile
Wildlife-Raptors	California condor	Roosts	Temporary activities will not occur within 0.5 miles of occupied roost areas between August 1 and November 11/31. A temporary action is completed prior to the following important season of use, leaving for habitat functionality.	TL	8/1 – 11/31	0.5 mile
Wildlife-Raptors	Cooper's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Ferruginous hawk	Nests	No surface disturbance or occupancy within a 0.5 mile buffer of active nests during breeding/nesting season (from March 1 through August 1).	TL	3/1 – 8/1	0.5 mile

Table C.3-14 Moab Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Flammulated owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through September 30.	TL	4/1 – 9/30	0.25 mile
Wildlife-Raptors	Golden eagle	Nests	No surface disturbance within a 0.5 mile buffer of active nests from January 1 through August 31.	TL	1/1 – 8/31	0.5 mile
Wildlife-Raptors	Great horned owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from December 1 through September 31.	TL	12/1 – 9/31	0.25 mile
Wildlife-Raptors	Long-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through August 15.	TL	2/1 – 8/15	0.25 mile
Wildlife-Raptors	Merlin	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Northern goshawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 15.	TL	3/1 – 8/15	0.5 mile
Wildlife-Raptors	Northern harrier	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 15.	TL	4/1 – 8/15	0.5 mile
Wildlife-Raptors	Northern pygmy owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 1.	TL	4/1 – 8/1	0.25 mile
Wildlife-Raptors	Northern saw-whet owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	Osprey	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Peregrine falcon	Nests	No surface disturbance within a 1 mile buffer of active nests from February 1 through August 31.	TL	2/1 – 8/31	1.0 mile
Wildlife-Raptors	Prairie falcon	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.25 mile
Wildlife-Raptors	Red-tailed hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Screech owl, western	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 15.	TL	3/1 – 8/15	0.25 mile
Wildlife-Raptors	Sharp-shinned hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile

Table C.3-14 Moab Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Short-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 1.	TL	3/1 – 8/1	0.25 mile
Wildlife-Raptors	Swainson's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.5 mile
Wildlife-Raptors	Turkey vulture	Nests	No surface disturbance within a 0.5 mile buffer of active nests from May 1 through August 15.	TL	5/1 – 8/15	0.5 mile
Wildlife-SSS	Mexican spotted owl	Nests	No temporary actions within 0.5 miles of suitable habitat during breeding season. A temporary action is completed prior to the following breeding season leaving no permanent structures and resulting in no permanent habitat loss.	TL	3/1 – 8/15	0.5 mile
Wildlife-SSS	Mexican spotted owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-SSS	Southwestern willow flycatcher	Occupied breeding habitat	Activities within 0.25 mile of occupied breeding habitat will not occur during the breeding season of May 1 to August 15.	TL	5/1 – 8/15	0.25 mile
Wildlife-SSS	Yellow-billed cuckoo	Habitat (riparian areas)	No surface-disturbing activities will be conducted within 100 meters of Yellow-billed Cuckoo habitat (riparian areas) from May 15 through July 20.	TL	5/15 – 7/20	100 meters (325 feet)

* Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah" (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

C.3.2.7 Price Field Office, Utah

References: Price Field Office Record of Decision for the Approved Resource Management Plan, October 2008 (BLM 2008d) (Appendix R-3—Stipulations for Surface Disturbing Activities; Appendix R-5—Best Management Practices for Raptors and Their Associated habitats in Utah, August 2006)⁴.

Table C.3-15 Price Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Cultural Resources	Historic trails	Old Spanish Trail- Big Flat to Walker Flat (Emery/Sevier County Line) Segment	The following will be implemented along the Old Spanish Trail: Big Flat to Walker Flat (Emery/Sevier County Line) Segment: Limit OHV use to designated routes; Manage for motorized recreation uses; ROWs allowed within the designated corridor; Manage for VRM objectives in areas open to oil and gas leasing subject to minor constraints (these areas of overlap are VRM Class III).	NSU outside corridor	No buffer
Cultural Resources	Historic trails	Old Spanish Trail- Green River Crossing (via Cottonwood Wash) to Big Flat Segment	The following will be implemented along the Old Spanish Trail: Green River Crossing (via Cottonwood Wash) to Big Flat Segment:• Limit OHV use to designated routes• Manage for VRM objectives (overlaps VRM Classes I, II, and III)• ROWs allowed within the designated corridor• CSU for leasing.	NSU outside corridor	No buffer
Cultural Resources	Historic trails	Old Spanish Trail- Lost Springs Wash/Trail Springs Wash segment	NSO within Trail Springs/Lost Springs Wash segment of the Old Spanish National Historic Trail to retain the historic character of the trail.; Avoid ROWs except where the designated corridor crosses the trail; Limit OHV use to designated routes; VRM Class III (existing).	NSU outside corridor	No buffer
Lands and Realty		All areas outside of designated corridors	All utility corridors within the PFO are designated for any size utility and transportation uses needed. The corridors are 1 mile in width crossing any BLM-administered public lands. These approved corridors will be the preferred location for future major linear ROWs that meet the following criteria: <ul style="list-style-type: none"> - Transmission (not distribution) lines with a voltage capacity of 69 kV or greater - Significant conduits requiring a permanent width greater than 50 feet - Any new utility corridors will require a plan amendment. 	NSU	No buffer
Recreation		Recreation sites, developed	NSO within developed recreation and administrative sites not consistent with the purpose of the site, including those authorized under a Recreation and Public Purpose Act.	NSU	No buffer
Soils		Slopes > 40%	NSO on slopes greater than 40 percent (except as allowed through exceptions, waivers, or modifications as described in Appendix R-3).	NSU	No buffer

⁴ Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah” (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

Table C.3-15 Price Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Soils		Slopes between 20 and 40%	In surface disturbing proposals regarding construction on slopes of 20 percent to 40 percent, include an approved erosion control strategy and topsoil segregation/restoration plan. Such construction must be properly surveyed and designed by a certified engineer and approved by the BLM prior to project implementation, construction, or maintenance	CSU	No buffer
Special Designation-Non-WSAs with Wilderness Characteristics		Mexican Mountain non-WSA	The following stipulations will be applied within the Mexican Mountain WSA: <ul style="list-style-type: none"> - VRM Class II - Limit OHV use and all mechanical travel to designated routes - Closed to activities related to geophysical operations - Avoidance area for ROWs. 	CSU	No buffer
Special Designations-ACEC		Heritage Sites ACEC (Wilsonville; Smith Canyon)	New utility corridor exclusion areas.	NSU	No buffer
Special Designations-ACEC		Nine Mile Canyon ACEC	Price: NSO for leasing; VRM Class II and III; Utility corridor will be allowed as shown on Map R-21; other utility restrictions not discussed. Within Vernal: Will be managed to enhance cultural and special status plant FO species while enhancing scenic vistas, recreation, and wildlife resource values. A comprehensive integrated activity plan will be developed / implemented. OHV use will be limited to designated routes.	CSU	No buffer
Special Designations-ACEC		Rock Art ACEC (Big Hole, Cottonwood Canyon, Dry Wash, Grassy Trail, Kings Crown, Molen Seep, North Salt Wash, Pictographs, Sand Cove, Short Creek	New utility corridor exclusion areas. NSO for cultural values within areas of critical environmental concern (ACEC) to retain the cultural character and context of the area. The existing ACEC will be maintained (Black Dragon, Head of Sinbad, Rochester/Muddy Petroglyphs, and Lone Warrior); however, the following sites will be managed as part of the Rock Art ACEC (5,300 acres): King's Crown, Short Creek, Molen Seep, Big Hole, North Salt Wash, Pictographs, and Cottonwood Canyon. (The portion of the Rock Art ACEC that is overlain by the Mexican Mountain and San Rafael Reef WSAs will be managed in accordance with the IMP, where the IMP is more restrictive than the prescriptions below.) The Rock Art ACEC will be excluded from ROW grants. OHV use will be limited to designated routes. NSO for leasing.	NSU	No buffer
Special Designations-ACEC		San Rafael Canyon ACEC	The San Rafael Canyon ACEC will be avoided from ROW grants and managed as a VRM Class II. OHV use will be limited to designated routes. NSO for leasing. New utility corridor avoidance area.	CSU	No buffer
Special Designations-ACEC		Uranium Mining District ACEC	Oil and gas will be open to leasing subject to major constraints (NSO); No disturbance of historic structures until the historic features have been recorded and oral history has been conducted.	CSU	No buffer
Special Designations-Wilderness Study Areas (WSA)		Mexican Mountain WSA	All WSAs are utility corridor exclusion areas. All WSAs will be managed according to the Interim Management Policy for Lands Under Wilderness Review (BLM Handbook H-8550-1) until legislation is enacted to either designate the areas as wilderness or release them for uses other than wilderness. All WSAs are VRM I and either closed for limited to designated for OHV. All WSAs will be managed as VRM Class I in accordance with BLM IM 2000-096 Use of Visual Resource Management Class I Designation in WSAs.	NSU, CSU	No buffer

Table C.3-15 Price Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Special Designations-Wilderness Study Areas (WSA)		Sids Mountain/Sids Cabin WSA	All WSAs are utility corridor exclusion areas. All WSAs will be managed according to the Interim Management Policy for Lands Under Wilderness Review (BLM Handbook H-8550-1) until legislation is enacted to either designate the areas as wilderness or release them for uses other than wilderness. All WSAs are VRM I and either closed for limited to designated for OHV. All WSAs will be managed as VRM Class I in accordance with BLM IM 2000-096 Use of Visual Resource Management Class I Designation in WSAs.	NSU, CSU	No buffer
Vegetation-SSS	All	Listed or candidate plants or animals or critical habitat	Surface disturbances will be prohibited that may affect listed species or critical habitat of listed or candidate plants or animals without consultation or conference (ESA, Section 7) between the BLM and USFWS.	CSU	No buffer
Visual Resources		VRM Class II areas within Price FO	Within VRM II areas, surface disturbing activities would comply with BLM Manual Handbook 8431-1 to retain the existing character of the landscape. Recognized utility corridors are exempt. Temporary exceedance may be allowed during initial development phases.	CSU	No buffer
Water Resources		Perennial streams; intermittent streams	No new surface disturbance (excluding fence lines) would be required in areas equal to the 100-year floodplain or 100 meters (330 feet) on either side from the centerline, whichever is greater, along all perennial and intermittent streams, streams with perennial reaches, and riparian areas.	NSU	300 feet or 100-yr floodplain, whichever greater
Water Resources		Springs	No surface disturbance or occupancy would be maintained around natural springs to protect the water quality of the spring. The distance would be based on geophysical, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, a 660-foot buffer zone would be maintained. The BLM will allow development of spring sources but will require protection of the spring source to maintain water quality and avoid detrimental impacts.	NSU	660 feet
Wildlife-SSS	All	T&E and candidate species habitat	Surface disturbances will be prohibited that may affect listed species or critical habitat of listed or candidate plants or animals without consultation or conference (ESA, Section 7) between the BLM and USFWS.	NSU	No buffer
Wildlife-SSS	Mexican spotted owl	Designated critical habitat	Any surface use or occupancy within designated critical habitat would be strictly controlled through close scrutiny of any surface use plan filed to protect habitat values and the use of the area by Mexican spotted owls. Modifications to the Surface Use Plan of Operations may be required for the protection of these resources. This limitation may apply to operation and maintenance of producing wells.	CSU	No buffer
Wildlife-SSS	Mexican spotted owl	Nests	NSO within 0.5 mile of known Mexican Spotted Owl (MSO) nests.	NSU	0.5 mile
Wildlife-SSS	Prairie dog, white-tailed	Colonies	NSO within 660 feet of prairie dog colonies within identified prairie dog habitat, No permanent above ground structures within 660 feet.	NSU	660 feet
Wildlife-SSS	Sage grouse	Leks	All surface disturbing activities will be prohibited within ½ mile of greater sage-grouse leks on a year-round basis.	NSU	0.5 mile

Table C.3-16 Price Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Water		Watersheds above 7,000 feet in elevation	To minimize watershed damage to the watersheds above 7,000 feet in elevation, no construction activities will be allowed in these areas during the period beginning December 1 through April 15	TL	12/1 – 4/15	No buffer
Wildlife-Big Game	All	Winter range, crucial	Mule deer, moose, and elk winter range would be closed seasonally from December 1 to April 15 within crucial winter habitat	TL	12/1 – 4/15	No buffer
Wildlife-Big Game	Big horn sheep	Spring/lambing range	Desert bighorn sheep and Rocky Mountain bighorn sheep spring/lambing range would be closed seasonally from April 15 to June 15 within desert bighorn sheep and Rocky Mountain bighorn sheep crucial year-long habitat.	TL	4/15 – 6/15	No buffer
Wildlife-Big Game	Mule deer, elk	Parturition areas	Mule deer fawning and elk calving areas would be closed seasonally from May 15 to July 5 within crucial fawning and calving areas as located within the crucial summer habitat.	TL	5/15 – 7/5	No buffer
Wildlife-Migratory Birds	All	High-value breeding habitat	Migratory bird nesting areas would be closed seasonally from April 15 to August 1 within high-value breeding habitat. Birds designated as BLM Special Status Species would have the highest priority.	TL	4/15 – 8/15	No buffer
Wildlife-Raptors	All not specified	Nesting complexes and known raptor nest sites	Raptor nesting complexes and known raptor nest sites would be closed seasonally February 1 to July 15 (within ½ mile of nests occupied within past 3 years) and raptor crucial cliff-nesting complex habitats.	TL	2/1 – 7/15	0.25 mile
Wildlife-Raptors	Bald eagle	Nests	No surface disturbance within a 1 mile buffer of active nests from January 1 to August 31.	TL	1/1 – 8/31	1.0 mile
Wildlife-Raptors	Boreal owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February to July 31.	TL	2/1 – 7/31	0.25 mile
Wildlife-Raptors	Burrowing owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 to August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	Cooper's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 to August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Ferruginous hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 to August 1.	TL	3/1 – 8/1	0.5 mile
Wildlife-Raptors	Flammulated owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 to September 30.	TL	4/1 – 9/30	0.25 mile
Wildlife-Raptors	Golden eagle	Nests	No surface disturbance within a 0.5 mile buffer of active nests from January 1 to August 31.	TL	1/1 – 8/31	0.5 mile
Wildlife-Raptors	Great horned owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from December 1 to September 31.	TL	12/1 – 9/31	0.25 mile
Wildlife-Raptors	Long-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 to August 15.	TL	2/1 – 8/15	0.25 mile
Wildlife-Raptors	Merlin	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 to August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Northern goshawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 to August 15.	TL	3/1 – 8/15	0.5 mile
Wildlife-Raptors	Northern harrier	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 to August 15.	TL	4/1 – 8/15	0.5 mile

Table C.3-16 Price Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Northern pygmy owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 to August 1.	TL	4/1 – 8/1	0.25 mile
Wildlife-Raptors	Northern saw-whet owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 to August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	Osprey	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 to August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Peregrine falcon	Nests	No surface disturbance within a 1 mile buffer of active nests from February 1 to August 31.	TL	2/1 – 8/31	1.0 mile
Wildlife-Raptors	Peregrine falcon	Nests	No surface disturbance within a 1 mile buffer from February 1 to August 31.	TL	2/1 – 8/31	1.0 mile
Wildlife-Raptors	Prairie falcon	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 to August 31.	TL	4/1 – 8/31	0.25 mile
Wildlife-Raptors	Red-tailed hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 to August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Screech owl, western	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 to August 15.	TL	3/1 – 8/15	0.25 mile
Wildlife-Raptors	Sharp-shinned hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 to August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Short-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 to August 1.	TL	3/1 – 8/1	0.25 mile
Wildlife-Raptors	Swainson's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 to August 31.	TL	3/1 – 8/31	0.5 mile
Wildlife-Raptors	Turkey vulture	Nests	No surface disturbance within a 0.5 mile buffer of active nests from May 1 to August 15.	TL	5/1 – 8/15	0.5 mile
Wildlife-SSS	Mexican spotted owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 to August 31.	TL	3/1 – 8/31	0.5 mile
Wildlife-SSS	Sage grouse	Leks	Allow no surface disturbing or otherwise disruptive activities within two miles of a known greater sage-grouse lek from March 15 to July 15 to protect nesting and brood rearing habitat.	TL	3/15 – 7/15	2 miles
Wildlife-SSS	Sage grouse	Winter habitat	Allow no surface disturbing activities or otherwise disruptive activities within greater sage-grouse in winter habitat from December 1 to March 14.		12/1 – 3/14	No buffer

* Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah" (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

C.3.2.8 Richfield Field Office, Utah

References: Richfield Field Office Record of Decision for the Approved Resource Management Plan, October 2008 (BLM 2008e) (Appendix 6—Wildland Fire Management; Appendix 10—Raptor Best Management Practices⁵; Appendix 11—Oil and Gas Leasing Stipulations and Lease Notices; Appendix 14—Committed Conservation Measures and Best Management Practices (BMPs) for Federally Listed Species).

Table C.3-17 Richfield Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Cultural Resources		NRHP-listed sites	Manage sites listed on the NRHP as open to leasing with NSO, except as otherwise provided in other management decisions. NSO areas are ROW avoidance areas.	CSU	No buffer
Lands and Realty		Administrative sites	Manage BLM administrative sites as open to leasing with NSO, except as otherwise provided in other management decisions..."All NSO areas are ROW avoidance areas."	CSU	No buffer
Lands and Realty		Cemeteries	Manage all cemeteries as open to leasing with NSO, except as otherwise provided in other management decisions: "All NSO areas are ROW avoidance areas."	CSU	No buffer
Lands and Realty		Incorporated municipalities	Manage Incorporated municipalities as closed to leasing. All closed areas are ROW exclusion areas.	NSU	No buffer
Lands and Realty		Landfills	Manage landfills—existing and closed—as open to leasing with NSO, except as otherwise provided in other management decisions. NSO areas are ROW avoidance areas.	CSU	No buffers
Lands and Realty		R&PP lease areas	Manage lands managed under a R&PP lease as open to leasing with NSO, except as otherwise provided in other management decisions. NSO areas are ROW avoidance areas.	CSU	No buffer
Non-WSA Lands with Wilderness Characteristics		All non WSAs	Manage the following as ROW avoidance areas: a. ACECs; b. Non-WSA lands with wilderness characteristics; c. Areas open to oil and gas leasing with NSO stipulations.	CSU	No buffers
Recreation		Developed Recreation Sites	Manage developed recreation sites as open to leasing with NSO, except as otherwise provided in other management decisions. NSO areas are ROW avoidance areas.	CSU	No buffer
Soils		Erodible, fragile soils and unstable soils	Soils identified by the NRCS as having high potential for wind erosion are to be avoided. If avoidance is impracticable then a plan of operation that addressed erosion control and mitigation will be required.	CSU	No buffer

⁵ Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah” (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

Table C.3-17 Richfield Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Soils		Slopes > 30%	Routing through areas with slopes of 30% or greater is to be avoided. If the action cannot be avoided, rerouted, or relocated than a proposed project would include an erosion control strategy, reclamation and a site plan with a detailed survey and design completed by a certified engineer. This proposed project must be approved by the BLM prior to construction and maintenance.	CSU	No buffer
Special Designations-ACEC		All ACECS in FO	Manage the following as ROW avoidance areas: a. ACECs; b. Non-WSA lands with wilderness characteristics; c. Areas open to oil and gas leasing with NSO stipulations.	CSU	No buffer
Vegetation-SSS	Barneby reed-mustard	Occupied habitat	Construction of roads will occur such that the edge of the right of way is at least 300 feet from any plant and 300 feet from avoidance areas. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Surface pipelines will be laid such that a 300-foot buffer exists between the edge of the right of way and plants and 300 feet between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Roads and utilities should share common right-of-ways where possible. Roads will be graveled within occupied habitat.	CSU	300 feet
Vegetation-SSS	Last Chance townsendia	Occupied habitat	Within occupied habitat, access roads will be graveled.	CSU	No buffer
Vegetation-SSS	Maguire daisy	Occupied habitat	Construction of roads will occur such that the edge of the right of way is at least 300 feet from any plant and 300 feet from avoidance areas. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Surface pipelines will be laid such that a 300-foot buffer exists between the edge of the right of way and plants and 300 feet between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Within occupied habitat, access roads will be graveled.	CSU	300 feet

Table C.3-17 Richfield Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Vegetation-SSS	San Rafael cactus	Occupied habitat	Buffers of 100 feet minimum between the edge of the right of way (roads and surface pipelines) or surface disturbance (well pads) and plants and populations will be incorporated. Occupied San Rafael cactus habitats within 100 feet of the edge of the surface pipelines' right-of-ways, 100 feet of the edge of the roads' right-of-ways, and 100 feet from the edge of the well pad shall be monitored for a period of 3 years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service. Surface pipelines will be laid such that a 100 foot buffer exists between the edge of the right of way and the plants, use stabilizing and anchoring techniques when the pipeline crosses the habitat to ensure the pipelines don't move towards the population.	CSU	100 feet
Vegetation-SSS	Ute ladies'-tresses	Occupied habitat	Buffers of 300 feet minimum between right of way (roads and surface pipelines) or surface disturbance (well pads) and plants and populations will be incorporated. Occupied Ute ladies'-tresses habitats within 300 feet of the edge of the surface pipelines' right-of-ways, 300 feet of the edge of the roads' right-of-ways, and 300 feet from the edge of the well pad shall be monitored for a period of 3 years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Habitat impacts include monitoring any changes in hydrology due to project related activities. Annual reports shall be provided to the BLM and the Service. To ensure desired results are being achieved, minimization measures will be evaluated and may be changed after a thorough review of the monitoring results and annual reports during annual meetings between the BLM and the Service. Surface pipelines will be laid such that a 300-foot buffer exists between the edge of the right of way and the plants, using stabilizing and anchoring techniques when the pipeline crosses habitat to ensure the pipelines don't move towards the population.	CSU	300 feet
Vegetation-SSS	Winkler pincushion cactus	Occupied habitat	Construction of roads will occur such that the edge of the right of way is at least 300 feet from any plant and 300 feet from avoidance areas. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Surface pipelines will be laid such that a 300-foot buffer exists between the edge of the right of way and plants and 300 feet between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Within occupied habitat, access roads will be graveled.	CSU	300 feet

Table C.3-17 Richfield Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Vegetation-SSS	Wright fishhook cactus	Occupied habitat	Construction of roads will occur such that the edge of the right of way is at least 300 feet from any plant and 300 feet from avoidance areas. The edge of the well pad should be located at least 300 feet away from plants and avoidance areas, in general; however, site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Surface pipelines will be laid such that a 300-foot buffer exists between the edge of the right of way and plants and 300 feet between the edge of right of way and avoidance areas; use stabilizing and anchoring techniques when the pipeline crosses suitable habitat to ensure pipelines don't move towards the population; site specific distances will need to be approved by FWS and BLM when disturbance will occur upslope of habitat. Within occupied habitat, access roads will be graveled.	CSU	300 feet
Visual		Existing ROWs	To avoid potential conflicts with the construction, operation, maintenance, and termination of facilities and improvements located on existing ROWs on public land, apply the following: Where a ROW grant specifically identifies an area and/or width, the VRM class within the specified area/width would be VRM Class IV. Where no width is specified, the VRM class within the interior boundaries of the area disturbed when the facility or improvement was initially constructed would be VRM Class IV.	CSU	No buffer
Visual Resources		All VRM classes	All ROWs must comply with the applicable visual resource management (VRM) classification objectives.	CSU	No buffer
Water Resources		Perennial streams; intermittent streams	Prohibit surface disturbing activities within the 100-year floodplain or 330 feet on either side from the centerline, whichever is greater, of streams with intermittent or perennial reaches, resulting in NSO in this area, for protection of habitat for riparian-obligate species.	NSU	300 feet or 100-yr floodplain, whichever greater
Water Resources		Riparian areas	A buffer zone of the 100 year floodplain or 330 feet either side of centerline, whichever is greater, will be maintained around riparian areas (NSO).	NSU	300 feet or 100-yr floodplain, whichever greater
Water Resources		Springs	Maintain buffer zones of no surface disturbance and/or occupancy around natural springs. Base the size of the buffer on hydrological, riparian, and other factors necessary to protect the water quality of the springs. If these factors cannot be determined, maintain a 330-foot buffer zone from outer edge. (Maintain a buffer zone of the 100-year floodplain or 330 feet on either side from the centerline, whichever is greater.)	NSU	300 feet or 100-yr floodplain, whichever greater

Table C.3-17 Richfield Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Water Resources		Wetlands	No surface occupancy on wetland soils or soils identified as having hydric properties. Consider exceptions to NSO if a site-specific environmental analysis determines that other placement alternatives would cause undue or unnecessary degradation to resources. In addition, require the operator to submit a plan prior to commencing operations that addresses: <ul style="list-style-type: none"> - Erosion control strategies - Mitigation to protect surface from rutting, compaction, and displacement, and disruption of surface and subsurface hydrologic function - Mitigation or restoration measures to restore hydrologic function to site - Proper survey and design by a certified engineer. 	NSU	No buffer
Wildlife-Raptors	Bald eagle	Nests	No permanent infrastructure will be placed within 1.0 mile of nest sites.	NSU	1.0 mile
Wildlife-Raptors	Bald eagle	Roosts	No permanent structures are permitted within 0.5 miles of bald eagle winter concentration areas/roosts.	CSU	0.5 mile
Wildlife-Raptors	Bald eagle	Roosts	No permanent infrastructure will be placed within 0.5 miles of winter roost areas.	NSU	0.5 mile
Wildlife-Raptors	California condor	Nests	No permanent infrastructure will be placed within 1.0 mile of nest sites.	NSU	1.0 mile
Wildlife-Raptors	California condor	Roosts	No permanent infrastructure will be placed within 0.5 miles of established roosting sites or areas.	NSU	0.5 mile
Wildlife-SSS	Prairie dog, Utah	Historic and/or occupied Utah prairie dog colonies	Project related vehicle maintenance activities will be conducted in maintenance facilities. Should it become necessary to perform vehicle or equipment maintenance on-site, these activities will avoid identified Utah prairie dog colonies or within a 350-foot distance from colonies. Precautions shall be taken to ensure that contamination of maintenance sites by fuels, motor oils, grease, etc. does not occur and such materials are contained and properly disposed of off-site. Inadvertent spills of petroleum based or other toxic materials shall be cleaned up and removed immediately.	CSU	350 feet
Wildlife-SSS	Prairie dog, Utah	Historic and/or occupied Utah prairie dog habitat	Permanent surface disturbance or facilities will be avoided within 0.5 mile of potentially suitable, unoccupied prairie dog habitat, identified and mapped by Utah Division of Wildlife Resources since 1976. Within occupied habitat, a 25 mph speed limit will be set.	CSU	0.5 mile
Wildlife-SSS	Prairie dog, Utah	Historic and/or occupied Utah prairie dog habitat	Surface occupancy or other surface disturbing activity will be avoided within 0.5 mile of active prairie dog colonies.	CSU	0.5 mile
Wildlife-SSS	Sage grouse	Leks	Surface disturbing activities would be limited to a year-round, 0.5 mile NSO around Greater sage-grouse leks.	NSU	0.5 mile
Wildlife-SSS	Southwestern willow flycatcher	Suitable riparian habitats	Drilling activities will maintain a 300-foot buffer from suitable riparian habitat year long.	NSU	300 foot
Wildlife-SSS	Southwestern willow flycatcher	Suitable riparian habitats	No surface disturbing activities within 0.25 miles of suitable Southwestern willow flycatcher riparian habitat.	NSU	0.25 mile

Table C.3-17 Richfield Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-SSS	Southwestern willow flycatcher	Suitable riparian habitats	Permanent surface disturbances should be avoided within 0.5 mile of suitable Southwestern willow flycatcher habitat.	CSU	0.5 mile

Table C.3-18 Richfield Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Vegetation-SSS	Barneby reed-mustard	Occupied habitat	Within occupied habitat, construction activities will not occur between April 15 through June 5. Within occupied habitat, access roads will be graveled and dust abatement (watering) is encouraged from April 15 through June 5.	TL, CSU	4/15 – 6/5	No buffer
Vegetation-SSS	Last Chance townsendia	Occupied habitat	Within occupied habitat, construction activities will not occur between April 15 through June 30. Within occupied habitat, dust abatement (watering) is encouraged from April 15 through June 30.	TL	4/15 – 6/30	No buffer
Vegetation-SSS	Maguire daisy	Occupied habitat	Within occupied habitat, construction activities will not occur between May 1 through June 30. Within occupied habitat, dust abatement (watering) is encouraged from May 1 through June 30.	TL	5/1 – 6/30	No buffer
Vegetation-SSS	Winkler pincushion cactus	Occupied habitat	Within occupied habitat, construction activities will not occur between March 15 through June 1. Within occupied habitat, dust abatement (watering) is encouraged from March 15 through June 1.	TL	3/1 – 6/1	No buffer
Vegetation-SSS	Wright fishhook cactus	Occupied habitat	Within occupied habitat, construction activities will not occur between April 15 through June 15. Within occupied habitat, dust abatement (watering) is encouraged from April 1 through June 15.	TL	4/15 – 6/15	No buffer
Wildlife-Big Game	All	Winter range, crucial	Surface disturbing activities are restricted in crucial winter habitat from December 15 through April 15.	TL	12/15 – 4/15	No buffer
Wildlife-Raptors	Bald eagle	Nests	No surface disturbance within a 1 mile buffer of active nests from January 1 through August 31. Temporary activities or habitat alterations that could disturb nesting bald eagles are restricted from January 1 through August 31 within 1 mile of nest sites, unless the area has been surveyed according to protocol and determined to be unoccupied.	TL	1/1 – 8/31	1.0 mile

Table C.3-18 Richfield Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Bald eagle	Roosts	Temporary activities within 0.5 miles of winter roost areas, e.g., cottonwood galleries, will not occur during the winter roost season of November 1 to March 31, unless the area has been surveyed according to protocol and determined to be unoccupied. In addition, require daily activities approved through subsequent consultation within these spatial buffers to start after 9 a.m. and terminate at least 1 hour before sunset to ensure that bald eagles using these roosts have the opportunity to vacate their roost in the morning and return undisturbed in the evening.	TL	11/1 – 3/31	0.5 mile
Wildlife-Raptors	Boreal owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through July 31.	TL	2/1 – 7/31	0.25 mile
Wildlife-Raptors	Burrowing owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	California condor	Nests	Temporary activities within 1.0 mile of nest sites will not occur during the breeding season.	TL	breeding season (undefined)	1.0 mile
Wildlife-Raptors	California condor	Roosts	Temporary activities within 0.5 miles of established occupied roosting sites or areas will not occur between August 1 through November 31.		8/1 – 11/31	0.5 mile
Wildlife-Raptors	Cooper's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Ferruginous hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 1.	TL	3/1 – 8/1	0.5 mile
Wildlife-Raptors	Flammulated owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through September 30.	TL	4/1 – 9/30	0.25 mile
Wildlife-Raptors	Golden eagle	Nests	No surface disturbance within a 0.5 mile buffer of active nests from January 1 through August 31.	TL	1/1 – 8/31	0.5 mile
Wildlife-Raptors	Great horned owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from December 1 through September 31.	TL	12/1 – 9/31	0.25 mile
Wildlife-Raptors	Long-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through August 15.	TL	2/1 – 8/15	0.25 mile
Wildlife-Raptors	Merlin	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Northern goshawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 15.	TL	3/1 – 8/15	0.5 mile

Table C.3-18 Richfield Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Northern harrier	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 15.	TL	4/1 – 8/15	0.5 mile
Wildlife-Raptors	Northern pygmy owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 1.	TL	4/1 – 8/1	0.25 mile
Wildlife-Raptors	Northern saw-whet owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	Osprey	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Peregrine falcon	Nests	No surface disturbance within a 1 mile buffer of active nests from February 1 through August 31.	TL	2/1 – 8/31	1.0 mile
Wildlife-Raptors	Prairie falcon	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.25 mile
Wildlife-Raptors	Red-tailed hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Screech owl, western	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 15.	TL	3/1 – 8/15	0.25 mile
Wildlife-Raptors	Sharp-shinned hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Short-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 1.	TL	3/1 – 8/1	0.25 mile
Wildlife-Raptors	Swainson's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.5 mile
Wildlife-Raptors	Turkey vulture	Nests	No surface disturbance within a 0.5 mile buffer of active nests from May 1 through August 15.	TL	5/1 – 8/15	0.5 mile
Wildlife-SSS	Mexican spotted owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile

Table C.3-18 Richfield Field Office Timing Restrictions*

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-SSS	Prairie dog, Utah	Historic and/or occupied Utah prairie dog habitat	Unavoidable surface disturbing activities in Utah prairie dog habitat should be conducted between April 1 and September 30 (the period when prairie dogs are most likely to be found above ground). BLM projects will be designed to avoid direct disturbance to Utah prairie dog populations and habitat wherever possible. Designs should consider flow of water, slope, buffers, possible fencing, and pre-activity flagging of critical areas for avoidance.	TL	4/1 – 9/30	No buffer
Wildlife-SSS	Sage grouse	Leks	Surface or other disruptive activities are not allowed within 2 miles of leks between March 15 and July 15.	TL	3/15 – 7/15	2 miles
Wildlife-SSS	Sage grouse	Winter habitat	Surface or other disruptive activities are not allowed within winter habitat between December 15 through March 14.	TL	12/15 – 3/14	No buffer
Wildlife-SSS	Southwestern willow flycatcher	Suitable habitat	No surface disturbing activities within 0.25 miles of suitable Southwestern willow flycatcher breeding habitat from May 1 through August 15. Unavoidable ground disturbing activities in occupied Southwestern willow flycatcher habitat should only be conducted when preceded by current year survey, should only occur between August 16 and April 30 (the period when Southwestern willow flycatcher are not likely to be breeding), and should be monitored to ensure that adverse impacts to Southwestern willow flycatcher are minimized or avoided, and to document the success of project specific mitigation/protection measures.	TL, CSU	5/1 – 8/15	0.25 mile

* Raptor management in the 2008 RMP was guided by Best Management Practices for Raptors and Their Associated Habitats in Utah” (BLM 2006) per BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Raptor Best Management Practices.

C.3.2.9 Salt Lake Field Office, Utah

References: Record of Decision for the Pony Express Resource Management Plan and Rangeland Program Summary for Utah County, January 1990 (BLM 1990) (Utility Corridor, Wildlife, Mineral Leasing, and Fluid Leasing stipulations); BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006).

Table C.3-19 Salt Lake Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Hazardous Materials		Lands with known or suspected hazardous materials	Rights-of-way, whether within or outside a corridor, will avoid lands with known or suspected hazardous materials.	CSU	No buffer
Lands and Realty		ROW corridors	Future proposals for major rights-of-way such as pipelines, large power lines and permanent improved roads must utilize identified corridors as shown in Figure 10. Otherwise, a planning amendment and appropriate environmental analysis will be required.	NSU	No buffer
Soils		Slopes > 30%	Rights-of-way, whether within or outside a corridor, will avoid lands with slopes greater than 30 percent. Surface disturbing activities will be allowed in fragile soils on Slopes >35% only after an engineered soils derived construction/reclamation plan is submitted by the operator and approved by the Area Manager.	CSU	
Visual		Ridge tops, narrow drainages	Rights-of-way, whether within or outside a corridor, will avoid lands where an above-ground right-of-way would be an obvious visual or physical intrusion such as ridge tops or narrow drainages.	CSU	No buffer
Visual		VRM Class II and III areas within Salt Lake FO	Rights-of-way, whether within or outside a corridor, will avoid lands within VRM Class II and III areas.	CSU	No buffer
Water Resources		Riparian areas	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities from within 1,200 feet of riparian habitats. Rights-of-way, whether within or outside a corridor, will avoid lands within 1200 feet of riparian/aquatic habitats.	CSU	1,200 feet
Wildlife-SSS	Sage grouse	Leks	Rights-of-way, whether within or outside a corridor, will avoid lands within 0.5 mile of sage grouse strutting grounds if the disturbance would adversely impact the effectiveness of the lek.	NSU	0.5 mile
Wildlife-Big Game	Big horn sheep	Crucial winter and lambing areas	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities from within bighorn sheep crucial winter and lambing areas. Once these ranges have been established by the reintroduced animals, appropriate dates and crucial habitats will be delineated.	CSU	No buffer

Table C.3-19 Salt Lake Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Wildlife-Waterfowl	Waterfowl	Marsh and wetlands areas	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities in the following areas within waterfowl habitat, i.e. marsh and wetland areas.	CSU	No buffer

Table C.3-20 Salt Lake Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Big Game	Elk	Winter range, crucial	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within crucial elk winter range December 1 to April 30.	TL	12/1 – 4/30	Wildlife-Big Game
Wildlife-Big Game	Mule deer	Winter range	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within mule deer winter range December 1 to April 15.	TL	12/1 – 4/15	Wildlife-Big Game
Wildlife-Big Game	Elk	Parturition areas	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within elk calving areas May 1 to June 30.	TL	5/1 – 6/30	Wildlife-Big Game
Wildlife-Big Game	Mule deer	Parturition areas	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within crucial mule deer summer/fawning habitats from April 15 to July 31.	TL	4/15 – 7/31	Wildlife-Big Game
Wildlife-Big Game	Pronghorn	Parturition areas	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within antelope fawning areas from April 15 to July 1.	TL	4/15 – 7/1	Wildlife-Big Game

Table C.3-20 Salt Lake Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Bald eagle	Roosts	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within .5 mile radius of the roosts sites from November 15 to March 15.	TL	11/15 – 3/15	Wildlife-Raptors
Wildlife-Raptors	Raptor management will be guided by the use of "Best Management Practices for Raptors and Their Associated Habitats in Utah" (BLM 2006), utilizing seasonal and spatial buffers, as well as mitigation, to maintain and enhance raptor nesting and foraging habitat, while allowing other resource uses. The following table outlines the timing restrictions contained in BLM 2006. See Table C.3-21, below.					
Wildlife-SSS	Sage grouse	Leks and crucial nesting habitat	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within 0.5 mile of sage grouse strutting grounds (leks) and crucial sage grouse nesting habitat between February 15 and June 15 each year.	TL	2/15 – 6/15	Wildlife-SSS
Wildlife-SSS	Sage grouse	Winter crucial habitat	BLM will protect important wildlife habitat values from disturbing activities by restricting seismic work, well development, new road construction, rights-of-way, organized recreational activities, military exercises, and other disturbing activities excluding maintenance activities within winter crucial habitat areas December 1 through March 1.	TL	12/1 – 3/1	Wildlife-SSS

Table C.3-21 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006)

Species	Spatial Buffer (miles)	Seasonal Buffer	Incubation, # Days	Brooding, # Days Post-Hatch	Fledging, # Days Post-Hatch	Post-fledge Dependency to Nest, # Days ¹
Bald eagle	1.0	1/1-8/31	34-36	21-28	70-80	14-20
Golden eagle	0.5	1/1-8/31	43-45	30-40	66-75	14-20
N. Goshawk	0.5	3/1-8/15	36-38	20-22	34-41	20-22
N. Harrier	0.5	4/1-8/15	32-38	21-28	42	7
Cooper's hawk	0.5	3/15-8/31	32-36	14	27-34	10
Ferruginous hawk	0.5	3/1-8/1	32-33	21	38-48	7-10

Table C.3-21 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006)

Species	Spatial Buffer (miles)	Seasonal Buffer	Incubation, # Days	Brooding, # Days Post-Hatch	Fledging, # Days Post-Hatch	Post-fledge Dependency to Nest, # Days ¹
Red-tailed hawk	0.5	3/15-8/15	30-35	35	45-46	14-18
Sharp-shinned hawk	0.5	3/15-8/31	32-35	15	24-27	12-16
Swainson's hawk	0.5	3/1-8/31	33-36	20	36-40	14
Turkey vulture	0.5	5/1-8/15	38-41	14	63-88	10-12
California condor	1.0	NN yet	56-58	5-8 weeks	5-6 months	2 months
Peregrine falcon	1.0	2/1-8/31	33-35	14-21	35-49	21
Prairie falcon	0.25	4/1-8/31	29-33	28	35-42	7-14
Merlin	0.5	4/1-8/31	28-32	7	30-35	7-19
American kestrel	NN ²	4/1-8/15	26-32	8-10	27-30	12
Osprey	0.5	4/1-8/31	37-38	30-35	48-59	45-50
Boreal owl	0.25	2/1-7/31	25-32	20-24	28-36	12-14
Burrowing owl	0.25	3/1-8/31	27-30	20-22	40-45	21-28
Flammulated owl	0.25	4/1-9/30	21-22	12	22-25	7-14
Great horned owl	0.25	12/1-9/31	30-35	21-28	40-50	7-14
Long-eared owl	0.25	2/1-8/15	26-28	20-26	30-40	7-14
N. saw-whet owl	0.25	3/1-8/31	26-28	20-22	27-34	7-14
Short-eared owl	0.25	3/1-8/1	24-29	12-18	24-27	7-14
Mex. Spotted owl	0.5	3/1-8/31	28-32	14-21	34-36	10-12
N. Pygmy owl	0.25	4/1-8/1	27-31	10-14	28-30	7-14
W. Screech owl	0.25	3/1-8/15	21-30	10-14	30-32	7-14
Common Barn-owl	NN ²	2/1-9/15	30-34	20-22	56-62	7-14

As a result of apparent high population densities and ability to adapt to human activity, a spatial buffer is currently considered not necessary (NN) for maintenance of American kestrel or common barn owl populations. Actions resulting in direct mortality of individual birds and "take" of known nest sites are unlawful.

C.3.2.10 Fillmore Field Office, Utah

References: Warm Springs Resource Area The Resource Management Plan, Record of Decision, Rangeland Program Summary, April 1987 (BLM 1987b) (Management Decision by Resource), Wildlife and Recreations sections; Table 2-11; House Range Resource Area Resource Management Plan and Record of Decision, Rangeland Program Summary, October 1987 (BLM 1987c) (Management Decision by Resource); BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006).

Table C.3-22 Fillmore Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Lands and Realty		Sigurd to Nevada, IPP to NV, and IPP to CA transmission corridors	Rights-of-way will be processed on a case-by-case basis, generally in the order received. Existing major rights-of-way are designated as corridors. New rights-of-way will be restricted to these corridors wherever feasible. Existing transmission line access roads shall be used, and only the roads to new tower sites shall be constructed for new ROWs. Transmission line ROWs shall be adjacent to each other or as close as possible.	CSU	No buffer
Lands and Realty		Highway 50, 6, and 257 ROW corridor	All land disturbed by new ROW except authorized new access roads shall be rehabilitated to as close to natural conditions as possible. All rights-of-way must comply with the applicable Visual Resource Management Class guidelines. Roads that are needed for construction of a new ROW shall be temporary and fully rehabilitated. The road or highway within the right-of-way corridor shall be used to the maximum extent possible for construction and maintenance of new ROWs.	CSU	No buffer
Lands and Realty		Interstate Highway 15 ROW corridor	All rights-of-way must comply with the applicable Visual Resource Management Class guidelines. New rights of way shall be limited to below the surface of the ground uses only.	CSU	No buffer
Lands and Realty		ROW corridors	Existing transmission line access roads shall be used and only roads to new tower sites shall be constructed for new rights-of-way.	CSU	No buffer
Lands and Realty		ROW corridors	Transmission line rights-of-way shall be adjacent or located as close together as possible.	CSU	No buffer
Special Designations		All SDAs	All Special management designation areas in this FO are right-of-way avoidance areas.	CSU	No buffer
Visual Resources		VRM II areas	VRM Class II areas [within the Warm Springs Resource Area] are right-of-way avoidance areas.	CSU	No buffer
Wildlife-SSS	Sage grouse	Leks	OHV use restricted within a 2 mile buffer around established lek sites from March 1 to July 31.	CSU, TL (3/1 – 7/31)	2 miles
Wildlife-SSS	Sage grouse	Leks	There is a 2 mile buffer around established lek sites where sagebrush manipulation is prohibited.	CSU	2 miles

Table C.3-23 Fillmore Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors			Raptor management will be guided by the use of "Best Management Practices for Raptors and Their Associated Habitats in Utah" (BLM 2006), utilizing seasonal and spatial buffers, as well as mitigation, to maintain and enhance raptor nesting and foraging habitat, while allowing other resource uses. Spatial and temporal buffers applied to disturbances in the vicinity of nesting raptors will be tailored to the individual raptor species involved and based on factors such as line of sight distance between nest and disturbance, type and duration of disturbance, nest structure security, sensitivity of the species to disturbance, observed responses to related disturbances, and the amount of other disturbances already occurring in the vicinity. Land use activities which would have an adverse impact on an occupied raptor nest, would not be allowed within the spatial or seasonal buffer.			
Wildlife-Raptors	Bald eagle	Nests	No surface disturbance within a 1-mile buffer of active nests from January 1 through August 31	TL	1/1 – 8/31	1.0 mile
Wildlife-Raptors	Boreal owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through July 31.	TL	2/1 – 7/31	0.25 mile
Wildlife-Raptors	Burrowing owl	Nests	No surface disturbance or occupancy within a 0.25 mile buffer of active nests during breeding/nesting season (from March 1 through August 31).	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	California condor	Nests	Temporary activities will not occur within 1.0 mile of occupied nest sites during breeding season. A temporary action is completed prior to the following important season of use, leaving for habitat functionality.	TL	Breeding season (undefined)	1.0 mile
Wildlife-Raptors	Cooper's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Ferruginous hawk	Nests	No surface disturbance or occupancy within a 0.5 mile buffer of active nests during breeding/nesting season (from 3/1 – 8/1).	TL	3/1 – 8/1	0.5 mile
Wildlife-Raptors	Flammulated owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through September 30.	TL	4/1 – 9/30	0.25 mile
Wildlife-Raptors	Golden eagle	Nests	No surface disturbance within a 0.5 mile buffer of active nests from January 1 through August 31.	TL	1/1 – 8/31	0.5 mile
Wildlife-Raptors	Great horned owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from December 1 through September 30.	TL	12/1 – 9/30	0.25 mile
Wildlife-Raptors	Long-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from February 1 through August 15.	TL	2/1 – 8/15	0.25 mile
Wildlife-Raptors	Merlin	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Mexican spotted owl	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.5 mile

Table C.3-23 Fillmore Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Northern goshawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 15.	TL	3/1 – 8/15	0.5 mile
Wildlife-Raptors	Northern harrier	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 15.	TL	4/1 – 8/15	0.5 mile
Wildlife-Raptors	Northern pygmy owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 1.	TL	4/1 – 8/1	0.25 mile
Wildlife-Raptors	Northern saw-whet owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.25 mile
Wildlife-Raptors	Osprey	Nests	No surface disturbance within a 0.5 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.5 mile
Wildlife-Raptors	Peregrine falcon	Nests	No surface disturbance within a 1 mile buffer of active nests from February 1 through August 31.	TL	2/1 – 8/31	1.0 mile
Wildlife-Raptors	Prairie falcon	Nests	No surface disturbance within a 0.25 mile buffer of active nests from April 1 through August 31.	TL	4/1 – 8/31	0.25 mile
Wildlife-Raptors	Red-tailed hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 15.	TL	3/15 – 8/15	0.5 mile
Wildlife-Raptors	Screech owl, western	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 8/15.	TL	3/1 – 8/15	0.25 mile
Wildlife-Raptors	Sharp-shinned hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 15 through August 31.	TL	3/15 – 8/31	0.5 mile
Wildlife-Raptors	Short-eared owl	Nests	No surface disturbance within a 0.25 mile buffer of active nests from March 1 through August 1.	TL	3/1 – 8/1	0.25 mile
Wildlife-Raptors	Swainson's hawk	Nests	No surface disturbance within a 0.5 mile buffer of active nests from March 1 through August 31.	TL	3/1 – 8/31	0.5 mile
Wildlife-Raptors	Turkey vulture	Nests	No surface disturbance within a 0.5 mile buffer of active nests from May 1 through August 15.	TL	5/1 – 8/15	0.5 mile

Note: As a result of apparent high population densities and ability to adapt to human activity, a spatial buffer is currently considered not necessary (NN) for maintenance of American kestrel or common barn owl populations. Actions resulting in direct mortality of individual birds and "take" of known nest sites are unlawful.

C.3.2.11 Cedar City Field Office, Utah

References: Pinyon Management Framework Plan, 1997 Amendment, page 195 (Management Decision by Resource) (BLM 1997b); Beaver, Cedar, Garfield, Antimony Record of Decision and Resource Management Plan, 1986 (BLM 1986); BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006).

Table C.3-24 Cedar City Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Lands and Realty		ROW avoidance/exclusion areas	Rights-of-way will not be authorized in Category 3 (NSO) or 4 (withdrawn or No lease) oil and gas designation areas.	NSU	No buffer
Water Resources		Municipal/culinary/public water/reservoirs/wells	Within a designated corridor, blasting and other surface disturbances would be prohibited within 500 feet of reservoirs or water wells.	NSU	500 feet
Water Resources		Springs	Within a designated corridor, blasting and other surface disturbances would be prohibited within 500 feet of all live springs.	NSU	500 feet
Water/Soils		Stream channels, areas of unstable soils, and seeps	Construct roads to avoid stream channels, areas of unstable soils, and seeps. Avoid constructing long, down slope straightaways, providing instead curves with water drainages off the road bed.	CSU	No buffer
Wildlife-multiple species		Deer habitat, prairie dog, sage grouse, bald & golden eagle dens, burrows, nests, and roosting sites.	Following the advice of a qualified wildlife biologist as designated by the appropriate federal official, roads, railroads, towers, and other ground disturbing activities would be located 200 yards from identified active dens, burrows, nests, or roosting sites to protect deer, Utah prairie dog, bald and golden eagles, and sage grouse.	NSU	200 yards (600 feet)
Wildlife-SSS	Prairie dog, Utah	Prairie dog towns	Prairie dogs require Category 3 protection of no occupancy or drilling within prairie dog towns.	CSU	No buffer

Table C.3-25 Cedar City Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Big Game	Mule deer	Sigurd to Paragonah transmission corridor crucial winter range	During Jan 1 to April 30 within the Sigurd to Paragonah transmission line corridor, transmission line construction would cease along the transmission lines. Transmission line construction would cease along the transmission lines to protect mule deer crucial winter range.	TL	1/1 – 4/30	No buffer
Wildlife-Raptors	Bald/golden eagles	Paragonah to St. George transmission corridor golden eagle roost sites	During Feb 15 to June 30 within Paragonah to St. George transmission line construction would cease along the transmission lines to protect bald and golden eagle roost sites.	TL	2/15 – 6/30	No buffer

Table C.3-25 Cedar City Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Raptors	Raptor management will be guided by the use of 'Best Management Practices for Raptors and Their Associated Habitats in Utah' (BLM 2006), utilizing seasonal and spatial buffers, as well as mitigation, to maintain and enhance raptor nesting and foraging habitat, while allowing other resource uses. The following table outlines the timing restrictions contained in BLM 2006. See Table C.3-26, below.					
Wildlife-SSS	Sage grouse	Leks	Sage grouse mating is protected by special stipulation prohibiting drilling or exploration on strutting grounds from March 1 through May 15.	TL	3/1 – 5/15	No buffer
Wildlife-SSS	Sage grouse	Sage grouse – Pinyon Planning Unit	In order to protect important sage grouse strutting and nesting areas, exploration, drilling, and other development activity will be allowed only during the period from May 16 to February 28. TL from March 1 to May 15.	TL	5/16 – 2/28	No buffer
Wildlife-SSS	Sage grouse	Sigurd to Paragonah transmission corridor strutting grounds	During March 15 to May 1 within the Sigurd to Paragonah transmission line corridor, transmission line construction would cease along the transmission lines to protect sage grouse strutting areas.	TL	3/15 – 5/1	No buffer

Table C.3-26 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006)

Species	Spatial Buffer (miles)	Seasonal Buffer	Incubation, # Days	Brooding, # Days Post-Hatch	Fledging, # Days Post-Hatch	Post-fledge Dependency to Nest, # Days ¹
Bald eagle	1.0	1/1-8/31	34-36	21-28	70-80	14-20
Golden eagle	0.5	1/1-8/31	43-45	30-40	66-75	14-20
N. Goshawk	0.5	3/1-8/15	36-38	20-22	34-41	20-22
N. Harrier	0.5	4/1-8/15	32-38	21-28	42	7
Cooper's hawk	0.5	3/15-8/31	32-36	14	27-34	10
Ferruginous hawk	0.5	3/1-8/1	32-33	21	38-48	7-10
Red-tailed hawk	0.5	3/15-8/15	30-35	35	45-46	14-18
Sharp-shinned hawk	0.5	3/15-8/31	32-35	15	24-27	12-16
Swainson's hawk	0.5	3/1-8/31	33-36	20	36-40	14
Turkey vulture	0.5	5/1-8/15	38-41	14	63-88	10-12

Table C.3-26 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006)

Species	Spatial Buffer (miles)	Seasonal Buffer	Incubation, # Days	Brooding, # Days Post-Hatch	Fledging, # Days Post-Hatch	Post-fledge Dependency to Nest, # Days ¹
California condor	1.0	NN yet	56-58	5-8 weeks	5-6 months	2 months
Peregrine falcon	1.0	2/1-8/31	33-35	14-21	35-49	21
Prairie falcon	0.25	4/1-8/31	29-33	28	35-42	7-14
Merlin	0.5	4/1-8/31	28-32	7	30-35	7-19
American kestrel	NN ²	4/1-8/15	26-32	8-10	27-30	12
Osprey	0.5	4/1-8/31	37-38	30-35	48-59	45-50
Boreal owl	0.25	2/1-7/31	25-32	20-24	28-36	12-14
Burrowing owl	0.25	3/1-8/31	27-30	20-22	40-45	21-28
Flammulated owl	0.25	4/1-9/30	21-22	12	22-25	7-14
Great horned owl	0.25	12/1-9/31	30-35	21-28	40-50	7-14
Long-eared owl	0.25	2/1-8/15	26-28	20-26	30-40	7-14
N. saw-whet owl	0.25	3/1-8/31	26-28	20-22	27-34	7-14
Short-eared owl	0.25	3/1-8/1	24-29	12-18	24-27	7-14
Mex. Spotted owl	0.5	3/1-8/31	28-32	14-21	34-36	10-12
N. Pygmy owl	0.25	4/1-8/1	27-31	10-14	28-30	7-14
W. Screech owl	0.25	3/1-8/15	21-30	10-14	30-32	7-14
Common Barn-owl	NN ²	2/1-9/15	30-34	20-22	56-62	7-14

As a result of apparent high population densities and ability to adapt to human activity, a spatial buffer is currently considered not necessary (NN) for maintenance of American kestrel or common barn owl populations. Actions resulting in direct mortality of individual birds and "take" of known nest sites are unlawful.

C.3.2.12 Saint George Field Office, Utah

References: St. George Field Office Record of Decision and Resource Management Plan, March 1999 (BLM 1999) (Chapter 2, Management Decision by Resource; Appendix 4—U.S. Fish and Wildlife Service Terms and Conditions for Authorized Activities within Desert Tortoise Habitat); BLM Instruction Memorandum No. UT 2006-096, Utah Supplemental Planning Guidance: Best Management Practices for Raptors and Their Associated Habitats in Utah, (BLM 2006).

Table C.3-27 Saint George Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/ Avoidance Area
Special Designations- ACEC	Desert tortoise	Beaver Dam Slope ACEC	The Bureau shall strongly discourage new rights-of-way and temporary use permits within the Beaver Dam Slope ACEC and the Upper Virgin River DWMA; such rights-of-way and temporary use permits within the DWMA or ACEC shall only be authorized if no reasonable alternative exists and impacts to tortoises and their habitat can be mitigated. Surface disturbance (before restoration) resulting from all new rights-of-ways and temporary use permits in the DWMA/ACECs shall not exceed 40 acres through the life of the project. In DWMA/ACECs, vehicles associated with Bureau-authorized projects traveling on unpaved roads in desert tortoise habitat shall not exceed speed limits established by the Bureau as necessary to protect desert tortoises. These speed limits will generally not exceed 40 mph even on the best unpaved roads, but may be much less than this on some roads. In regard to new rights-of-way within the Beaver Dam Slope ACEC and the Upper Virgin River DWMA, such rights-of-way shall be routed away from high-density tortoise populations, and along the edges of DWMA/ACECs. Linear right-of-ways shall be placed adjacent or parallel to existing rights-of-way and share vehicular access. Utilities shall be co-located with other utility projects whenever feasible. No new paved roads shall be authorized in the DWMA or ACEC. Temporary upgrading of existing roads and construction of new unpaved roads in the DWMA or ACEC could be authorized only if positive benefits to tortoise management occur. Concurrence from the Service that positive benefits would accrue is required prior to authorizing new roads in DWMA/ACECs.	CSU	No buffer
Wildlife-SSS	All	T&E and candidate species habitat	T&E and Candidate Species Habitat are Rights-of-Way avoidance areas (subject to designated corridors). New rights-of-way will be granted in these areas only when feasible alternative routes or designated corridors are not available.	CSU	No buffer
Water Resources		Riparian areas	Riparian Areas are Rights-of-Way avoidance areas (subject to designated corridors).	CSU	No buffer
Wildlife-SSS		Desert tortoise habitat	Outside of the HCP Reserve and the Beaver Dam Slope ACEC, tortoise habitat now designated as critical will be protected by designating such habitats as right-of-way avoidance areas (outside of utility corridors).	CSU	No buffer
Travel		OHV closed areas	OHV Closed Areas are Rights-of-Way avoidance areas (subject to designated corridors). New rights-of-way will be granted in these areas only when feasible alternative routes or designated corridors are not available.	CSU	No buffer

Table C.3-27 Saint George Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Travel		OHV designated roads & trails areas	OHV Designated Roads & Trails Areas are Rights-of-Way avoidance areas (subject to designated corridors). New rights-of-way will be granted in these areas only when feasible alternative routes or designated corridors are not available.	CSU	No buffer
Visual Resources		VRM Class I and II areas	VRM Class I and II areas are Rights-of-Way avoidance areas (subject to designated corridors). New rights-of-way will be granted in these areas only when feasible alternative routes or designated corridors are not available.	CSU	No buffer

Table C.3-28 Saint George Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife- Big Game	Elk	Parturition areas	Elk calving areas will be closed for the same reason from May 1 to July 30. These seasonal use restrictions will also be applied to mineral materials sales, forest product sales, and rights-of-way construction.	TL	5/1 – 7/30	No buffer
Wildlife- Big Game	Mule deer	Winter range	Crucial mule deer winter range will be protected from the potential effects of fluid mineral leasing with a Category 2 seasonal stipulation to close the lands to exploration or development from November 1 to April 15. Elk calving areas will be closed for the same reason from May 1 to July 30. These seasonal use restrictions will also be applied to mineral materials sales, forest product sales, and rights-of-way construction.	TL	11/1 – 4/15	No buffer
Wildlife-SSS	Desert tortoise	Habitat	To the extent possible, project activities shall be scheduled when tortoises are inactive (October 15 through March 15). The following project activities shall only occur from October 15 through March 15: surface disturbance associated with mineral leasing; organized, non-speed vehicular events in the DWMA and/or ACEC; construction and nonemergency maintenance activities in rights-of- ways; and non-emergency maintenance of existing roads. During the tortoise active season (March 15 through October 15), project features that might trap or entangle desert tortoises such as open trenches, pits, open pipes, etc., shall be covered or modified to prevent entrapment.	TL, CSU	3/16 – 10/14	No buffer
Wild-Raptors	Raptor management will be guided by the use of "Best Management Practices for Raptors and Their Associated Habitats in Utah" (BLM 2006), utilizing seasonal and spatial buffers, as well as mitigation, to maintain and enhance raptor nesting and foraging habitat, while allowing other resource uses. The following table outlines the timing restrictions contained in BLM 2006. See Table C.3-29, below.					
Wildlife-SSS	Southwestern willow flycatcher	Known active nests	Where known active nest sites are located on public lands, BLM will implement seasonal closures for the period of April 1 to August 30 within 0.5 mile of nests for discretionary permits authorizing construction or other disruptive activity.	TL	4/1 – 8/30	0.5 mile

Raptor management will be guided by the use of "Best Management Practices for Raptors and Their Associated Habitats in Utah" (BLM 2006), utilizing seasonal and spatial buffers, as well as mitigation, to maintain and enhance raptor nesting and foraging habitat, while allowing other resource uses. The following table outlines the timing restrictions contained in BLM 2006. The following table outlines the timing restrictions contained in BLM 2006.

Table C.3-29 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006)

Species	Spatial Buffer (miles)	Seasonal Buffer	Incubation, # Days	Brooding, # Days Post-Hatch	Fledging, # Days Post-Hatch	Post-fledge Dependency to Nest, # Days ¹
Bald eagle	1.0	1/1-8/31	34-36	21-28	70-80	14-20
Golden eagle	0.5	1/1-8/31	43-45	30-40	66-75	14-20
N. Goshawk	0.5	3/1-8/15	36-38	20-22	34-41	20-22
N. Harrier	0.5	4/1-8/15	32-38	21-28	42	7
Cooper's hawk	0.5	3/15-8/31	32-36	14	27-34	10
Ferruginous hawk	0.5	3/1-8/1	32-33	21	38-48	7-10
Red-tailed hawk	0.5	3/15-8/15	30-35	35	45-46	14-18
Sharp-shinned hawk	0.5	3/15-8/31	32-35	15	24-27	12-16
Swainson's hawk	0.5	3/1-8/31	33-36	20	36-40	14
Turkey vulture	0.5	5/1-8/15	38-41	14	63-88	10-12
California condor	1.0	NN yet	56-58	5-8 weeks	5-6 months	2 months
Peregrine falcon	1.0	2/1-8/31	33-35	14-21	35-49	21
Prairie falcon	0.25	4/1-8/31	29-33	28	35-42	7-14
Merlin	0.5	4/1-8/31	28-32	7	30-35	7-19
American kestrel	NN ²	4/1-8/15	26-32	8-10	27-30	12
Osprey	0.5	4/1-8/31	37-38	30-35	48-59	45-50
Boreal owl	0.25	2/1-7/31	25-32	20-24	28-36	12-14
Burrowing owl	0.25	3/1-8/31	27-30	20-22	40-45	21-28
Flammulated owl	0.25	4/1-9/30	21-22	12	22-25	7-14
Great horned owl	0.25	12/1-9/31	30-35	21-28	40-50	7-14
Long-eared owl	0.25	2/1-8/15	26-28	20-26	30-40	7-14

Table C.3-29 Utah Best Management Practices for Raptors and Their Associated Habitats in Utah (BLM 2006)

Species	Spatial Buffer (miles)	Seasonal Buffer	Incubation, # Days	Brooding, # Days Post-Hatch	Fledging, # Days Post-Hatch	Post-fledge Dependency to Nest, # Days ¹
N. saw-whet owl	0.25	3/1-8/31	26-28	20-22	27-34	7-14
Short-eared owl	0.25	3/1-8/1	24-29	12-18	24-27	7-14
Mex. Spotted owl	0.5	3/1-8/31	28-32	14-21	34-36	10-12
N. Pygmy owl	0.25	4/1-8/1	27-31	10-14	28-30	7-14
W. Screech owl	0.25	3/1-8/15	21-30	10-14	30-32	7-14
Common Barn-owl	NN ²	2/1-9/15	30-34	20-22	56-62	7-14

As a result of apparent high population densities and ability to adapt to human activity, a spatial buffer is currently considered not necessary (NN) for maintenance of American kestrel or common barn owl populations. Actions resulting in direct mortality of individual birds and “take” of known nest sites are unlawful.

C.3.2.13 Ely District/Caliente Field Office, Nevada

References: Ely District Record of Decision and Approved Resource Management Plan, August 2008 (BLM 2008f) (Chapter 2, Alternatives, page 2.4-52; Appendix A—Resource Program Best Management Practices, page A1-8), Wildlife section; Clark County Conservation of Public Land and Natural Resources Act of 2002 (Public Law 107-282-Nov. 6, 2002), Title II (Clark County 2002); Wilderness Act of 1964.

Table C.3-30 Ely Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Geology (Karst)		Caves	Ground disturbing activities are not allowed within 100 yards (horizontally or vertically) of known cave resources including entrances, drainage areas, subsurface passages, and developed recreation sites.	NSU	300 feet
Wildlife-SSS	Sage grouse	Leks	Outside of designated corridors, above-ground facilities will not be constructed within 0.25 mile of greater sage-grouse leks. Underground facilities will not be installed within 0.25 mile of greater sage-grouse leks unless the vegetation can be established to pre-disturbance conditions within a reasonable period of time. No new roads will be constructed within 0.25 mile of greater sage-grouse leks. Exceptions may be granted by the authorized officer, in consultation with Nevada Department of Wildlife, if the project can be designed so that it will not affect breeding activity nor degrade the integrity of the habitat associated with the lek, or if the lek has been inactive for at least 5 consecutive years or the habitat has changed such that there is no likelihood that the lek will become active.	NSU, CSU	0.25 mile

Table C.3-30 Ely Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Special Designations-ACEC		Kane Springs ACEC	Limited/avoidance/exclusion area. [Limited = Rights-of-way; limit authorization of future communication sites to existing established rights-of-way unless technically unfeasible and encourage use of existing corridors for all future rights-of-way when possible. Avoidance= Avoidance area; granting rights-of-way (surface, subsurface, aerial) within the area will be avoided, but rights-of-way may be granted if there is minimal conflict with identified resource values and impacts can be mitigated.]. In general, proposed ACECs are Rights-of-Way avoidance areas (subject to designated corridors). New rights-of-way will be granted in these areas only when feasible alternative routes or designated corridors are not available. Manage rights-of-way in desert tortoise habitat the same as that described for the Beaver Dam Slope, Kane Springs, and Mormon Mesa ACECs.	CSU	No buffer
Special Designations-ACEC		Beaver Dam Slope ACEC	Limited Rights-of-way area. Limited: Rights-of-way; limit authorization of future communication sites to existing established rights-of-way unless technically unfeasible and encourage use of existing corridors for all future rights-of-way when possible. Avoidance: Avoidance area; granting rights-of-way (surface, subsurface, aerial) within the area will be avoided, but rights-of-way may be granted if there is minimal conflict with identified resource values and impacts can be mitigated . In general, proposed ACECs are Rights-of-Way avoidance areas (subject to designated corridors). New rights-of-way will be granted in these areas only when feasible alternative routes or designated corridors are not available. Manage rights-of-way in desert tortoise habitat the same as that described for the Beaver Dam Slope, Kane Springs, and Mormon Mesa ACECs.	CSU	No buffer
Special Designations-ACEC		Mormon Mesa ACEC	Limited/avoidance/exclusion area: Limited: Rights-of-way; limit authorization of future communication sites to existing established rights-of-way unless technically unfeasible and encourage use of existing corridors for all future rights-of-way when possible. Avoidance: Avoidance area; granting rights-of-way (surface, subsurface, aerial) within the area will be avoided, but rights-of-way may be granted if there is minimal conflict with identified resource values and impacts can be mitigated. Manage rights-of-way in desert tortoise habitat the same as that described for the Beaver Dam Slope, Kane Springs, and Mormon Mesa ACECs.	CSU	No buffer
Special Designations-Wilderness Areas	Delamar Mountains Wilderness Area	All wilderness areas	Clover Mountain and Delamar Mountains Wilderness areas are designated ROW exclusion areas.	NSU	No buffer
Special Designations-Wilderness Areas	Clover Mountain wilderness Area	All wilderness areas	Clover Mountain and Delamar Mountains Wilderness areas are designated ROW exclusion areas.	NSU	No buffer

Table C.3-31 Ely Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Big Game	All	Parturition areas	Where appropriate, restrict permitted activities in big game calving/fawning/kidding/lambing grounds and crucial summer range from April 15 through June 30.	TL	4/15 – 6/30	No buffer
Wildlife-Big Game	All	Winter habitat, crucial	Where appropriate, restrict permitted activities in crucial winter range from November 1 through March 31.	TL	11/1 – 3/31	No buffer
Wildlife-Big Game	Big horn sheep	Occupied habitat	Where appropriate, restrict permitted activities within occupied desert bighorn sheep habitat from March 1 through May 31 and from July 1 through August 31.	TL	3/1 – 5/31	No buffer
Wildlife-Big Game	Big horn sheep	Occupied habitat	Where appropriate, restrict permitted activities within occupied desert bighorn sheep habitat from March 1 through May 31 and from July 1 through August 31.	TL	7/1 – 8/31	No buffer
Wildlife-Raptors	Raptors	Nests	Where appropriate, restrict permitted activities from May 1 through July 15 within 0.5 mile of raptor nest sites unless the nest site has been determined to be inactive for at least the previous 5 years.	TL	6/1 – 7/15	0.5 mile
Wildlife-SSS	Desert tortoise	Habitat	Where appropriate, restrict permitted activities from March 1 through October 31 within desert tortoise habitat.	TL	3/1 – 10/31	No buffer
Wildlife-SSS	Sage grouse	Leks	Where appropriate, restrict permitted activities in all occupied ranges from 3/1 – 5/15 within 2 miles of active leks.	TL	3/1 – 5/15	2 miles
Wildlife-SSS	Sage grouse	Winter range	Where appropriate, restrict permitted activities from 11/1 – 3/31 within GSG winter range.	TL	11/1 – 3/31	No buffer

C.3.2.14 Las Vegas Field Office, Nevada

References: Record of Decision for the Approved Las Vegas Resource Management Plan and FEIS, October 1998 (BLM 1998) (Management Decisions by Resource); Clark County Conservation of Public Land and Natural Resources Act Of 2002 (Public Law 107-282-Nov. 6, 2002), Title II; Wilderness Act of 1964.

Table C.3-32 Las Vegas Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Special Designations-Wilderness Areas.		Arrow Canyon Wilderness Area	There shall be no commercial enterprise and no permanent road within any wilderness area designated. There shall be no temporary road. No use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area. Motorized equipment and equipment used for mechanical transport are generally prohibited on all federal lands designated as wilderness.	NSU	No buffer
Special Designations-Wilderness Areas.		Black Mountain Wilderness Area	There shall be no commercial enterprise and no permanent road within any wilderness area designated. There shall be no temporary road. No use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area. Motorized equipment and equipment used for mechanical transport are generally prohibited on all federal lands designated as wilderness.	NSU	No buffer
Special Designations-Wilderness Areas.		Muddy Mountain Wilderness Area	There shall be no commercial enterprise and no permanent road within any wilderness area designated. There shall be no temporary road. No use of motor vehicles, motorized equipment or motorboats, no landing of aircraft, no other form of mechanical transport, and no structure or installation within any such area. Motorized equipment and equipment used for mechanical transport are generally prohibited on all federal lands designated as wilderness.	NSU	No buffer
Special Designations-ACEC		Mormon Mesa ACEC	Critical tortoise habitat ACEC. ROW avoidance area except within designated corridor; NSO for leasing; "Limited to designated roads and trails" for all motorized and mechanized vehicles. Limit utility corridors to 3,000 feet or less in width. On a case-by-case basis, support fencing of highways and moderately to heavily traveled dirt roads with tortoise-proof fencing and installation of culverts to allow tortoises to cross under the highway and roads. Require reclamation of disturbed lands resulting from activities that result in loss or degradation of tortoise habitat with habitat be reclaimed so that pre-disturbance condition can be reached within a reasonable time frame. Reclamation may include salvage and transplant of cactus and yucca, recontouring of the area, scarification of compacted soil, soil amendments, seeding, and transplant of seedling shrubs. Subsequent seeding or transplanting efforts may be required if monitoring indicates that the original effort was not successful. Require reclamation of temporary roads. Authorize new roads in response to specific proposed actions where no feasible alternative exists. Ensure access to private property. In general, proposed ACECs are Rights-of-Way avoidance areas (subject to designated corridors). New rights-of-way will be granted in these areas only when feasible alternative routes or designated corridors are not available.	CSU	No buffer

Table C.3-32 Las Vegas Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Special Designations-ACEC		Arrow Canyon ACEC	Designate as ROW avoidance area except within corridors. Close to mineral material ROWs. NSO. Requires reclamation of temporary roads. Authorize new roads in response to specific authorized actions only, ensure access to private property. R&I: Paleontological (Miocene bird tracks); Geological (candidate for the midcarboniferous Boundary stratotype section); cultural (prehistoric rock art).	CSU	No buffer
Special Designations-ACEC		Coyote Springs Desert Tortoise ACEC	Designated ACEC for Desert Tortoise. ROW avoidance area except within corridors. Closed to mineral material ROWs. NSO to fluid leasing. Require reclamation of temporary roads. Authorize new roads in response to specific authorized actions only, ensure access to private property.	CSU	No buffer
Special Designations-ACEC		Rainbow Garden ACEC	Critical tortoise habitat ACEC. ROW avoidance area except within designated corridor; NSO for leasing; Limited to designated roads and trails" for all motorized and mechanized vehicles. Limit utility corridors to 3,000 feet or less in width. On a case-by-case basis, support fencing of highways and moderately to heavily traveled dirt roads with tortoise-proof fencing and installation of culverts to allow tortoises to cross under the highway and roads. Require reclamation of disturbed lands resulting from activities that result in loss or degradation of tortoise habitat with habitat be reclaimed so that pre-disturbance condition can be reached within a reasonable time frame. Reclamation may include salvage and transplant of cactus and yucca, recontouring of the area, scarification of compacted soil, soil amendments, seeding, and transplant of seedling shrubs. Subsequent seeding or transplanting efforts may be required if monitoring indicates that the original effort was not successful. Require reclamation of temporary roads. Authorize new roads in response to specific proposed actions where no feasible alternative exists. Ensure access to private property.	CSU	No buffer
Special Designations-ACEC		River Mountains ACEC	Designated ACEC for geological, scientific, scenic, cultural, plants. ROW avoidance area except within corridors. Closed to mineral material ROWs. NSO to fluid leasing. Require reclamation of temporary roads. Authorize new roads in response to specific authorized actions only, ensure access to private property.		No buffer
Geology (Karst)		Caves	All lands within 0.25 mile of significant caves, exclusive of any designated corridors, are designated as right-of-way avoidance areas.	CSU	0.25 mile

Table C.3-32 Las Vegas Field Office No Surface Use and Controlled Surface Use Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Buffer/Avoidance Area
Water Resources		All artificial and natural waters	Protect artificial and natural waters that provide benefit to wildlife by providing a minimum buffer of 0.25 mile for permitted activities (such as for off-road vehicle events).	CSU	0.25 mile
Special Designations-NCA		Sloan Canyon NCA	Outside the Wilderness, applications for new linear or site-type ROWs, or any amendments to existing ROWs, will be considered on a case-by-case basis within the NCA if the action furthers the purpose of the NCA in Section 602 of the Sloan Canyon NCA Act (Figure 2.11). Evaluation criteria will include, in part— Direct benefit to the NCA, such as utilities to serve NCA facilities; Maintaining or decreasing visual contrast; • Reduction of disturbed areas; Improvement in road/ROW alignments to minimize resource impacts. Designation and construction of trails, facilities, and ROWs will be limited within known lambing areas of bighorn sheep. Trail construction will be avoided in areas of known bighorn sheep movement between the North and South McCullough Mountains. In areas identified as having a medium to high potential for cultural resource sites (Duke et al. 2004), a Class III cultural resources inventory (100 percent) is required prior to any land disturbing undertaking. For areas with a low potential density for cultural resource sites, a reconnaissance-level inventory is required prior to land disturbing activities. Areas with a low potential will be considered for elimination of inventory requirements when sufficient information is available. All physical contact with petroglyphs, such as touching, chalking, and making impressions through rubbings or casting is prohibited except for traditional cultural purposes with a special use permit. Air quality dust control permits would be obtained from the Clark County Department of Air Quality and Environmental Management prior to the approval of any activity within the NCA .Special Status Species habitat will be maintained and protected to ensure suitable habitat conditions and viable populations. Disturbance or development will be avoided in areas of Special Status Species potential habitat. Disturbance or development will be mitigated in areas of Special Status Species habitat discovered during pre-activity site-specific surveys. Within Zone 2 (Semi-Primitive, Non-Motorized MEA)—Conduct restoration if the surface disturbing activity may have a short-term impact on natural vegetation community processes or if it reduces the viability of local species populations. The NCA is VRM II—Retain the existing character of the landscape. The level of change to the characteristic landscape should be low and may not attract the attention of casual viewers.	CSU	No buffer

Table C.3-33 Las Vegas Field Office Timing Restrictions

Resource	Species (if Applicable)	Area of Restriction	Description	Constraint Type	Timing	Buffer/Avoidance Area
Wildlife-Big Game	Big horn sheep	Sloan Canyon NCA	Surface disturbing activities will be limited within known lambing areas from January through May.	TL	1/1 – 5/1	No buffer
Wildlife-Raptors	All unspecified	Nests within Sloan Canyon NCA	Construction of trails, facilities, or ROWs will be seasonally restricted within an appropriate distance of occupied raptor nesting sites.	TL	No dates given	None specified

C.4 USFS Management Units crossed by TWE Project Alternatives

The analysis area includes NFS lands under the jurisdiction of five different national forests. NFS lands within the analysis area contain special managed units, which are held to special management prescriptions developed to protect resources or specific opportunities. The NFS lands special managed units are depicted in **Appendix H**. Each forest plan (LRMP) provides direction, goals, standards, and guidelines for unit management of these areas. More detail can be found in the Forest Plan compliance spreadsheets contained in the Project Record. Additionally, the USFS has published National BMPs for water quality management, and BMPs applicable to the Project have been listed below.

C.4.1 Ashley National Forest

Reference: Land and Resource Management Plan (LRMP) for the Ashley National Forest, 1986 (USFS 1986a); and Utah Northern Goshawk Project Decision Notice (USFS 2000).

In general, all alternatives are in compliance with the 1986 Ashley National Forest LRMP. The following four management areas could be crossed by the Project.

- **Management Area D (Livestock Grazing):** Managed for livestock grazing. Open to all recreation uses and generally all travel. Other construction is permitted if conflicts with livestock grazing are mitigated. Riparian areas maintained to protect streambank stability.
- **Management Area E (Wildlife Habitat Emphasis):** Includes portions of summer and winter ranges, T&E habitat, strutting areas, calving and fawning areas and spawning areas. Recreation may be closed or restricted during key use periods. Road closures are common to in stress seasons for featured species. Livestock grazing may be limited or excluded and mineral development may have seasonal or NSO restrictions. New construction would be mitigated for wildlife needs. Riparian areas are protected.
- **Management Area F (Dispersed Recreation Roaded):** Area receiving a variety of uses in a variety of landforms and vegetation types in a roaded environment. Dispersed recreation is favored over other resources. Improvements designed to enhance recreation opportunities and optimize species diversity. Construction allowed as needed. Maintenance at high levels on main roads. May have road closures to protect resources.
- **Management Area N (Existing Low Management Emphasis):** Resource protection as needed. Access may be controlled to enhance wildlife habitat. Improvements allowed on low investment basis. Habitat diversity. No restrictions to mineral development other than standard s and guidelines.

C.4.2 Manti- La Sal National Forest

Reference: Land and Resource Management Plan (LRMP) for the Manti-La Sal National Forest, 1986 (USFS 1986b).

In general, all alternatives are in compliance with the 1986 Manti-La Sal National Forest LRMP. The following seven management units could be crossed by the Project.

- **General Big-Game Winter Range (GWR):** Management emphasis is on providing general big-game winter range. These are areas wildlife traditionally use. Treatments of various types are applied to increase forage production and plant species composition. Investments in compatible resource activities may occur. Permanent roads and special uses may be permitted. Short-term or temporary roads are obliterated and rehabilitated within 1 year after intended use. Motorized use is managed as appropriate to prevent unacceptable stress on big-game animals during the primary use season. Specific cover opening ratios, opening width, and stand design are maintained in pinyon-juniper woodland chaining areas.

- **Key Big-Game Winter Range (KWR):** Management emphasis is on providing winter forage and cover for big-game species in areas that must be available and unencumbered for wildlife use each year during the critical winter period. Vegetative treatments are applied to increase forage production of grass, forb, and especially browse species and/or to create and maintain thermal and hiding cover. Conflicting uses are not permitted on a continuing basis, but may be permitted outside the critical season if there is no long-term degradation. New roads other than short-term (temporary) roads are located outside of the management unit. Short-term roads will be rehabilitated to provide for wildlife use within one season after completed use. Prohibit motorized use to prevent unacceptable stress on big game during critical use periods.
- **Developed Recreation Sites (DRS):** Management emphasis is for developed recreation facilities such as campgrounds, picnic grounds, trailheads, visitor information facilities, summer homes areas, ski areas, and water-related support facilities. Proposed sites) are managed to maintain the site attractiveness until developed. Facilities such as roads, trails, signs, etc., may dominate or subordinate, but should harmonize and blend with the characteristic landscape. As appropriate, existing developed sites should be withdrawn from locatable mineral entry, and closed to surface occupancy for leasable and saleable minerals. The prescription can be considered for application to all existing developed recreation sites and proposed sites identified for development.
- **Minerals Management Area (MMA):** Management emphasis is on making land surface available for existing and potential major mineral developments. This prescription is applies where the lands surface is or will be used for facilities needed for the extraction of leasable minerals over an extended period. The areas associated with known, potential, development sites are included in this unit. Additional areas may be added to this unit as mines or fields are located and developed. As the developments are removed and restoration is completed, these areas may be changed to other appropriate management units. In units where mineral development is pending, renewable resource activities strive to be compatible with the management goals of adjacent management units. Long-term investments, such as timber planting, generally are not made. However, short-term investments, such as range and wildlife revegetation projects, may be made on these units.
- **Range Forage Production (RNG):** Emphasis is on production of forage and cover for domestic livestock and wildlife. Intensive grazing management systems are generally favored. Some periodic heavy forage utilization may occur. Opportunities for investments in structural and non-structural improvements to increase forage production is moderate to high. Investments are made in compatible resource activities. Dispersed recreation opportunities vary between semi-primitive non-motorized and roaded natural appearing. Management activities are evident, but harmonize with the natural setting
- **Utility Corridor (UC):** Emphasis is on providing transportation corridors for major cross-country pipelines, electrical transmission lines, and telephone lines. Management activities within these linear corridors strive to be compatible with the management goals of the adjacent management units.
- **Wood Fiber Production and Utilization (TBR):** Emphasis is on management for the production and use of wood-fiber for a variety of wood products. The harvest methods by Forest cover type are single tree and group selection and shelterwood in Englemann spruce-subalpine fire, Douglas-fire, ponderosa pine, mixed conifers, and clear cutting in aspen. Harvesting will be accomplished with methods including cable, conventional crawler tractor, or rubber-tired skidders. Pre-commercial thinning and intermediate harvest will be used to increase or maintain fiber production. Dispersed recreation opportunities vary between semi-primitive non-motorized and roaded natural appearing. Wildlife habitat diversity may be enhanced by vegetative manipulation. Livestock grazing may be permitted. This prescription could alter water yield through vegetation management, as well as decreased evapotranspiration and maximize snow retention in small openings on low energy slopes.

- **Research, Protection, and Interpretation of Lands and Resource (RPI):** Management emphasis for these units is to manage unique ecological, geological, paleontological, archeological, or historical sites or features of the Forest for research, protection, and/or interpretation of land and resources condition while making them available for study and viewing. Other resource use may be made of these units as long as they do not conflict with the purpose for which they exist. Activities that might cause impairment or occupancy of the unit for any reason other than interpretive are usually prohibited.
- **Special Land Designation (SLD):** Management emphasis is on making lands available for existing and potential specialized uses. Sites that may be considered for application of this prescription include Ranger or Guard Stations and other administrative sites, electronic sites, and similar special land uses. Generally, other resource development and use activities within these units strive to be compatible with the management goals of the adjacent management units. However, this is often limited by the special activity or use authorized on the unit.
- **Undeveloped Motorized Recreation Sites (UDM):** Management emphasis is on providing high quality dispersed recreation opportunities in areas characteristically receiving moderate to heavy levels of use. Visual resources are managed so that activities of man remain visually subordinate or are not evident. Range, timber, wildlife, and mineral resource activities and use may occur subject to maintaining appropriate ROS user experience or setting characteristics visual quality objectives, not permanently exceeding threshold levels for noise and air quality, or seriously impairing recreation use. These units generally occur along arterial and collector roads, although they may occur along local roads or trails and generally near water bodies.
- **Watershed Protection/Improvement (WPE):** Management emphasis is for watershed protection and improvement in areas where watershed treatment (i.e., contour trenching and furrowing) have been, or should be, applied, and where other use restrictions are implemented to protect on-site and downstream values from flooding and sedimentation. Also included, but not mapped, are some areas that have received damage by landslide and flood events. Units receiving damage by such events should be entered on the Watershed Improvement Needs Inventory list and evaluated against all other potential projects for priority of treatment.

C.4.3 Fishlake National Forest

Reference: Land and Resource Management Plan for the Fishlake National Forest, 1986 (USFS 1986c).

In general, all alternatives are in compliance with the 1986 Fishlake National Forest LRMP, with the exceptions of Visual Resource Standard, which is addressed in Chapter 4 (Land Use Plan Amendments). The following five management areas could be crossed by the Project.

- **2B Rural and Roaded-Natural Recreation Opportunities:** Management emphasis is for rural and roaded-natural recreation opportunities. Motorized and no motorized recreation activities such as driving for pleasure, viewing scenery, picnicking, fishing, snowmobiling, and cross-country skiing are possible. Conventional use of highway-type vehicles is provided for in design and construction of facilities. Motorized travel may be prohibited or restricted to designated routes to protect physical and biological resources. Visual resources are managed so that management activities maintain or improve the quality of recreation opportunities. Management activities are not evident, remain visually subordinate, or may be dominant, but harmonize and blend with the natural setting. Landscape rehabilitation is used to restore landscapes to a desirable visual quality. Enhancement aimed at increasing positive elements of the landscape to improve visual variety is also used. Minimum visual quality objective (VQO) shall be partial retention. Arterial and collector roads and trails are Sensitivity level 1. Permit special uses which are complementary and compatible with the kind and development level of forest service facilities within the area may be permitted.

- **3A Non-Motorized Recreation with Development of other Resources:** Management emphasis is for non-motorized recreation outside of wilderness. Recreation opportunities such as hiking, horseback riding, hunting and cross-country skiing are available. Seasonal or permanent restrictions on human use may be applied to provide seclusion for wildlife such as nesting for raptorial birds, big game rearing areas, and mammals (mountain lion, elk) with large home ranges. Visual resources are managed so that management activities are not visually evident or remain visually subordinate. Investments in compatible resource uses such as livestock grazing and mineral exploration and development occur; but roads are closed to public use. Commercial and noncommercial tree harvest occur.
- **4A Fish Habitat Improvement:** Emphasis is on fish habitat improvement where aquatic habitat is below productive potential. Habitat enhancement techniques may be used on lake, reservoir, river or stream habitats and their adjacent riparian ecosystems. The goals of management are to maintain or improve aquatic habitat condition for fish at or above a good habitat condition rating, maintain stable stream channels, meet water quality standards for cold water fisheries, provide healthy, self-perpetuating riparian plant communities and provide habitats for viable populations of wildlife. Vehicular travel is limited on roads and trails at times when excessive stream sedimentation would result. New road construction is restricted within riparian areas unless no feasible alternative exists. Forest riparian ecosystems are treated to improve wildlife and fish habitat diversity through specified silvicultural objectives.
- **4B Management Indicator Species:** Management emphasis is on the habitat needs of one or more management indicator species. Species with compatible habitat needs are selected for an area. The prescription can be applied to emphasize groups of species, such as early succession dependent or late succession dependent, in order to increase species richness or diversity. Vegetation characteristics and human activities are managed to provide optimum habitat for the selected species, or to meet population goals jointly agreed to with the Utah Division of Wildlife Resources. Recreation and other human activities are regulated to favor the needs of the designated species. Roaded natural recreation opportunities are provided along forest arterial and collector roads. Local roads and trails are either open or closed to public motorized travel. Semi primitive motorized recreation opportunities are provided on those local roads and trails that remain open. Semi-primitive non-motorized opportunities are provided on those that are closed. Investments in other compatible resource uses may occur but will be secondary to habitat requirements. Management activities may dominate in foreground and middleground, but harmonize and blend with the natural setting.
- **5A Big Game Winter Range:** Management emphasis is on winter range for deer, elk, and bighorn sheep if introduced. Treatments are applied to increase forage production of existing grass, forb, and browse species or to alter plant species composition. Investments in compatible resource activities occur. Management activities are not evident, remain visually subordinate, or are dominant in the foreground or middleground but harmonize or blend with the natural setting. Eliminate special uses that conflict with management wintering animals. New roads other than short-term (temporary) roads are located outside of the management area. Short term roads are obliterated within one season after intended use. Selected local roads are closed and motorized recreation use is managed to prevent unacceptable stress on big game animals during the primary big game use season. Minimum VQO shall be modification. Roads cross winter range in the minimum distance feasible. When road construction is allowed, lost wildlife, habitat will be mitigated.
- **6B Livestock Grazing:** Intensive management of range resources through structural and non-structural improvement with associated maintenance Investments are made in compatible resource activities. Dispersed recreational opportunities vary between semi-primitive non motorized and roaded natural. Management activities are evident but harmonize and blend with the natural setting. Minimum VQO shall be modification.

- **9F Improved Watershed Condition:** Management emphasis is on improving watershed condition and thus eliminating the watershed improvement needs backlog. Emphasis is also on maintenance of projects already completed. Management activities in the foreground, middleground, and background may dominate, but should be designed to harmonize and blend with the natural setting to the extent possible. Motorized travel is prohibited except for over-snow machines and for designated routes. Routes may have seasonal closures.

C.4.4 Uinta National Forest Planning Area⁶

References: Land and Resource Management Plan for the Uinta National Forest, May 2003 (USFS 2003); Correction No. 4, 2003 Uinta National Forest Land and Resource Management Plan, November 27, 2006 (USFS 2006).

In general, all alternatives are in compliance with the 2003 Uinta National Forest LRMP. The following seven management prescriptions could be crossed by the Project.

- **3.1 Aquatic, Terrestrial, and Hydrologic Resources:** Emphasis is on maintaining or improving existing quality aquatic, terrestrial, and hydrologic conditions through limited to moderate management activity. This prescription includes areas where multiple habitat and resource values are present. These values are recognized as important and may require restoration to reach desired conditions. Other uses and activities may be allowed provided they do not inhibit attainment of objectives for the areas. Vegetation management activities, including timber harvest, may be used to address vegetation needs for wildlife habitat, watershed improvement, and/or forest health needs. Additional motorized trails may be constructed. Livestock grazing is allowed where compatible with desired aquatic, terrestrial, and hydrologic conditions. Leasing stipulations are CSU for all areas except, semi-primitive non-motorized, which is NSO.
- **3.3 Aquatic and Terrestrial Habitat:** These areas are managed for quality habitat to contribute toward maintenance and/or recovery of plant and animal species. Resources are maintained or improved to achieve desired conditions for habitats of threatened, endangered, sensitive, and Management Indicator Species (MIS). Most, but not all, of the critical deer and elk winter range is included within this prescription. This prescription applies to areas with multiple habitats (big game winter range, Lynx Analysis Units [LAUs], greater sage grouse habitat in the Vernon and Strawberry Reservoir Management Areas, etc.). Where habitats overlap, the most restrictive standard or guideline will take precedence. No additional winter recreation facilities may be constructed in the areas of this prescription managed as Lynx Analysis Units (LAUs). Leasing stipulations are TL/CSU for all areas except, semi-primitive non-motorized, which is NSO.
- **4.4 Dispersed Recreation:** The emphasis in this prescription is on providing opportunities for and/or facilitating dispersed recreation. This management prescription includes areas of existing or anticipated concentrations of recreational use. Intensive vegetation management may be required to maintain desired conditions. Additional motorized trails may be constructed. Development is limited to a level that facilitates the dispersed recreation experience and addresses resource impacts. Leasing stipulations are TL/CSU for all areas except, semi-primitive non-motorized, which is NSO.
- **4.4 Developed Recreation:** These areas include developed facilities such as campgrounds, boat docks, resorts, and water systems. Because of the large capital investments in these areas, site protection will be paramount. Wildland fire use is not allowed. Intensive vegetation

⁶ In March 2008, the Uinta National Forest and the Wasatch-Cache National Forest were combined into one administrative unit (Uinta-Wasatch-Cache National Forest). Each of these forests continues to operate under individual forest plans approved in 2003. The term "Uinta National Forest Planning Area" is used to refer to the portion of the Uinta-Wasatch-Cache National Forest managed under the 2003 LRMP for the Uinta National Forest.

management may be required to maintain desired conditions. Additional motorized trails may be constructed.

- **5.1 Forested Ecosystems – Limited Development:** Emphasis is on maintaining or restoring vegetation to achieve multiple resource values. Additional motorized trails may be constructed. Management of forested ecosystems enhances wildlife habitats, improves watershed stability, and improves vegetative diversity. Management encompasses the full range of land and resource treatment activities. Additional motorized trails may be constructed. Grazing by livestock is allowed, but forage production for livestock use is limited to meet requirements for wildlife, riparian, water quality, or other objectives. Leasing stipulations are CSU for all areas except, semi-primitive non-motorized, which is NSO.
- **5.2 Forested Areas -Vegetation Management:** Emphasis is on maintaining or restoring vegetation to achieve multiple resource values and provide for multiple uses. Management area direction also includes timber resource goals and objectives, but achievement of high yields is not the primary purpose. The Forest's suitable timber base is located within this management prescription. Timber volumes harvested are applied to the Forest's allowable sale quantity (ASQ). Management encompasses the full range of activities and uses. Road densities and designs are compatible with multiple resource values. Additional motorized trails may be constructed. Recreation and other developments requiring the construction and reconstruction of roads and trails will be considered.
- **6.1 Non-forested Ecosystems:** Emphasis is on maintaining or restoring vegetation conditions to achieve ecosystem health. Additional motorized trails may be constructed. Standard lease terms for all ROS except for semi-primitive non-motorized (NSO) and semi-primitive motorized (CSU).
- **8.2 Utility Corridor/Communication Sites:** Features in these areas may include various non-recreation special uses such as utility corridors or communication sites allocated for long-term site investment. Vegetation management should be limited to activities consistent with installation and maintenance of the utility line or communication site and mitigation against potential erosion and visual quality impacts. Recreation use is limited to incidental dispersed use, such as a trail crossing through the area. Public access restrictions may be imposed within energy transmission, utility, and communication corridors and sites for health, safety, or resource considerations, or to be compatible with management direction for surrounding areas. CSU for all leasing. See other management areas for surrounding area stipulations.

The Uinta National Forest Planning Area is also broken down into geographical management areas that identify desired future condition through these management prescriptions. The management areas units that are within the analysis area are: Upper Spanish Fork Canyon, Diamond Fork, Strawberry Reservoir, Willow Creek, White River, Thistle, Nephi, and Mona.

C.4.5 Dixie National Forest

Reference: Land and Resource Management Plan for the Dixie National Forest, 1986 (USFS 1986d); Utah Northern Goshawk Project Decision Notice (USFS 2000).

In general, all alternatives are in compliance with the 1986 Dixie National Forest LRMP. The following seven management areas could be crossed by the Project.

- **1-General Forest Direction:** Forest-wide general management standards and guidelines apply in this area.
- **2b Roded Natural Recreation:** Management emphasis is for rural and roded-natural recreation opportunities. Motorized and non-motorized recreation activities such as driving for pleasure, viewing scenery, picnicking, fishing, snowmobiling, and cross-country skiing are possible. Conventional use of highway-type vehicles is provided for in design and construction of

facilities. Motorized travel may be prohibited or restricted to designated routes, to protect physical and biological resources. Visual resources are managed so that management activities maintain or improve the quality of recreation opportunities. Management activities are not evident, remain visually subordinate, or may be dominant, but harmonize and blend with the natural setting. Landscape rehabilitation is used to restore landscapes to a desirable visual quality. Enhancement aimed at increasing positive elements of the landscape to improve visual variety is also used.

- **4c Wildlife Habitat - Brushy Range:** Management emphasis is on wildlife habitat in hardwood and shrub-dominated draws and other areas of woody vegetation to sustain their inherent biological, physical, and visual values. Recreational opportunities vary between semi-primitive non-motorized and roaded natural. Management activities may dominate in foreground or middle ground but harmonize and blend in the natural setting. Do not go below VQO of modification. Recreation should not conflict with habitat needs of MIS. Semi-primitive non-motorized, semi-primitive motorized.
- **5a Big-Game Winter Range:** Management emphasis is on winter range for deer, elk, and pronghorn. Treatments are applied to increase forage production of existing grass, forb, and browse species or to alter plant species composition. Investments in compatible resource activities occur. Management activities are not evident, remain visually subordinate, or are dominant in the foreground or middleground but harmonize or blend with the natural setting. New roads other than short-term (temporary) roads are located outside of the management area. Short-term roads are obliterated within one season after intended use. Existing roads are closed and new motorized recreation use is managed to protect unacceptable stress on big game during the primary big game season. Design and implement management activities to blend with the natural landscape Do not go below VQO of modification.
- **6a Livestock Grazing:** The area is managed for livestock grazing through structural and non-structural improvement with associated maintenance Investments are made in compatible resource activities. Dispersed recreational opportunities vary between semi-primitive nonmotorized and roaded natural. Management activities are evident but harmonize and blend with the natural setting. Minimum VQO shall be modification. Design and implement management activities to blend with the natural landscape. Do not go below VQO of modification. When project require clearing of vegetation and/or soils disturbances, use irregular clearing edges and shaped to blend with the natural landscape. Prohibit motorized vehicle use off Forest System roads and trails (except snowmobiles operating on snow) in subalpine and other ecosystems where needed to protect soils, vegetation, or special wildlife habitat.
- **9a Riparian Management:** The goals of management are to provide healthy, self-perpetuating plant communities, meet water quality standards, provide habitats for viable populations of wildlife and fish, and provide stable stream channels and still water body shorelines. The aquatic ecosystem may contain fisheries habitat improvement and channel stabilizing facilities that harmonize with the visual setting and maintain or improve wildlife or fish habitat. Management area is located adjacent to perennial streams and across the forest. Includes aquatic ecosystems. Riparian ecosystem and adjacent eco systems that are within 100 from edges of perennial streams and other waterbodies. Developed recreation restricted/modified within 100-year floodplain. Minimum VQO shall be partial retention.
- **10B Municipal Water Supply Watersheds:** Management emphasis is to protect or improve the quality and quantity of municipal water supplies. Management practices are modified. Allow motorized travel only on established roads and trails. Close watershed to all travel when the road or trail surfaces could be damaged to the degree that water quality would be degraded. Generally roads are not permitted. VQO of retention. Immediately rehabilitate man-caused disturbances and restore burned areas. Inspect rehabilitated areas annually and provide maintenance necessary to protect the watershed. Within riparian areas apply management direction in riparian area management prescription except as amended by the direction in this prescription. Use Chapter 6 of State of Utah Public Drinking Water regulations as a guide.

Provide for special protection zone within 1,500 feet up gradient and 100 feet down gradient of spring sources of Municipal water supplies.

C.4.6 National BMPs for Water Quality Management

Reference: National Best Management Practices for Water Quality Management on National Forest System Lands (USFS 2012).

The USDA has established BMPs to be followed on National Forest System Lands to manage water quality. The BMPs that are applicable to the Project are listed in **Table C.4-6**.

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands

AqEco-2. Operations in Aquatic Ecosystems

Objective: Avoid, minimize, or mitigate adverse impacts to water quality when working in aquatic ecosystems.

Explanation: Common construction or maintenance operations in waterbodies often involve ground disturbance. The close proximity to, and contact with, the waterbody increases the potential for introducing sediment and other pollutants that can affect water quality. This BMP includes practices for minimizing direct and indirect water quality impacts when working in or adjacent to waterbodies.

Practices: See Page 21, Volume 1: National Core BMP Technical Guide

Chem-1. Chemical Use Planning

Objective: Use the planning process to develop measures to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources from chemical use on NFS lands.

Explanation: Pollution risk from chemical use depends on chemical mobility and persistence, application mode and rate, and distance from water. Risk of entry to surface water is highest for broadcast and aerial treatments and for fine droplets. Risk to groundwater is highest over sandy soils, shallow water tables, and groundwater recharge areas. The planning process is the framework for incorporating measures to avoid or minimize impacts to soil and water resources into project design and management to reduce the risk of contamination from chemical use.

Practices: See Page 31, Volume 1: National Core BMP Technical Guide

Chem-2. Follow Label Directions

Objective: Avoid or minimize the risk of soil and surface water or groundwater contamination by complying with all label instructions and restrictions required for legal use.

Explanation: Directions found on the label of each chemical are detailed, specific, and include legal requirements for use. In brief, "...the label is the law..." with respect to chemical use. Not following label directions increases the risk of adverse effects to surface water or groundwater as a result of using chemicals inappropriate to the site, an inappropriate method of application, and an inappropriate application rate (too much or too little) to meet project objectives.

Practices: See Page 32, Volume 1: National Core BMP Technical Guide

Chem-3. Chemical Use Near Waterbodies

Objective: Avoid or minimize the risk of chemical delivery to surface water or groundwater when treating areas near waterbodies.

Explanation: Some chemicals used in terrestrial applications are toxic to aquatic flora and fauna, may overly enrich aquatic systems, and may pose a human health hazard if drinking water sources are contaminated during or after chemical applications. During application, chemicals may drift into waterbodies or other nontarget areas. After application, chemicals or chemical residues may enter surface water or groundwaters through runoff and leaching. Most State and local water quality standards include a general narrative standard that requires surface waters to be free from substances attributable to human-caused discharges in amounts, concentrations, or combinations that are toxic to humans, animals, plants, or aquatic life. To help protect surface waters and wetlands from contamination, a buffer zone of land and vegetation adjacent to the waterbody may need to be designated. Treatment within this zone may differ from that applied to upland areas or the buffer zone may be left untreated if necessary.

Practices: See Page 33, Volume 1: National Core BMP Technical Guide

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands**Chem-5. Chemical Handling and Disposal**

Objective: Avoid or minimize water and soil contamination when transporting, storing, preparing and mixing chemicals; cleaning application equipment; and cleaning or disposing chemical containers.

Explanation: Handling chemicals, chemical containers, and equipment can lead to contamination of surface water or groundwater if not done carefully. Spills, leaks, or wash water can contaminate soil and leach into groundwater. Residue left on containers or equipment can wash off during precipitation events and enter surface waters. Preparing and mixing chemicals and cleaning and disposing of chemical containers must be done in accordance with Federal, State, and local laws, regulations, and directives. Specific procedures are documented in the Forest Service Pesticide Use Management and Coordination Handbook (FSH 2109.14, chapter 40) as well as in State and local laws.

Practices: See Page 35, Volume 1: National Core BMP Technical Guide

Chem-6. Chemical Application Monitoring and Evaluation

Objective: 1. Determine whether chemicals have been applied safely, have been restricted to intended targets, and have not resulted in unexpected nontarget effects.

Explanation: Monitoring of chemical applications is used to evaluate and document chemical application accuracy, amount, and effects on soils and water quality to reduce or eliminate hazards to nontarget biological or physical resources. Monitoring can occur before, during, and after chemical application depending on treatment objectives and monitoring questions. Monitoring methods may include any of the following: visual observations; vegetation surveys; use of spray cards; dye tracing (fluorometry); and sampling of water, soil, sediment, flora, or fauna to measure chemical presence in or near water. Monitoring needs and methods are determined in the project planning process and should consider treatment objectives; resource values at risk; chemical properties; potential for offsite movement; Federal, State, and local requirements; monitoring costs; and available project funding.

Practices: See Page 36, Volume 1: National Core BMP Technical Guide

Fac-1. Facilities and Nonrecreation Special Uses Planning

Objective: Use the applicable special use authorization and administrative facilities planning processes to develop measures to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources during construction and operation of facilities and nonrecreation special uses activities.

Explanation: Facilities may be developed on NFS lands by the Forest Service for a variety of administrative and recreational purposes. Potential effects of the proposed facility construction and operation on water quality should be considered when new sites are created or existing sites are improved and operated. In the planning process, site-specific BMP prescriptions are developed to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources. Facilities developed and operated by others on NFS lands are administered through special use authorizations issued by the Forest Service to public or private agencies, a group, or an individual. Special use permits must include terms and conditions to protect the environment and otherwise comply with the requirements of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1752). These environmental protection requirements include the use of appropriate BMPs to control nonpoint source pollution. State and local governments regulate many activities associated with facility development and operation, such as public water supplies, sanitation systems, waste disposal, and control of stormwater discharges. State or local requirements applicable to these activities should be incorporated into facility design, construction, and operation plans, and terms and conditions during the planning process.

Practices: See Page 40, Volume 1: National Core BMP Technical Guide

Fac-2. Facility Construction and Stormwater Control

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources by controlling erosion and managing stormwater discharge originating from ground disturbance during construction of developed sites.

Explanation: During construction and operation of facility sites, land may be cleared of existing vegetation and ground cover, exposing mineral soil that may be more easily eroded by water, wind, and gravity. Changes in land use and impervious surfaces can temporarily or permanently alter stormwater runoff that, if left uncontrolled, can affect morphology, stability, and quality of nearby streams and other waterbodies. Erosion and stormwater runoff control measures are implemented to retain soil in place and to control delivery of suspended sediment and other pollutants to nearby surface water. This practice is initiated during the planning phase and applied during project implementation and operation.

This BMP contains practices for managing erosion and stormwater discharge that are generally applicable for any project that involves ground disturbance, including developed recreation, mineral exploration and production sites, pipelines, water

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands

developments, etc., and should be used for all such projects.

Practices: See Page 41, Volume 1: National Core BMP Technical Guide

Fac-3. Potable Water Supply Systems

Objective: Provide potable water supplies of sufficient quality and quantity to support the use at facilities.

Explanation: Many facilities provide potable water from a surface water or groundwater source. Water systems should supply an adequate volume of acceptably clean water as needed by the facility. A water system is comprised of collection, treatment, storage, and distribution facilities. Water systems are classified into categories (e.g., public versus nonpublic, community versus noncommunity, and transient versus nontransient) based on ownership, size, and permanence of the population served. Regulations are based on these different categories. Management requirements and controls to protect drinking water quality and provide potable water are incorporated into each facility's operation and maintenance plan (FSM 7410).

Practices: See Page 43, Volume 1: National Core BMP Technical Guide

Fac-4. Sanitation Systems

Objective: Avoid, minimize, or mitigate adverse effects to soil and water quality from bacteria, nutrients, and other pollutants resulting from collection, transmission, treatment, and disposal of sewage and wastewater at facilities.

Explanation: Sanitation systems at facilities vary from a portable toilet to a sophisticated treatment plant. Facilities also may have wastewater systems for showers and washbasins. The type of sanitation system at a facility depends on the purpose and capacity of the site, available and needed infrastructure, Forest Service policy, and State or local regulations. Bacteria, nutrients, and other contaminants from sanitation systems can enter surface water or groundwater if the system is not properly designed and operated. Facilities are required to comply with State and local public health and sanitation ordinances. Management requirements and controls to minimize the possibility of water contamination from wastewater collection, treatment, and disposal are incorporated into each facility's operation and maintenance plan (FSM 7410).

Practices: See Page 44, Volume 1: National Core BMP Technical Guide

Fac-5. Solid Waste Management

Objective: Avoid, minimize, or mitigate adverse effects to water quality from trash, nutrients, bacteria, and chemicals associated with solid waste management at facilities.

Explanation: Uncollected garbage and trash at developed facilities can contaminate water by introducing nutrients, bacteria, or chemicals to the water. Trash can be blown about by the wind or carried by runoff into waterbodies. In addition, uncollected garbage can attract wildlife, which are looking for an easy meal, to the facility.

Practices: See Page 45, Volume 1: National Core BMP Technical Guide

Fac-6. Hazardous Materials

Objective: Avoid or minimize short- and long-term adverse effects to soil and water resources by preventing releases of hazardous materials.

Explanation: Constructing and operating facilities often involve the storage and use of hazardous materials. Improper storage and use can contaminate nearby soils and surface water or groundwater resources.

Practices: See Page 46, Volume 1: National Core BMP Technical Guide

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands**Fac-7. Vehicle and Equipment Wash Water**

Objective: Avoid or minimize contamination of surface water and groundwater by vehicle or equipment wash water that may contain oil, grease, phosphates, soaps, road salts, other chemicals, suspended solids, and invasive species.

Explanation: Washing vehicles and equipment is a common method used to maintain vehicles and minimize the spread of noxious and invasive species. Wash water and the resulting residue removed from vehicles and equipment may contain oils, chemicals, or sediment harmful to water and aquatic resources if not properly contained and treated. Work centers, ranger stations, fire stations, and other facilities may have washing equipment and locations designated for cleaning fleet or contracted vehicles and equipment. Temporary wash locations may also be installed during incident management or project work.

Practices: See Page 47, Volume 1: National Core BMP Technical Guide

Fac-8. Nonrecreation Special Use Authorizations

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources from physical, chemical, and biological pollutants resulting from activities under non-recreation special use authorizations.

Explanation: This BMP covers all non-recreation special use activities with the exceptions of pipelines; transmission facilities and other rights-of-ways; and water diversions, storage, and conveyance. BMP Fac-9 (Pipelines, Transmission Facilities, and Rights-of-Way), BMP WatUses-4 (Water Diversions and Conveyances), and BMP WatUses-5 (Dams and Impoundments) are provided for those activities. The Forest Service role in defining and requiring the use of BMPs occurs during the development of the special use authorization and administration of the use. Discussions between the Forest Service and the permit holder concerning soil, water quality, and riparian resource impacts and appropriate BMPs to use should occur at the time of permit development or renewal. The special use authorization operation and maintenance plan details the conditions that must be met, including management requirements and mitigation measures to protect water quality.

The permit holder will be required to conform to all applicable Federal, State, and local regulations and land management plan direction governing water resource protection and sanitation. State or Federal law may require that the permit holder obtain a pollution discharge permit or other authorization from a State, regional or local government entity. Authorized uses often cover a wide range of activities and may require that BMPs from several management activity categories be included in the authorization.

Practices: See Page 47-48, Volume 1: National Core BMP Technical Guide

Fac-9. Pipelines, Transmission Facilities, and Rights-of-Way

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources during the construction and maintenance of pipelines, powerlines, transmission facilities, and other rights-of-way.

Explanation: Powerlines and pipelines are constructed on NFS land by both public and private agencies under either an easement or special use authorization. Impacts to soil and water resources during transmission corridor and pipeline construction and maintenance include those originating from directional drilling, pipeline testing, soil disturbance, and erosion associated with vegetation removal and road construction. Other water quality impacts could occur from natural events, inappropriate or unauthorized activities, chemical spills, herbicide use, and other maintenance activities.

Measures to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources should be incorporated in the authorization terms and conditions, project plans for construction and design, and the right-of way management plans for ongoing maintenance of vegetation along the corridor.

Practices: See Page 48-49, Volume 1: National Core BMP Technical Guide

Fac-10. Facility Site Reclamation

Objective: Reclaim facilities and surrounding disturbed areas to as near to the predisturbed condition as is reasonably practicable following closure or completion of operations, or as necessary for mitigation purposes, to avoid, minimize, or mitigate long-term adverse effects to soil, water quality, and riparian resources.

Explanation: Abandoned structures and wastes, particularly hazardous materials, at facility sites may pose a safety risk to the public. Lack of ongoing maintenance of facility sites can also threaten surface water and groundwater quality via erosion and chemical leaks as they fall into disrepair. Facility sites should be closed and reclaimed after the need for it ends or the recurrent impacts to resources indicate the site cannot be properly managed with available resources.

Heavily used recreation sites will cause some areas to become denuded and compacted. These disturbed sites may become unstable and begin to erode at accelerated rates if not stabilized. Reestablishing stable grades, functional drainages, some level of site infiltration capacity, and effective ground cover on terrestrial sites and stabilizing substrates impacted by water flow or wave action are necessary to rehabilitate disturbed areas to avoid or minimize water quality and riparian resource degradation.

Disturbances in and immediately adjacent to surface waters, riparian areas, and wetlands should be the highest priority for

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands

reclamation or rehabilitation.

Practices: See Page 50, Volume 1: National Core BMP Technical Guide

Plan-2. Project Planning and Analysis

Objective: Use the project planning, environmental analysis, and decisionmaking processes to incorporate water quality management BMPs into project design and implementation.

Explanation: The project planning, environmental analysis, and decisionmaking process is the framework for incorporating water quality management BMPs into project design and implementation. The process should identify likely direct, indirect, or cumulative impacts from the proposed project or management activities on soils, water quality, and riparian resources in the project area. Project documents (plans, contracts, permits, etc.) should include site-specific BMP prescriptions to meet water quality objectives as directed by the environmental analysis. Project planning should ensure that activities are consistent with land management plan direction; State BMPs, floodplain, wetland, coastal zone; and other requirements including CWA 401 certification, CWA 402 permits, and CWA 404 permits; wilderness or wild and scenic river designations; and other Federal, State, and local rules and regulations.

Practices: See Page 15, Volume 1: National Core BMP Technical Guide

Plan-3. Aquatic Management Zone Planning

Objective: To maintain and improve or restore the condition of land around and adjacent to waterbodies in the context of the environment in which they are located, recognizing their unique values and importance to water quality while implementing land and resource management activities.

Explanation: The land around and adjacent to waterbodies plays an important ecologic role in maintaining the structure, function, and processes of the aquatic ecosystem. These areas provide shading, soil stabilization, sediment and water filtering, large woody debris recruitment, and habitat for a diversity of plants and animals. The quality and quantity of water resources and aquatic habitats may be adversely affected by ground-disturbing activities that occur on these areas. Because of the importance of these lands, various legal mandates have been established pertaining to management of these areas, including, but not limited to, those associated with floodplains, wetlands, water quality, endangered species, wild and scenic rivers, and cultural resources. Protection and improvement of soil, water, and vegetation are to be emphasized while managing these areas under the principles of multiple use and sustained yield. Riparian-dependent resources are to be given preferential consideration when conflicts among land use activities occur.

Designation of a zone encompassing these areas around and adjacent to a waterbody is a common BMP to facilitate management emphasizing aquatic and riparian-dependent resources. These management zones are known by several common terms such as streamside management area or zone, riparian management area, stream environment zone, and water influence zone. For purposes of the National Core BMPs, these areas will be referred to as AMZs.

AMZs are intended to be large enough to protect a waterbody and its associated beneficial uses and aquatic and riparian ecosystems. AMZs along streams and rivers may be linear swaths extending a prescribed distance from a bank, though widths are usually adjusted to include features such as riparian vegetation and unstable landforms as well as critical floodplain components necessary to sustain waterbody integrity and protect beneficial uses. AMZ areas around wetlands, lakes, and other nonlinear features may be irregular in shape to encompass sensitive riparian areas and other water-dependent features.

Local regulation often stipulates the area and extent of AMZs and may be listed in land management plans; biological opinions, evaluations, or assessments; and other regional or State laws, regulations, and policies. Virtually all States have BMPs that include AMZs, as do most land management plans.

Practices: See Page 17, Volume 1: National Core BMP Technical Guide

Road-1. Travel Management Planning and Analysis

Objective: Use the travel management planning and analysis processes to develop measures to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources during road management activities.

Explanation: Road management related planning includes travel analyses as well as consideration of road management objectives and maintenance levels to address access needs and adjustments for projects. Planning occurs at scales that range from forestwide assessments and plans, to watershed scale or project-level analyses, to individual road activities. Effects to soil, water quality, and riparian resources are evaluated during planning and balanced with the social, economic, and land management needs of the area. Appropriate protection and mitigation measures are considered when soil, water quality, and riparian resources may be adversely impacted.

Travel analysis is conducted at a scope and scale determined by the line officer and used to inform future project decisions on the benefits and risks of, as well as the ongoing need for, the transportation system. Project-level travel analyses are conducted to inform decisions and facilitate vegetation, fire and fuels, rangeland, recreation, minerals, or other management actions. Such analyses contain detail on the condition of individual roads. Options for road management are shown in figure 3.

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands

Road Management Objectives (RMOs) are developed and documented for each system road and include the intent and purpose in providing access to implement the land management plan. In addition to considering route needs at the site scale, RMOs also document the purpose of the road (access needs) along with operational maintenance levels and objectives.

Practices: See Page 105-107, Volume 1: National Core BMP Technical Guide

Road-2. Road Location and Design

Objective: Locate and design roads to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources.

Explanation: Roads are located according to standards and specifications to meet their use objectives while protecting other resources. Well-defined project objectives are needed to locate and design roads that will best address environmental and resources issues as well as road use, safety, and traffic requirements.

New roads can be designed to avoid or minimize adverse effects to soil, water quality, and riparian resources, while existing roads may need to be redesigned or relocated to mitigate such effects. Management needs have changed considerably since most NFS roads were constructed. Influences of roads on aquatic and riparian systems are currently better understood.

Designs for improvements to existing roads often revise the original design to change location, drainage, crossing type or size, or surfacing. Improvements to the road system are made on a priority basis that considers road and resource condition, values at risk, available funding, and cost. In addition, some situations may require adherence to special conditions associated with Clean Water Act (CWA) 401 certification, CWA 402 permits, and CWA 404 permits. State and local entities may also provide guidance and regulations such as a Forest Practices Act or a Stream Alteration Act. Land management plans often contain direction on location of roads relative to streams, wetlands, and unstable landforms.

Practices: See Page 108-109, Volume 1: National Core BMP Technical Guide

Road-3. Road Construction and Reconstruction

Objective: Avoid or minimize adverse effects to soil, water quality, and riparian resources from erosion, sediment, and other pollutant delivery during road construction or reconstruction.

Explanation: During road construction and reconstruction activities, vegetation and ground cover is removed exposing soil to erosion. Temporary and long-term erosion control and stormwater management measures are necessary to reduce erosion and maintain overall slope stability. These erosion control measures may include vegetative and structural practices to ensure long-term stability of the area.

Practices: See Page 110-111, Volume 1: National Core BMP Technical Guide

Road-4. Road Operations and Maintenance

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources by controlling road use and operations and providing adequate and appropriate maintenance to minimize sediment production and other pollutants during the useful life of the road.

Explanation: Control of road use and operations and appropriate maintenance can protect road investment and soil, water quality, and riparian resources. Periodic inventory and assessment that determine road condition are used to determine operational controls and maintenance needs.

Operational objectives and activities are documented in the RMOs. In travel management decisions, roads open to motorized vehicle use are designated by allowed vehicle class and, if appropriate, by time of year. Road operations include administering permits, contracts, and agreements, controlling allowed use, maintaining roads in closed status, and revising maintenance levels and seasonal closures as needed. Road closures and restrictions are necessary because many forest roads are designed for dry season use. Many local roads are not surfaced; while others have some surfacing but little to no base. Such roads can be damaged by use during wet periods or by loads heavier than the road was designed to convey. Properly maintained road surfaces and drainage systems can reduce adverse effects to water resources by encouraging natural hydrologic function. Roads and drainage systems normally deteriorate because of traffic, weather, and age.

In addition, roads occasionally become saturated by groundwater springs and seeps after a wildfire or unusually wet periods. Many such conditions can be corrected by timely maintenance. While routine maintenance is needed to ensure the road performs as designed, however, it can also be a source of soil disturbance, concentrated flow, sediment production, and slope instability if done improperly. Lower impact maintenance techniques may be desired to minimize disturbance of stable sites.

Practices: See Page 112-114, Volume 1: National Core BMP Technical Guide

Road-5. Temporary Roads

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources from the construction and use of

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands

temporary roads.

Explanation: Temporary roads may be used in situations where access needs are short-term and the roads can be constructed without requiring advanced engineering design or construction practices to avoid, minimize, or mitigate adverse effects to resources. Practices related to road location and stormwater and erosion control should be applied to temporary roads. Temporary roads are to be decommissioned and the area returned to resource production after the access is no longer needed.

Practices: See Page 114-115, Volume 1: National Core BMP Technical Guide

Road-6. Road Storage and Decommissioning

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources by storing closed roads not needed for at least 1 year (Intermittent Stored Service) and decommissioning unneeded roads in a hydrologically stable manner to eliminate hydrologic connectivity, restore natural flow patterns, and minimize soil erosion.

Explanation: Roads not needed for access for long periods (greater than 1 year) may be put into storage (Intermittent Stored Service—Maintenance Level 1) to reduce maintenance costs. Level 1 roads receive basic custodial maintenance focusing on maintaining drainage facilities and runoff patterns to avoid or minimize damage to adjacent resources and to perpetuate the road for future use. The integrity of the roadway is retained to the extent practicable and measures are implemented to reduce sediment delivery from the road surface and fills and reduce the risk of crossing failure and stream diversion. Roads no longer needed are identified during transportation planning activities at the forest, watershed, or project level. The former road may be decommissioned or converted to a trail as appropriate. Decommissioned roads are stabilized and restored to a more natural state to protect and enhance NFS lands. Temporary roads constructed for a specific short-term purpose (e.g., ski area development, minerals exploration, or timber harvesting) are decommissioned at the completion of their intended use. Road decommissioning includes a variety of treatments to block the road, revegetate the road surface, restore surface drainage, remove crossing structures and fills, mitigate road surface compaction, re-establish drainageways, remove unstable road embankments, and recontour the surface to restore natural slopes. One or more treatments are applied to decommission the road depending on resource objectives and cost.

Practices: See Page 115-117, Volume 1: National Core BMP Technical Guide

Road-7. Stream Crossings

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources when constructing, reconstructing, or maintaining temporary and permanent waterbody crossings.

Explanation: Forest and grassland management activities often occur in areas that require surface waters to be crossed. Depending on the activity type and duration, crossings may be needed permanently or temporarily. Permanent crossings, in general, are more durable and are designed by an engineer to meet applicable standards while also protecting water quality and riparian resources. Examples of crossings include culverts, bridges, arched pipes, low-water crossings, vented fords, and permeable fills. Crossing materials and construction will vary based on the type of access required, duration of need, and volume of use expected. Crossings should be designed and installed to provide for flow of water, bedload, and large woody debris, desired aquatic organism passage, and to minimize disturbance to the surface and shallow groundwater resources. Construction, reconstruction, and maintenance of a crossing usually requires heavy equipment to be in and near streams, lakes, and other aquatic habitats to install or remove culverts, fords, and bridges, and their associated fills, abutments, piles, and cribbing. Such disturbance near the waterbody can increase the potential for accelerated erosion and sedimentation by altering flow paths and destabilizing streambanks or shorelines, removing vegetation and ground cover, and exposing or compacting the soil. Use of heavy equipment has a potential for contaminating the surface water from vehicle fluids or introducing aquatic nuisance species. Some crossings may require adherence to special conditions associated with CWA 401 certification or CWA 404 permits. State and local entities may also provide guidance and regulations such as a Forest Practices Act or a Stream Alteration Act.

Practices: See Page 117-120, Volume 1: National Core BMP Technical Guide

Road-8. Snow Removal and Storage

Objective: Avoid or minimize erosion, sedimentation, and chemical pollution that may result from snow removal and storage activities.

Explanation: Snow removal from roads and parking areas may adversely affect water quality and riparian resources in several ways. Plowing may physically displace native or engineered surfaces on roads, damage drainage structures, or alter drainage patterns. Plowing may also remove protective soil cover (e.g., vegetation or mulch). These changes can result in concentrated flow, increased erosion, and greater risk of sediment delivery to waterbodies. Snow piled in large mounds or berms, or in sensitive areas, may contribute to increased run-off, hill slope erosion, mass slope instability, and in-channel erosion from snowmelt. Snow stored in riparian areas and floodplains may compact soils, break or stunt vegetation, or

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands

channel runoff in undesirable patterns, thereby weakening the buffering capacity of these areas. Additionally, both snow removal and storage may result in additions of salts or fine aggregates used for de-icing or traction control and other vehicle pollutants directly to surface water and indirectly to both surface water and groundwater during runoff.

Practices: See Page 121-122, Volume 1: National Core BMP Technical Guide

Road-9. Parking and Staging Areas

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources when constructing and maintaining parking and staging areas.

Explanation: Parking and staging areas on NFS lands may be permanent or temporary and are associated with a variety of uses including administrative buildings, developed recreation sites, trailheads, and forest management projects. These parking facilities sometimes constitute large areas with little or no infiltration capacity. Runoff from these areas can create rills or gullies and carry sediment, nutrients, and other pollutants to nearby surface waters.

Practices: See Page 122-123, Volume 1: National Core BMP Technical Guide

Road-10. Equipment Refueling and Servicing

Objective: Avoid or minimize adverse effects to soil, water quality, and riparian resources from fuels, lubricants, cleaners, and other harmful materials discharging into nearby surface waters or infiltrating through soils to contaminate groundwater resources during equipment refueling and servicing activities.

Explanation: Many activities require the use and maintenance of petroleum-powered equipment in the field. For example, mechanical vegetation management activities may employ equipment that uses or contains gasoline, diesel, oil, grease, hydraulic fluids, antifreeze, coolants, cleaning agents, and pesticides. These petroleum and chemical products may pose a risk to contaminating soils, surface water, and groundwaters during refueling and servicing the equipment. BMP Fac-6 (Hazardous Materials) provides additional guidance for handling hazardous materials.

Practices: See Page 123-124, Volume 1: National Core BMP Technical Guide

Road-11. Road Storm-Damage Surveys

Objective: Monitor road conditions following storm events to detect road failures; assess damage or potential damage to waterbodies, riparian resources, and watershed functions; determine the causes of the failures; and identify potential remedial actions at the damaged sites and preventative actions at similar sites.

Explanation: Large storms stress road systems in multiple ways: large volumes of water are transported on road surfaces and through its drainage systems; significant volumes of water and debris are transported through stream crossings; and elevated pore pressures on unstable hillslopes, road cutslopes, and fillslopes sometimes generate mass failures. All road drainage systems, stream crossings with culverts, and unstable slopes have the potential to fail during periods of high runoff. The probabilities of failure differ greatly, and the potential consequences to water quality and designated uses vary dramatically from no impacts to severe and long-term impacts to aquatic systems. Surveying roads during or soon after storms is critical to timely detection of these problems. Observation of problems caused by storm runoff is of great value in understanding both the causes of failure and in adapting designs and prescriptions that reduce both the probability and consequences of future road failures. Over time, this kind of monitoring illustrates how and where roads can fail and points readily to practice modifications that can reduce adverse effects to water quality and watershed function.

The Emergency Relief for Federally Owned Roads (ERFO) Program is intended to help assess and fund the unusually heavy expenses associated with repairing and reconstructing Federal roads and bridges seriously damaged by a natural disaster over a wide area or catastrophic failure. To qualify for this type of funding, applications for repair must be submitted to the Federal Highways Administration through the ERFO program (FSM 7700).

Practices: See Page 125, Volume 1: National Core BMP Technical Guide

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands**Veg-1. Vegetation Management Planning**

Objective: Use the applicable vegetation management planning processes to develop measures to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources during mechanical vegetation treatment activities.

Explanation: Vegetation on NFS lands is managed for a variety of purposes to achieve land management plan desired conditions, goals, and objectives for many resources. Planning for vegetation management generally follows a sequence of steps. The gathering and assessment of data involves evaluating the current condition of the vegetation compared to land management plan desired conditions, goals, and objectives. Potential vegetation treatment options to move the site towards desired conditions are developed and compared. Detailed treatment prescriptions are prepared to implement the preferred treatment option. The project is subjected to the National Environmental Policy Act (NEPA) analysis process where alternatives are developed and effects are analyzed. A decision is made and implemented. During the development of vegetation treatment prescriptions and alternatives, site specific measures consistent with BMP guidance to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resource are identified and included in the project as design criteria or mitigation measures. These BMP prescriptions are incorporated into the timber sale contract, stewardship contract, or project plan.

Vegetation management for scheduled timber harvest on NFS lands has additional specific requirements from the National Forest Management Act that are incorporated into the project in the planning process. Scheduled timber harvest can occur only where watershed conditions will be maintained, lands can be adequately restocked within 5 years after final regeneration harvest, and water quality will be protected.

Practices: See Page 129, Volume 1: National Core BMP Technical Guide

Veg-2. Erosion Prevention and Control

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources by implementing measures to control surface erosion, gully formation, mass slope failure, and resulting sediment movement before, during, and after mechanical vegetation treatments.

Explanation: Prevention and control of erosion on areas undergoing mechanical vegetation treatments is critical to maintaining water quality. The process of erosion control has three basic phases: planning, implementation, and monitoring. During planning, areas subject to excessive erosion, detrimental soil damage and mass failure can be identified and avoided. Also during planning, treatments can be designed and units laid out to minimize or mitigate damage to soils, streambanks, shorelines, wetlands, riparian areas, and water quality. Planning for erosion control is addressed in BMP Plan-2 (Project Planning and Analysis) and BMP Veg-1 (Vegetation Management Planning). Suitable erosion control measures are implemented while the mechanical vegetation treatment is ongoing and following project completion. Inspection and maintenance of implemented measures will ensure their function and effectiveness over their expected design period.

The potential for accelerated erosion or other soil damage during or following mechanical treatments depends on climate, soil type, site conditions, and type of equipment and techniques used at the site. Erosion control measures are grouped into two general categories: structural measures to control and treat runoff and increase infiltration and nonstructural measures to increase ground cover. Many erosion control handbooks, technical guides, and commercial products are available. Both structural and nonstructural measures require onsite expertise to ensure proper design and implementation to conform to local site characteristics.

Practices: See Page 131-132, Volume 1: National Core BMP Technical Guide

Veg-3. Aquatic Management Zones

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources when conducting mechanical vegetation treatment activities in the AMZ.

Explanation: Designation of an AMZ around and adjacent to waterbodies is a typical BMP to avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources. Mechanical vegetation treatments are a tool that can be used within the AMZ to achieve a variety of resource-desired conditions and objectives when implemented with suitable measures to maintain riparian and aquatic ecosystem structure, function, and processes. Depending on site conditions and resource desired conditions and objectives, mechanical vegetation treatments in the AMZ could range from no activity or equipment exclusion to purposely using mechanical equipment to create desired disturbances or conditions. When treatments are to be used in the AMZ, a variety of measures can be employed to avoid, minimize, or mitigate soil disturbance, damage to the waterbody, loss of large woody debris recruitment, and shading, and impacts to floodplain function.

Practices: See Page 132-134, Volume 1: National Core BMP Technical Guide

Table C.4-1 National BMPs for Water Quality Management on National Forest System Lands**Veg-8. Mechanical Site Treatment**

Objective: Avoid, minimize, or mitigate adverse effects to soil, water quality, and riparian resources by controlling the introduction of sediment, nutrients, chemical, or other pollutants to waterbodies during mechanical site treatment.

Explanation: Mechanical treatments are used to remove or reduce the amount of live and dead vegetation on a site to meet management objectives, such as site preparation for reforestation, fuel treatments to reduce fire hazards, wildlife habitat improvement, recreation access, utility corridor maintenance, and other activities that require removing vegetation from specified areas on a periodic and repeated basis. Mechanical treatments include cutting and piling; chipping or mulching; roller chopping or masticating using heavy equipment; and pushing over vegetation. Disturbance from mechanical site treatments can expose and compact soils, resulting in accelerated runoff and erosion.

Practices: See Page 139, Volume 1: National Core BMP Technical Guide

C.5 Additional Mitigation Measures Prescribed for the TWE Project

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
Climate and Air Quality (Final EIS Section 3.1)	
AQ-1	In Region II, the Alternative II-B transmission line route passes within about 10 miles of Arches National Park. No concrete batch plants would be located within 30 miles of Arches National Park; therefore, concrete required for structure foundations should be acquired from local sources in the vicinity of Moab.
AQ-2	In Region III, Alternative III-A passes within about 20 miles of Zion National Park. No concrete batch plants would be located within 30 miles of Zion National Park; therefore, concrete required for structure foundations should be acquired from local sources in the vicinity of Cedar City or St. George, Utah.
AQ-3	The Clark County nonattainment area is located in both Region III and Region IV. No new concrete batch plants are to be located within the nonattainment area; concrete required for structure foundations and other construction are to be acquired from existing local vendors.
Geological, Paleontological, and Mineral Resources (FINAL EIS Section 3.2)	
GE-1	In areas with geologic hazards (e.g., ground shaking, liquefaction, landslides, subsidence from karst, groundwater withdrawal, underground mining, and historic mining) and active mining; placement of Project structures and other Project related disturbance would be avoided to the extent practical. Where avoidance is not possible a site-specific geotechnical investigation and engineering design would be implemented during construction and operation of the Project. Depending on the type of potential geologic hazards, the designs may vary and should address specific needs for enhanced structural supports. Site-specific assessment of geologic hazards shall include review of available information concerning areas of mapped hazards and consultation with appropriate governmental agency (USFS, BLM, UGS, USGS) personnel who are knowledgeable about the hazards. Assessment also shall include, if necessary, field surveys and gathering of geotechnical information to determine what engineering design methods would mitigate or lessen potential risks. If active mines cannot be avoided, applicant will conduct similar due diligence in regard to hazards from underground and historic mining to ensure that Project facilities will not hinder access to mineral resources or create dangers to mining activities.
Soil Resources (FINAL EIS Section 3.3)	
S-1	Where permanent facilities or structures would be located, the entire topsoil horizon would be salvaged for use in reclamation, prior to surface disturbance. Topsoil would be spread evenly around the permanent structure (not left in piles) and revegetated for future use.
S-2	Construction, excavation, or re-spreading with frozen or saturated soils would be prohibited.
S-3	During reclamation, compacted areas (typically any area that receives repeated traffic or 3 or more passes by heavy equipment) would be decompacted, to the depth of compaction, by subsoiling, paraplowing, or parabolic ripping on the contour to the depth of compaction. This would help prepare the seed bed, encourage infiltration and help to prevent accelerated runoff and erosion. Scarification would only be used on shallow soils. Compaction depth would be determined on a case by case basis, by a qualified environmental inspector or soil scientist.
S-4	During decommissioning, where a soil sterilizer has been applied, sterile soils would be removed prior to the replacement of topsoil and seeding.
S-5	Surface activities would be prohibited when soils or road surfaces become saturated to a depth of 3 inches or less if mixing of the topsoil and subsoil would occur or the soil surface becomes unsafe for vehicular travel.
S-6	During construction, erosion control measures would be inspected after every storm event and maintained.
S-7	Permanent access roads would not be constructed on slopes over 25 percent.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
S-8	<p>Temporary and permanent access roads would be gated to restrict motorized use by the public. In some instances, other methods may need to be employed to prevent public access. After construction is complete, permanent access roads would remain gated at the land management agency or landowner's discretion. If the road is no longer needed for operations, it would be obliterated with the following procedures or in accordance with the land-managing agencies direction:</p> <ol style="list-style-type: none"> 1. Remove all stream crossings and restore stream banks to natural contours; 2. Reestablish natural drainage patterns; 3. Decompact the road surface by subsoiling along the entire disturbed length; 4. Recontour the road prism to the original land contours; 5. Seed with an agency or landowner approved seed mixture; and 6. Gates and closure signage should be left in place until adequate regeneration/rehabilitation occurs.
S-9	Excess subsoil that is excavated for foundations would not be spread on the soil surface (on top of topsoil) or on access roads. Excess subsoil would be disposed of in accordance with federal, state, and local requirements.
S-10	Prime farmlands would be avoided to the extent possible for permanent Project facilities and structure foundations.
S-11	Permanent erosion control measures would be installed on all project access roads used for operations and maintenance. Erosion control measures would be inspected and maintained bi-annually.
S-12	This mitigation measure was removed after review of the Draft EIS.
S-13	Follow-up seeding using native seed or corrective erosion control measures would be required on areas of surface disturbance that experience reclamation failure.
Water Resources (FINAL EIS Section 3.4)	
WR-1	Existing stream crossings would be utilized wherever requested by agencies. This would be developed on a site-specific basis during POD development. Stream crossings would be maintained as appropriate.
WR-2	When existing crossings were not used, drive through (Arizona) crossings would not be utilized when un-protected (bare soil) streambeds are wet or when the stream is flowing water.
WR-3	As part of the ROW Grant and prior to the final agency authorization for construction, TransWest would consult with federal agencies having land jurisdiction regarding location and design of access roads and temporary work areas near impaired streams to avoid erosion and sedimentation effects. The proposed design and location of new and upgraded access roads and temporary work areas within watersheds (HUC10) containing sediment- or ion-impaired waters (according to 303(d) lists) would be provided by TransWest to the agencies upon completion of conceptual design of these facilities. The agencies would coordinate and provide input (as deemed applicable by the agencies) to TransWest for modification of locations and designs within TransWest's final engineering schedule to prevent the Project from contributing additional sediment to impaired waters.
WR-4	As part of the Erosion Control Plan, TransWest would include monitoring of erosion and sedimentation effects that would be recorded as part of the construction stormwater permits. In the event that the agencies deem erosion control measures ineffective, the agencies and TransWest would coordinate to develop additional measures for TransWest to implement for erosion control.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
Vegetation (FINAL EIS Section 3.5)	
NX-1	<p>The noxious weed management plan to be developed as part of the COM Plan would include the following:</p> <ol style="list-style-type: none"> 1. Pre-construction surveys for noxious weeds in the footprints of the ROW, access roads, and ancillary facilities; 2. Pre-construction weed control; 3. Education of construction and operation personnel in each Project region; 4. Washing of vehicles and equipment before entering and leaving the ROW; 5. Herbicide spraying; and 6. Annual monitoring and reporting. <p>Survey information collected during pre-construction surveys would include species name, GPS location of weed infestations, percent cover, and approximate size of weed infestations. Control of noxious and invasive species could include chemical, physical, and biological methods and would be developed in consultation with the land agencies and private landowners. The plan would identify species of concern for each BLM FO and USFS forest and would focus monitoring and control methods on these species. The plan would comply with the existing BLM, USFS, USFWS, state, and federal regulations concerning noxious weed management. Post construction annual monitoring would be determined with the appropriate land management agencies.</p>
NX-2	<p>Herbicide spraying would be conducted following all applicable state and federal laws regarding chemical use, adverse weather, chemical storage, and chemical drift. Further guidelines and protocols for herbicide spraying on BLM land are provided in the Final BLM Vegetation Treatment Using Herbicides Programmatic EIS (BLM Vegetation EIS) (BLM 2007). Standard operating procedures for herbicide spraying include buffers for sensitive areas such as riparian and wetland areas and threatened and endangered species habitat, timing restrictions, and safety protocols. No aerial spraying of herbicides would be permitted within 500 feet of known sensitive species with hand-only application methods allowed.</p>
NX-3	<p>On lands managed by the BLM, an approved Pesticide Use Proposal (PUP) would be obtained from each BLM FO prior to herbicide spraying. PUPs would have site-specific information about the herbicides to be used. The PUPs and associated reporting requirements would be submitted in accordance with the schedule required for each BLM FO. Herbicide spraying in desert tortoise habitat in Nevada would require consultation with the BLM and USFWS.</p>
NX-4	<p>The cut-stumps of mature salt cedar stands that are cut as part of vegetation clearing would be immediately painted with herbicides. The specific control methods and herbicide to be used would be determined in consultation with the appropriate state or federal land-managing agencies. Additional control measures could include the planting of native or desired plant species following treatment to provide erosion control and the use of biocontrols.</p>
VG-1	<p>Native seed mixes to be used for reclamation would be developed in consultation with the land managers for the various regions crossed by the Project. Seed mixes would meet the requirements of the individual agency FOs crossed by the Project. Site-specific seed mixes for soils with LRP would be developed. The LRP seed mixes would be specifically designed for alkaline, saline, or sodic soils and would be used in areas where reclamation would potentially be difficult based on soil conditions. Additional soil amendments may be required in these areas, and would be implemented at the direction of the land manager. Reclaimed areas would be monitored annually by the Applicant to ensure successful reclamation is occurring. The length of time for the annual monitoring and the definition of successful reclamation would be determined by the appropriate land management agency. Subsequent actions in areas without successful reclamation would be determined in consultation with the appropriate land management agency.</p>
VG-2	<p>This mitigation measure was removed after review of the Draft EIS.</p>
VG-3	<p>A vegetation reclamation and monitoring plan would be developed as part of the COM Plan. The reclamation monitoring plan would define reclamation success for each vegetation type and management agency, list reclamation seed mixes, and detail reclamation monitoring for both interim and final reclamation. Interim and final reclamation success would be monitored quarterly for the first year, and then annually for at least 3 years, or until reclamation success as defined by each land management agency crossed by the Project, is achieved. Reporting of construction, reclamation progress, and monitoring results would be submitted to each land management agency per each office's reporting requirements.</p>

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
VG-4	During vegetation clearing, if chipping and spreading woody material in the ROW, wood chips would not exceed 3 inches in depth. Chips would be distributed in discontinuous patches that would not result in a continuous chip mat (less than 40 percent of surface covered by 3 inches of chips).
VG-5	Masticated material spread in the ROW would not exceed a depth of 3 to 6 inches. Materials would be distributed in discontinuous patches that would not result in a continuous chip mat (less than 40 percent of surface covered 3 to 6 inches thick).
WET-1	Wetland surveys would be conducted at terminals, above the ROW, at ancillary facilities, and along proposed access roads corridors to identify wetlands, waters of the U.S., and riparian areas located in these areas. Survey information collected would include wetland type, type and cover of hydrophytic and riparian vegetation species present, soil characteristics, site hydrology, Global Positioning System (GPS) location of the wetland, and associated information required to determine jurisdictional status. Based on survey results, no surface disturbance including temporary and permanent facilities, the placement of fill material or vegetation clearing for storage, parking, construction activities, or construction work areas as feasible would occur within the avoidance buffer or surface use restriction defined in the resource management plan for each BLM FO and USFS national forest. If avoidance is not feasible, USACE, BLM, USFS, and USFWS crossing and construction techniques for wetlands and riparian areas would be employed. The wetland crossing and construction techniques would be approved by the USACE, BLM, USFS, and USFWS and will be outlined in the Final POD.
WET-2	For any features identified during field surveys as jurisdictional under the USACE and USEPA guidance under Section 4 of the CWA, consultation with the USACE will occur prior to construction. Mitigation for these features would be determined in consultation with the USACE and BLM.
WET-3	Access roads would be routed around riparian areas, wetlands, intermittent or perennial drainages, and ephemeral channels to the extent practical. If jurisdictional wetlands or waters of the U.S. cannot be avoided, USACE approved construction techniques for construction in wetlands and waters of the U.S. would be applied. BLM and USFS construction techniques for non-jurisdictional wetlands, riparian areas, intermittent drainages, and ephemeral channels would be applied on BLM and USFS lands, as appropriate. These include the use of timber mats, erosion controls, and the placement of equipment outside of the wetland, riparian area, intermittent drainage, and ephemeral channel boundaries.
Special Status Plant Species (FINAL EIS Section 3.6)	
SS-1	(Species-specific Surveys) – Species requiring surveys would be identified by the BLM and Western in consultation with the appropriate agency. For the species that are identified as requiring surveys, site- and species-specific surveys would be conducted. The timing and methodology of the surveys would be determined by the BLM in consultation with the appropriate agency and the Applicant. Surveys would be conducted in areas identified as potential habitat through models developed for the EIS or from agency-provided models for specific species. If individuals or populations are identified during surveys in potential habitat areas, species-specific avoidance through structure and ROW design modifications would be developed and implemented. For species that cannot be avoided, species-specific mitigation would be developed in consultation with the appropriate agency and BLM. Species-specific mitigation may include compensatory mitigation and transplanting of individuals. For federally listed species, the species-specific mitigation would be identified as conservation measures in the BA. For Forest Service Sensitive species, field surveys of sensitive plant species may be required to delineate the entire contiguous patch or population of species intersected by the <i>250-foot wide transmission line</i> ROW (not just those plants that fall within the <i>250-foot wide transmission line</i> ROW) and species-specific mitigation would be described in the BE.
SS-2	(Avoidance of Ute Ladies'-tresses Orchid Species and Habitat) – Known individuals and populations and areas identified as suitable habitat through consultation with the USFWS would be spanned by the transmission line. Surface disturbance associated with facilities, access roads, and other Project related construction activities would not occur within the areas identified as suitable habitat or as having known occurrences. A minimum 300-foot buffer distance would be incorporated between known occurrences and surface disturbance. Presence of species in modeled habitat would be assumed for ESA Section 7 consultation purposes. If potential habitat cannot be avoided, 2 years of surveys in potential habitat would be required and formal consultation may be necessary.
SS-3	Construction would occur downslope of special status plants and populations where feasible. If surface disturbance must be sited upslope, erosion controls would be implemented at the direction of the BLM, USFS, or USFWS, as appropriate, to prevent sedimentation and erosion from upslope surface disturbance. Additional buffer distances greater than the minimum 300-foot buffer distance described in measure SS-4 may be required.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SS-4	A minimum 300-foot buffer distance would be established between federally listed individuals, field verified suitable habitat, populations and surface disturbance. Avoidance areas would be visible during construction through fencing, signing, rebar, etc. Construction and operation traffic would stay on designated routes and other cleared or approved areas.
SS-5	The Dust Control and Air Quality Plan would include dust abatement measures to minimize impacts to special status plant species, including use of slower speed limits on unpaved roads, gravel on roads in occupied habitat and avoidance areas, and the application of water for dust abatement.
SS-6	Prior to vegetation management activities, including vegetation removal, herbicide use, and ORV access, within federally listed occupied habitat, the applicant will coordinate with the USFWS and BLM to minimize impacts to federally listed and candidate species.
SS-7	<p>To avoid and minimize impacts to the Deseret milkvetch, TransWest would coordinate with the BLM and USFWS to implement appropriate mitigation measures during construction, including but not limited to:</p> <ol style="list-style-type: none"> 1. If the Project can avoid all suitable habitat (as modeled) and occupied habitat (as documented) with a 300-foot buffer, no surveys are necessary. If avoidance of suitable habitat is not possible, surveys will be performed within 300 feet of the Project area to determine occupancy prior to construction or 400 feet if upslope of suitable or occupied habitat. 2. If surveys are necessary, they must be performed by qualified individual(s) and according to USFWS accepted survey protocols. Surveys will be conducted during the flowering and/or fruiting period when the plant can be detected and correctly identified. Surveys will be valid for one calendar year. 3. No new development or permanent ground disturbance, including but not limited to poles, pads, towers, etc., will occur within a 300 foot buffer of suitable or occupied Deseret milkvetch habitat. If construction activities occur upslope of suitable or occupied habitat, the buffer may be increased to 400 feet to prevent additional erosion within the habitat. 4. Wire will be strung between towers aerially with no ground disturbance in suitable or occupied Deseret milkvetch habitat. 5. No new roads will be established within a 300 foot buffer of suitable or occupied Deseret milkvetch habitat. If construction activities occur upslope of suitable or occupied habitat, the buffer may be increased to 400 feet to prevent additional erosion within the habitat. 6. Existing access roads will be utilized to the extent practicable to limit additional fragmentation within the species' habitat from new road development. 7. The existing access road to the north of Birdseye that connects to Blind Canyon Road contains plants alongside the road and within 300 feet of the road edge. If this road will be used, formal consultation that incorporates the following conservation measures is recommended: <ol style="list-style-type: none"> a. Existing road sections where the plants occur will not be bladed or widened. b. A 300 foot buffer will be maintained between the edge of disturbance from blading or widening activities and individual plants. Widening of existing roads will not occur if occupied habitat is immediately upslope or downslope of the existing road. c. This road will not be used during the flowering period of Deseret milkvetch, between May 1 and June 30 to minimize the impact of dust on pollination and reproduction. d. This road may be used during the active growing season, outside the flowering period: March 1 through April 30 and July 1 through August 31. During these time periods, dust abatement will be employed during all phases of construction, maintenance, and operation. 8. For the existing road to the south of Birdseye, if plants are found within 300 feet of the road edge, formal consultation that incorporates the conservation measures identified in #7 is recommended. 9. Occupied Deseret milkvetch habitats within 300 feet of the edge of newly installed roads, poles, pads, towers, etc. shall be monitored for a period of 3 years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the USFWS and the Utah Natural Heritage Program.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
<p>SS-7 (Cont.)</p>	<p>10. All Project employees, including contractors, brought onsite for the duration of the construction project and ongoing maintenance activities will be informed of the occurrence of Deseret milkvetch in the project area and of the threatened status of the species. Maps with areas of avoidance, including buffers, will be provided to all employees accessing the project area. A qualified biologist or botanist is required to perform this instruction and update maps as necessary.</p> <p>11. A qualified biologist or botanist must be on-site pre-construction to clearly mark or flag avoidance areas so they are visible during construction. The same qualified personnel will be present during construction to monitor avoidance of these areas. A post-construction report documenting compliance and non-compliance with these measures will be prepared by the qualified personnel and submitted to USFWS no later than 1 month post-construction.</p> <p>12. All equipment will be cleaned and inspected for presence of invasive, non-native plants and seeds before being brought in suitable habitat.</p> <p>13. Post-construction, the project will provide a GIS-shapefile or documentation of new and upgraded access routes to the appropriate emergency fire operations personnel with the State of Utah, the BLM, the USFS, and USFWS, as well as notification statement that there is a Federally listed plant species within the area of Birdseye, Utah. This information will be provided no later than 1 year post-construction of this specific transmission line segment.</p> <p>14. No vegetation treatments will be performed in suitable or occupied Deseret milkvetch habitat. In addition, the following buffers will be applied—300 feet buffer for mechanical vegetation treatments, 2500 feet for herbicide treatments, and no aerial herbicide treatments.</p> <p>15. Project disturbance within suitable habitat will not exceed 10% cumulatively. Compensatory mitigation measures will be necessary for any disturbance in Deseret milkvetch suitable or occupied habitat.</p> <p><i>Compensatory mitigation</i></p> <p>If any construction activity, development, or ground disturbance (even temporarily) occurs in Deseret milkvetch modeled suitable habitat or occupied habitat then the following compensatory mitigation measures shall be considered:</p> <ol style="list-style-type: none"> 1. Acquire conservation easements in perpetuity or fee title purchases of occupied habitat on private lands at a 3:1 ratio. 2. Additional site-specific measures may also be employed to avoid or minimize effects to the species. These additional measures will be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.
<p>SS-8</p>	<p>Avoidance of Clay Phacelia and Minimization of Indirect Impacts</p> <ol style="list-style-type: none"> 1. 100% clearance surveys (within 650 feet of the centerline through all modeled suitable habitat) would establish the extent of occupied habitat that occurs in the area and any Project constraints. These surveys should occur between late May and early July. 2. Avoid placement of the 250-foot-wide Project transmission line ROW (including structures, facilities, and new roads) within 650 feet of known occupied (i.e. existing locations and USFS transplant sites) clay phacelia habitat. 3. All occupied sites would be avoided by development within the of the 250-foot-wide Project transmission line ROW (including structures, facilities, and new roads) by at least 650 feet. The distance could be adjusted in coordination with the authorizing agency and the USFWS in order to properly protect the plants from all disturbances. (Example: May be a larger distance if there is a higher risk of erosion or shorter distance if there is a lower risk chance of erosion). 4. Appropriate erosion (i.e. silt fence, straw wattles) control measures would be constructed if disturbance is allowed within 650 feet of occupied habitat or if such measures are needed to prevent sedimentation or dust deposition. 5. A qualified botanist would be on-site to monitor surface-disturbing activities when clay phacelia is within 650 feet of those surface disturbing activities. 6. Only water (no chemicals, reclaimed production water or other) would be used for dust abatement measures within occupied clay phacelia habitat.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SS-8 (Cont.)	<p>7. Dust abatement would be employed during maintenance activities in modeled suitable clay phacelia habitat over the life of the project during the time of the year when the plant is most vulnerable to dust-related impacts (March through August).</p> <p>8. No herbicide treatments within 2,500 feet of occupied clay phacelia habitat and no aerial herbicide treatments within modeled suitable habitat.</p> <p>9. Limit upgrades to existing access roads within 650 feet of occupied clay phacelia habitat to those that eliminate the need to construct a new road, or are necessary for safety. Upgrades would also be designed to limit impacts to clay phacelia.</p>
SS-9	<p>(Avoidance of High Quality Habitats) – In instances where complete habitat avoidance is not possible due to topographical, biological, or engineering constraints, all “high quality” habitats as determined during site- and species-specific surveys would be avoided by all direct disturbances during construction and operational activities. High quality habitats are defined as areas that are within the geographic range of the species and have been field-verified as having the majority of required habitat characteristics, and/or the species has been observed in the immediate vicinity, resulting in high occurrence potential for the identified species.</p>
SS-10	<p>To avoid or minimize impacts to the Uinta Basin hookless cactus (<i>Sclerocactus</i>), the following measures would be implemented within potentially suitable habitat for the species as identified by the BLM and USFWS:</p> <ol style="list-style-type: none"> 1. All new or improved access that would not be required for maintenance would be closed or rehabilitated following Project construction using the most effective and least environmentally damaging methods. 2. Ground-disturbing activities would occur outside of the flowering season, typically late April to mid-May (exact date for year of construction to be identified by BLM Vernal FO and USFWS) , in Level 1 <i>Sclerocactus</i> core habitat as defined by the USFWS. This would avoid adverse impacts on <i>Sclerocactus</i> reproductive success in high-density occupied habitat related to fugitive dust and pollinator disturbance. 3. The transmission line would be sited to minimize impacts on the maximum number of cacti technically feasible. 4. Where complete avoidance is unfeasible, all cacti located within the areas required to be disturbed by the Project would be transplanted by a qualified botanist. All transplanted cacti would be monitored as agreed upon by BLM and USFWS. <ol style="list-style-type: none"> 5. Site inventories would be conducted to determine habitat suitability. The following protocols would be adhered to for site inventories: <ol style="list-style-type: none"> a. Site inventories would be performed within a 300-foot buffer from the edges of the Project disturbance and/or right-of-way. b. Site inventories are required in known or potential habitat for all areas proposed for surface disturbance prior to initiation of project activities, at a time when the plant can be detected, and during appropriate flowering periods. c. Documentation would include, but not be limited to, individual plant locations and suitable habitat distributions. d. All surveys must be conducted by qualified individuals. e. Surveys would be valid for 1 year from the survey date. If the Project has not been completed within the year following pre-construction plant surveys, spot check surveys would be conducted on an annual basis by a qualified botanist, and reviewed by the BLM and USFWS, for all planned disturbance areas. Review of spot checks may result in additional pre-construction plant surveys as directed by the BLM and USFWS. If the proposed action or parts thereof have not occurred within four years of the original survey, additional coordination with the BLM and USFWS must occur and a new clearance survey may be necessary prior to ground disturbing activities. 6. Project activities would require monitoring throughout the duration of the Project. To ensure desired results are being achieved, minimization measures would be evaluated and, if necessary, Section 7 consultation would be reinitiated.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
<p>SS-10 (Cont.)</p>	<p>7. Project activities must be designed to avoid direct disturbance to populations and to individual plants. This includes the following provisions:</p> <ul style="list-style-type: none"> a. Designs would avoid concentrating water flows or sediments into occupied UBHC habitat. Erosion control measures (e.g., silt fencing) would be implemented to minimize sedimentation to <i>Sclerocactus</i> plants and populations located downslope of proposed surface disturbance activities, and should only be implemented within the area proposed for disturbance. b. Construction would take place downslope of plants and populations where feasible; if disturbance must occur upslope, buffers of 300 feet minimum between surface disturbances and plants and populations would be incorporated. Donations to a mitigation fund generally are required for surface disturbance within 300 feet of plants and populations. c. Where populations are found within 200 feet of planned disturbance, a silt fence or similar erosion/sedimentation control device would be established around the individuals or groups of individuals prior to construction and would be maintained during and after construction until disturbed soils are revegetated or otherwise stabilized. d. Avoidance areas would be visually identifiable in the field (e.g., through use of flagging, temporary fencing, rebar, etc.). <p>8. Ground disturbing activities in suitable <i>Sclerocactus</i> habitat and within 300 feet of individual <i>Sclerocactus</i> plants and/or populations must occur outside of the flowering period, April 1 through May 30.</p> <p>9. Disturbance from vehicle travel would be limited by implementation of the following provisions:</p> <ul style="list-style-type: none"> a. Disturbances to and in suitable habitat would be limited by staying on designated routes. b. New access routes created by the project would be limited. c. Signing would be placed to limit all-terrain vehicle travel in sensitive areas. d. Dust abatement practices would be implemented near occupied plant habitat during the time of the year when <i>Sclerocactus</i> species are most vulnerable to dust-related impacts (March through August). All disturbed areas would be re-vegetated with native species consisting of species indigenous to the area. <p>10. Post-construction monitoring for invasive species would be required. Noxious weeds within <i>Sclerocactus</i> habitat may be controlled with herbicides in accordance with the BLM Herbicide Programmatic EIS (BLM 2007). Application for a pesticide use permit would include provisions for mechanical removal, as opposed to chemical removal, for Utah Class A, B, and C noxious weeds within 50 feet of <i>Sclerocactus</i> individuals or populations.</p> <p>11. Additional measures to avoid or minimize effects on the species may be developed and implemented in consultation with the USFWS to ensure continued compliance with the ESA.</p> <p>The following recommendations have been developed by the FWS for actions in Level 1 and Level 2 <i>Sclerocactus</i> core areas:</p> <ul style="list-style-type: none"> 12. The FWS would be contacted within 24 hours in the event of any emergency or unforeseen situation in which cacti or habitat in core conservation areas would be damaged or lost. 13. A qualified third-party botanist would be on site prior to and during all construction activities to flag cacti or avoidance areas, train construction crews on how to avoid cacti, and ensure that construction and activities do not damage core conservation area habitat. 14. Surface-disturbing activities in Level 1 <i>Sclerocactus</i> core conservation areas would occur outside of the flowering season, typically late April to mid-May, to avoid impacts related to fugitive dust and pollinator disturbance.
<p>Wildlife (FINAL EIS Section 3.7)</p>	
<p>WLF-1</p>	<p>See Migratory Birds (FINAL EIS Section 3.22)</p>
<p>WLF-2</p>	<p>See Migratory Birds (FINAL EIS Section 3.22)</p>
<p>WLF-3</p>	<p>To ensure wildlife access to existing wildlife water developments (e.g., "guzzlers"), TransWest would avoid impacts to these developments to the extent possible during final project siting and development. TransWest would be required to offset the loss of any permanently impacted wildlife water developments by installing new developments of equal capacity, in coordination with the appropriate state wildlife agency.</p>

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
WLF-4	See Migratory Birds (FINAL EIS Section 3.22)
WLF-5	See Migratory Birds (FINAL EIS Section 3.22)
WLF-6	To minimize fragmentation impacts to forested habitats on public lands, TransWest would employ vegetation management Level 3, as described in the Project Vegetation Management Plan, to portions of the 250-foot-wide transmission line ROW located in forest and woodland habitat areas identified by local federal or state wildlife management agency biologists as being of particular importance to wildlife. In these areas, TransWest also would be required to leave downed woody debris greater than 3 inches in diameter (not including merchantable timber) in place to provide habitat for insects, small mammals, and other small prey species utilized by owls, raptors, and other predators.
WLF-7	See Migratory Birds (FINAL EIS Section 3.22)
WLF-8	To minimize collision potential for avian species, TransWest would design the Project to meet or exceed the standards described in the Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012).
WLF-9	To minimize collision potential for avian species, TransWest would be required to install avian flight diverters on all guy wires in all areas of priority migratory bird habitats which include IBAs, BHCA, riparian crossings, and other sensitive habitats identified in coordination with land management, USFWS, and applicable state wildlife agencies. TransWest would also be required to install flight diverters on guyed structures at tower locations identified by post construction monitoring as having high collision potential.
Special Status Wildlife Species (FINAL EIS Section 3.8)	
SSWS-1	In order to protect nesting mountain plovers, TransWest would follow the USFWS 2002 Mountain Plover Survey Guidelines and would conduct mountain plover nest surveys if construction were to occur in suitable habitat, as identified by the BLM and applicable state wildlife agency, during the mountain plover breeding season (April 10 to July 10). If a nest is located, a 0.25-mile protection buffer would be implemented around the active nest until the birds fledge from the nest.
SSWS-2	Prior to construction activities in suitable pygmy rabbit habitat, TransWest would be required to conduct presence/absence surveys consistent with the Interagency Pygmy Rabbit Working Group Survey Protocols (Ulmschneider et al. 2004). Survey areas would be selected in coordination with the BLM, Western, and appropriate state wildlife management agencies and would be limited to locations within 0.5 mile of proposed Project disturbance areas. If presence/absence surveys conclude that pygmy rabbits are present, TransWest would be required to further coordinate with the BLM and applicable agencies to avoid or minimize impacts to the extent practicable through micro-siting. The BLM may also determine to require additional measures including installation of alternative structure types (e.g., tubular monopoles) with perch discouragers on transmission line segments within occupied habitat. Use of these alternative measures would be implemented on a site-specific basis and in coordination with the BLM, Western, and the appropriate state wildlife agency.
SSWS-3	Prior to construction activities in suitable Wyoming pocket gopher habitat, TransWest would conduct presence/absence surveys following appropriate protocols. If active pocket gopher mounds are identified, the proposed surface disturbing activities would avoid the active pocket gopher mounds by 75 m (BLM 2009). If avoidance of the active pocket gopher mounds by 75 m is not possible, classification surveys (via live capture) must be completed to identify the pocket gopher responsible for the mounds to the species level. If the results conclude that the Wyoming pocket gopher is responsible for the mounds, the "Occupied Wyoming Pocket Gopher Habitat Protection Measures" would apply (BLM 2009). If the results conclude that the associated species is a northern pocket gopher, then the proposed surface disturbance may proceed without mitigation. If the classification survey fails to conclusively identify the associated pocket gopher to the species level, then it would be assumed that the species is a Wyoming pocket gopher and the "Occupied Wyoming Pocket Gopher Habitat Protection Measures" would apply (BLM 2009).
SSWS-4	To avoid and minimize impacts to the desert tortoise and its habitat, TransWest would coordinate with the BLM, Western, Boulder City, Clark County (Nevada), Bureau of Reclamation, and USFWS to implement appropriate mitigation measures during construction of the project, including but not limited to:

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SSWS-4 (Cont.)	<ol style="list-style-type: none"> 1. Depending on the distance between concurrent construction activities in desert tortoise habitat, TransWest would provide at least one Field Contact Representative (FCR) to be responsible for overseeing compliance with protective measures for the desert tortoise. Where the distance between activities is over 100 miles, an additional FCR would be required. The FCR would be an authorized biologist approved by the BLM, applicable state wildlife agencies, such as the Nevada Department of Wildlife (NDOW), and the USFWS and would be present during all project activities within desert tortoise habitat. TransWest would ensure that FCR(s) and supporting authorized biologists and desert tortoise monitors would have authority to halt any activities that are in violation of the stipulations in the Biological Opinion for the project. The FCR would prepare and submit a daily report to the BLM and USFWS for all work activities within desert tortoise habitat. 2. All TransWest employees and its contractors working in the field would be required to complete a desert tortoise education program prior to reporting in the field. The program would be approved by the BLM and USFWS and would cover such topics as desert tortoise distribution within the Project Area, general behavior and ecology, sensitivity to human activities, legal protection, penalties for violation (ESA), conservation and protection measures, reporting requirements, fire prevention, etc. All field workers would be instructed that activities must be confined to locations within the approved areas. The program would instruct participants to report all observations of desert tortoises and their sign during construction activities to the nearest tortoise monitor or authorized biologist who would, in turn, inform the FCR. 3. An authorized desert tortoise biologist would possess at least a bachelor's degree in biology, ecology, wildlife science, herpetology, or closely related fields as determined by the BLM, NDOW, and USFWS. The authorized biologist must have demonstrated prior field experience using accepted resource agency techniques to survey for desert tortoises and tortoise sign. Authorized biologists would have special training in accepted techniques for moving desert tortoises, excavating tortoise burrows and relocating burrow contents including tortoises and eggs. As a guideline, USFWS approval of an authorized biologist requires that the applicant have at least 60 days project experience as a desert tortoise monitor. In addition, the biologist would have the ability to recognize and accurately record survey results and must be familiar with the terms and conditions of the biological opinion that resulted from project-level consultation between BLM and the USFWS. All tortoise biologists would be familiar with the Desert Tortoise (Mojave Population) Field Manual (USFWS 2009). Desert tortoise monitors would possess at least a bachelor's degree in biology, ecology, wildlife science, herpetology, or closely related fields as determined by the BLM and USFWS and have prior field experience using accepted resource agency techniques to survey for desert tortoises and tortoise sign. Desert tortoise monitors would not be permitted to move tortoises or excavate tortoise burrows. All FCRs, other authorized biologists, and tortoise monitors would have the ability to recognize and accurately record biological information in the field. 4. TransWest would coordinate with the BLM and USFWS to ensure that an appropriate number of authorized biologists and tortoise monitors are onsite during construction to ensure the protection of desert tortoises. TransWest would submit the names of all authorized biologists and tortoise monitors to the BLM and USFWS for review and approval at least 30 days prior to initiation of any desert tortoise clearance surveys. Project activities would not begin until authorized biologists and tortoise monitors have been approved. Replacements of authorized biologists and tortoise monitors would require BLM and USFWS approval. Authorized biologists would be assigned to monitor each area of activity where conditions exist that may result in take of desert tortoise (for example, clearing, construction, grading, recontouring, and reclamation activities). The BLM and TransWest would ensure that a tortoise monitor or authorized biologist would be assigned to each piece/group of large equipment. All authorized biologists and tortoise monitors would be responsible for determining compliance with terms and conditions of the Biological Opinion, the Project ROD, and other applicable agreements. With input from authorized biologists and tortoise monitors, the FCR(s) would maintain a detailed record of all desert tortoises encountered during project surveys and monitoring. 5. All construction vehicle movement outside of the ROW would be restricted to pre-designated access, contractor acquired access, or public roads. Any routes of travel that require construction or modification would have an authorized biologist or desert tortoise monitor survey the area for tortoises prior to modification or construction of the route. Off-road travel by vehicles and equipment would be prohibited. 6. To limit the potential for adverse impacts resulting from contact with construction equipment, vehicles, and personnel, TransWest would implement a Project area vehicle speed limit of 15 mph during the tortoise active season (temperatures >65°F) and 20 mph during the tortoise inactive season (temperatures <65°F). 7. Whenever a vehicle or construction equipment is parked longer than 2 minutes within desert tortoise habitat, whether the engine is engaged or not, the ground around and underneath the vehicle would be inspected for desert tortoises prior to moving the vehicle. If a desert tortoise is observed, the vehicle would not be moved and an authorized biologist would be contacted. If possible, the tortoise would be left to move on its own. If the tortoise does not move within 15 minutes, the tortoise would be removed and relocated by the authorized biologist in accordance with the tortoise handling procedures, as presented in the Desert Tortoise Field Manual (USFWS 2009), which should be included or incorporated by reference in the POD.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SSWS-4 (Cont.)	<p>8. Pre-determine the area of construction activity with removable flagging and confine all activities to these areas. All construction sites and access roads would be clearly marked or flagged at the outer limits prior to the onset of any surface-disturbing activity. All personnel would be informed that their activities must be confined within the marked or flagged areas. No permanent paint or other marking agents would be applied to vegetation or rocks.</p> <p>9. All desert tortoise burrows and pallets that fall outside of, but within 50 feet of, the construction work area would be flagged for avoidance. Desert tortoise burrows would not be marked in a manner that facilitates poaching or provides a cue for predators. Avoidance flagging would be designed to be easily distinguished from access route or other flagging, and would be designed in consultation with experienced construction personnel and authorized biologists. All flagging would be removed immediately following construction activities.</p> <p>10. Construction sites, staging areas, and access routes would be cleared by an authorized tortoise biologist before the start of construction. An authorized biologist(s) would survey the site for desert tortoises using survey techniques providing 100-percent coverage of the area proposed for disturbance. If construction occurs during the desert tortoise active season (March 1 through October 31), or when temperatures and environmental conditions are conducive to tortoise activity as determined by an authorized biologist, two surveys would occur. The first survey would be conducted within 14 days prior to surface-disturbance; the second survey would occur immediately before surface disturbance. During the inactive season (November 1 through February 28, except as noted above) when conditions are not conducive to tortoise activity as determined by an authorized biologist, one survey would occur within 72 hours of surface disturbance or up to 5 days in advance of disturbance if conditions are not favorable for tortoise activity.</p> <p>11. To limit the potential for adverse impacts resulting from contact with construction equipment, vehicles, and personnel, TransWest would ensure that all construction-related activities are monitored by an authorized biologist or desert tortoise monitor with the authority to stop construction activities upon the detection of a tortoise within the Project area. During the active season (March 1 through October 31), an authorized biologist or approved desert tortoise monitor would be onsite for the duration of construction activities in desert tortoise habitat. During the inactive season (November 1 through February 28, except when conditions are conducive to tortoise activity (i.e., when temperatures are above 65°F), authorized biologists or desert tortoise monitors would be onsite during all phases of transmission line construction to ensure that all construction vehicles and heavy equipment remain within the boundaries of the marked construction zone. If necessary, an authorized desert tortoise biologist would be brought on site to excavate any tortoise burrow that might be impacted.</p> <p>12. Desert tortoises and eggs found within construction sites would be removed by authorized desert tortoise biologists in accordance with the most current protocols identified by BLM and USFWS. If any tortoise active nests are encountered, USFWS would be contacted immediately, prior to removal of any tortoises or eggs from those burrows, to determine the most appropriate course of action. Unoccupied burrows would be collapsed or blocked to prevent tortoise re-entry. All desert tortoises located in harm's way would be relocated to safe areas up to 1,000 feet from the point of capture. Desert tortoises that are found above-ground would be placed in the shade of a shrub and out of harm's way, following the most current protocol approved by BLM and USFWS. Relocated tortoises would not be placed in existing occupied burrows. If an existing burrow that is similar in size, shape, and orientation to the original burrow is unavailable, the authorized biologist would construct one. Desert tortoises moved during inactive periods would be monitored for at least two days after placement in the new burrows to ensure their safety. The authorized biologist would be allowed some judgment and discretion to ensure that survival of the desert tortoise is likely. Desert tortoises would not be placed on lands outside the administration of the Federal government without the written permission of the landowner. Desert tortoises would be purposely moved only by authorized tortoise biologists and solely for the purpose of moving them out of harm's way.</p> <p>13. Authorized desert tortoise biologists would follow procedures for handling tortoises in accordance with the most current protocols identified by BLM and USFWS. All tortoises would be handled using disposable surgical gloves. The gloves would be disposed of after handling each tortoise. Equipment or materials that contact desert tortoises would be sterilized, disposed of, or changed before contacting another tortoise. The authorized biologist would document each tortoise encounter/handling with the following information, at a minimum: a description of the situation; vegetation type; date of observation; weather conditions; condition and health; any apparent injuries and state of healing; if moved, the GPS location from which it was captured and the location in which it was released; map locations; whether the animal voided its bladder; and identifying markings (that is, identification numbers marked on lateral scutes or attached transmitters).</p> <p>14. If desert tortoises need to be moved at a time of day when harmful ambient temperatures exist (i.e., less than 40°F or greater than 95°F or 35°C at 5 cm above ground or 43°C at ground surface), they would be held overnight in a clean cardboard box. These tortoises would be kept in the care of the authorized biologist under appropriate controlled temperatures and released the following day when temperatures are favorable. All cardboard boxes would be appropriately discarded after one use and never hold more than one tortoise.</p>

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures	
<p>SSWS-4 (Cont.)</p>	<p>15. Any excavated holes or trenches related to transmission line construction (e.g., tower foundations, ground electrode wells) left open overnight would be covered and/or tortoise-proof fencing would be installed to prevent the possibility of tortoises falling into the open holes. Any tortoise found in an excavated hole or trench would be promptly removed by an authorized desert tortoise biologist in accordance with USFWS-approved protocols or if the biologist is not allowed to enter the excavation for safety reasons, the alternative method for removal must have prior approval by USFWS. Tortoise escape ramps would be placed inside the excavation or trench so as to not entrap tortoises. All excavations would be inspected for tortoises before filling.</p> <p>16. Any construction pipe, culvert, or similar structure with a diameter greater than 3 inches left above ground on the construction site for one or more nights would be inspected for tortoises before the material is moved, buried, or capped. As an alternative, all structures may be capped before being stored on the construction site.</p> <p>17. Permanent tortoise-proof fencing would be installed around the perimeters of the Southern Terminal and approved ground electrode site to prevent tortoises from wandering onto the Project site where they would be in harm's way. Any gates or gaps in the fence would be constructed and operated so as to prevent tortoise entry (e.g. "tortoise guards and/or keeping gates closed). Tortoise fencing would be inspected on a regular basis to ensure that there are no breaches in the fencing material. Fence specifications would be consistent with those approved by the USFWS (USFWS 2009). Permanent tortoise-proof fencing along the project area would be appropriately constructed, monitored, and maintained. Fencing would be inspected in accordance with Table SSWS-4.1 unless modified by the USFWS. Monitoring and maintenance would be conducted by TransWest staff or contractors and would include removal of trash and sediment accumulation and restoration of zero ground clearance between the ground and the bottom of the fence, including re-covering the bent portion of the fence if not buried. Maintenance activities would occur regularly for the life of the project and would be carried out concurrently and in conjunction with fence inspections. Fence monitoring and maintenance activities would be documented as they occur and this documentation would be provided to the BLM on a quarterly basis.</p>	
	Condition	Minimum Requirements
	First week following fence installation; tortoises active	Inspect fence perimeter, tortoise guards, and gates twice per day, timed to occur when tortoises may be pacing the fenceline.
	First week following fence installation; tortoises inactive	Inspect fence perimeter, tortoise guards, and gates once per day.
	Beginning the second week following fence construction, tortoises active	Inspect fence perimeter, tortoise guards, and gates once per day.
	Beginning the second week following fence construction, tortoises inactive	Inspect fence perimeter, tortoise guards, and gates once per month.
	Following major storm event, tortoises active	Inspect fence perimeter, tortoise guards, and gates within 48 hours.
	Following major storm event, tortoises inactive	Inspect fence perimeter, tortoise guards, and gates within 72 hours.
	Breach in fence observed, tortoise guard or gate requires maintenance, tortoises active	Repair within 48 hours of breach occurrence.
	Breach in fence observed, tortoise guard or gate requires maintenance, tortoises inactive	Repair within 1 week of breach occurrence.
	<p>18. Water applied for dust control would not be allowed to pool outside of desert tortoise fenced areas, as this can attract desert tortoises. Leaks from water trucks or water tanks would be promptly repaired to prevent pooling water. During the desert tortoise active season, an authorized biologist or desert tortoise monitor would be assigned to patrol each area being watered. This individual would patrol the area immediately after the water is applied and at approximate 60-minute intervals until the ground is no longer wet enough to attract tortoises. No dust palliatives (e.g., calcium or magnesium chlorides, dust oils, plant or animal extracts, enzymes, synthetic polymers, etc.) other than water are approved for use in desert tortoise habitat.</p> <p>19. In construction areas where re-contouring is not required, vegetation would be left in place wherever possible and original contours would be maintained to avoid excessive root damage and allow for re-sprouting.</p>	

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SSWS-4 (Cont.)	<p>20. If blasting is necessary, a 200-foot radius area around the blasting site would be surveyed and all desert tortoises located aboveground within this 200-foot radius of the blasting site would be moved 500 feet from the blasting site, placed in an unoccupied burrow, and temporarily penned to prevent tortoises that have been temporarily relocated from returning to the site. Tortoises in burrows would be left in their burrows. All burrows, regardless of occupied status, would be stuffed with newspapers, flagged, and location recorded using a GPS unit. Immediately after blasting, newspaper and flagging would be removed. If a burrow or cover site that could be occupied has collapsed, it would be excavated to ensure that no tortoises have been buried and are in danger of suffocation.</p> <p>21. Constructed road berms would be less than 12 inches in height and have slopes of less than 30 degrees. Where road berms consist primarily of rocks, gaps would be opened to allow for tortoise passage.</p> <p>22. To prevent mortality, injury, and harassment of desert tortoises and damage to their burrows and cover sites, no pets would be permitted in any Project construction area.</p> <p>23. To limit the potential for predation of desert tortoise by corvids and raptors, TransWest would construct self-supporting tubular/monopole towers with perch discouragers throughout USFWS-designated critical habitat and in all tortoise habitat (USGS model rating of 0.6 or higher) where the Project is not co-located with existing transmission lines with steel lattice towers. Islands of non-habitat (USGS model rating of <0.6) within surrounding tortoise habitat (USGS model rating of 0.6 or higher) will also be subject to self-supporting tubular/monopole towers with perch discouragers.</p> <p>24. To limit the potential for predation of desert tortoise by corvids, TransWest would prepare a Raven Management Plan (in accordance with BLM Southern Nevada District requirements) that outlines active adaptive management strategies for controlling raven predation and nesting within the Project ROW, including post-construction monitoring for ravens and removal of raven nests, consistent with the restrictions implemented by the Migratory Bird Treaty Act. If evidence of raven nesting is observed in the ROW, the USFWS would be notified within three calendar days.</p> <p>25. To limit the potential for predation of desert tortoise by corvids, coyotes, feral dogs, and other opportunistic predators, TransWest would require all construction waste to be contained and removed from the Project area in a manner that does not attract corvids to the Project area. All trash and food items would be placed in raven-proof containers and removed daily.</p> <p>26. The use of herbicides within USFWS-designated critical habitat, ACECs, and general desert tortoise habitat (USGS model rating of 0.6 or higher) would be prohibited without prior approval from the USFWS, BLM, and applicable state wildlife agency.</p> <p>27. TransWest would coordinate with the BLM to ensure that appropriate measures are implemented to minimize public access and use of the transmission line ROW following completion of the project. Such measures may include signs and substantial physical barriers, and rehabilitation actions that would make the ROW impassible to vehicles.</p> <p>28. To compensate for desert tortoise habitat affected during construction, TransWest would offset these effects through either an acceptable land acquisition or an assessed financial contribution, based on the final construction footprint. The BLM requires section 7 desert tortoise mitigation fees for all acres of new disturbance (permanent and temporary). As of March 1, 2015, the current rate is \$836 per acre for tortoise habitat and is subject to a multiplier ranging from 1 to 6. The multiplier(s) used for TWE would be determined by USFWS based on habitat quality, timing and duration of impacts, existing and adjacent levels of disturbance, and other factors. This rate will increase on March 1, 2015.</p> <p>29. Upon completion of construction, a thorough inspection of the site would be conducted by the FCR(s) and authorized biologists to determine the extent of compliance with the conditions of USFWS's Biological Opinion, including agreements between TransWest and the agencies. Annual and comprehensive final project reports would be submitted to BLM and the USFWS's Nevada Fish and Wildlife Office in Las Vegas. Project reports would document the numbers and locations of desert tortoises encountered, their disposition, effectiveness of protective measures, practicality of protective measures, recommendations for future measures that allow for better protection or more workable implementation, and the number of acres disturbed. Annual reports would cover the calendar year and are due April 1 of the following year (e.g., the annual report for calendar year 2015 is due April 1, 2015). Final project reports are due within 60 days following completion of the project or each phase of the project.</p> <p>30. All vehicles and equipment that are not in areas enclosed by desert tortoise exclusion fencing would stop activities in desert tortoise habitat during rainfall events in the more-active season (generally March 1 to October 31), and if temperatures are above 60°F but below 95°F for more than 7 consecutive days. The FCR or designee would determine, in coordination with the BLM and USFWS, when it is appropriate for project activities to continue.</p>

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
<p>SSWS-4 (Cont.)</p>	<p>31. Any deaths and injuries of desert tortoises would be investigated as thoroughly as possible to determine the cause. The wildlife staff of the USFWS Las Vegas Field Office (702-515-5230), BLM Las Vegas Field Office (702-515-5000), BLM Caliente Field Office (775-726-8100) and Nevada Department of Wildlife Las Vegas Office (702-486-5127) must be verbally informed of desert tortoise injuries or death immediately and within 5 business days in writing (electronic mail is sufficient). The FCR or other authorized desert tortoise biologist would complete a Desert Tortoise Handling and Take Report.</p> <p>TransWest would undertake the following measures to minimize potential project effects on desert tortoises during operation and maintenance activities:</p> <p>32. TransWest would submit a list of planned maintenance activities by name, category, location, and approximate start date to the BLM Las Vegas and Caliente Field Offices. TransWest would also forward the list of activities to the USFWS and state agencies. The agencies would have 30 days following receipt of the report to consider the proposed action. In the event of a rejection, TransWest would work with the agencies to resolve issues. Agency approval of the proposed list of projects is valid for 1 year after agency acceptance.</p> <p>33. The following measures would apply to normal maintenance activities that do not result in new disturbance.</p> <ul style="list-style-type: none"> a. All TransWest employees and its contractors involved with transmission line ROW inspection and maintenance activities would be required to take a tortoise education program described previously (Measure 2). b. If desert tortoises or their burrows occur in the work area, TransWest would implement appropriate measures described previously. c. Upon completion of each maintenance activity in the ROW, all used material and equipment would be removed from the site. This condition does not apply to fenced sites. d. Routine road surface maintenance activities on existing access and/or patrol roads would be conducted during the inactive season of the desert tortoise, unless accompanied by an authorized biologist. Localized repair of major damage may take place throughout the year. <p>34. All mitigation measures stipulated for construction activities during the construction phase for the desert tortoise inactive season would be applicable to operation and maintenance activities that result in surface disturbance during the inactive season.</p> <p>35. All mitigation measures stipulated for construction activities during the construction phase for the desert tortoise active season would be applicable to operation and maintenance activities that result in surface disturbance during the active season.</p> <p>36. All maintenance activities in critical tortoise habitat that use heavy equipment (whether there is surface disturbance or not) would require an authorized desert tortoise biologist to be on-site during the active season and on-call during the inactive season.</p> <p>37. The following measures would apply to maintenance activities that may extend outside the transmission line ROW corridors.</p> <ul style="list-style-type: none"> a. In addition to measures (b) and (c) following, TransWest would implement appropriate measures for operations and maintenance activities described for construction-phase activities (Measures 1 -31, above); b. For maintenance activities that result in surface disturbance during the active season of the desert tortoise: the width of the activity corridor would be determined prior to the onset of ground-disturbing activities. Work areas would be restricted to the narrowest possible corridors and generally would not be expected to extend beyond the Project ROW; c. TransWest would contact the BLM if activities may extend outside of the transmission line ROW in all or in part; re-initiation of section 7 consultation may be required for activities that extend beyond the ROW. <p>38. Emergency Repairs: for emergency situations, TransWest would notify the local BLM and USFWS offices within 48 hours. As a part of this emergency response, the BLM and USFWS may require specific measures to protect desert tortoises. During cleanup and repair, the agencies may also require measures to recover damaged habitats.</p>
<p>SSWS-5</p>	<p>To avoid or minimize Project-related impacts to greater sage-grouse and its habitat, the BLM and Western have coordinated with applicable federal and state land and wildlife management agencies and other stakeholders to develop a suite of measures for this species. In addition, TransWest has developed a HEA to quantitatively determine an appropriate level of compensatory mitigation that would be implemented to offset unavoidable impacts to sage-grouse habitat. Applicant-committed measures proposed as part of the HEA process are further discussed in Section 3.8.6.3. The BLM and Western support the implementation of the applicant's HEA process and compensatory mitigation measures in conjunction with the following impact avoidance and minimization measures developed through the NEPA process.</p>

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SSWS-5 (Cont.)	<p>General Measures: To reduce impacts to greater sage-grouse from construction and operation of the proposed Project, TransWest, in consultation with the BLM, Western, and applicable federal and state land and wildlife management agencies, would be required to implement the following general design features:</p> <ol style="list-style-type: none"> 1. Placement of Project structures and access roads would maximize use of topographic features to visually screen Project facilities from high quality greater sage-grouse habitat (i.e., Wyoming – within sage-grouse core habitat and within 4 miles of active leks; Colorado – within preliminary priority habitat; Utah – within occupied habitat and within 4 miles of active leks; 2. To minimize fragmentation of suitable sage-grouse breeding, brood-rearing, and wintering habitats, the approved transmission line ROW would use existing roads, create no new permanent roads, be accessed via drive and crush wherever possible, and be micro-sited in coordination with applicable state and federal wildlife management; 3. To limit corvid predation on greater sage-grouse, TransWest would develop a Raven Management Plan that outlines active adaptive management strategies for controlling raven predation and nesting within the Project ROW and includes post–construction monitoring for ravens and removal of raven nests; 4. To limit disturbance to lekking and nesting activity, disruptive construction and maintenance activities within 4 miles of occupied/active leks would be prohibited between March 1 and June 30. Activities determined to be non-disruptive by the BLM, Western, and applicable federal and state land and wildlife management agencies would be permitted between March 1 and June 30. 5. To limit the potential for adverse impacts resulting from contact with construction equipment, vehicles, and personnel, TransWest would implement a vehicle speed limit of 15 mph on roads without posted speed limits in areas of occupied sage-grouse habitat. 6. Under Applicant Committed Design Feature TWE-26, TransWest has committed to developing a Noxious Weed Management Plan in accordance with existing BLM Pesticide Use Plan requirements. Control of noxious weeds would minimize the potential for weed-related degradation of occupied sage-grouse habitat. Prior to the use of chemical weed control agents, herbicide applications would be reviewed by agency wildlife biologists to ensure consistency with state and local greater sage-grouse conservation goals. <p>Site-specific Measures: In addition to requiring implementation of the general mitigation measures discussed above, the BLM and Western would consider requiring additional impact avoidance and minimization measures on a site-specific basis in areas of greater sage-grouse habitat located within areas that meet all of the following state-specific criteria:</p> <ul style="list-style-type: none"> - Areas within 4 miles of active leks and within Wyoming Core Areas designated under EO 2011-05; - Areas within 4 miles of active leks and within areas of PPH in Colorado; - Areas within 4 miles of active leks and within areas of designated brood-rearing habitats and winter concentration areas in Utah; <p>Identification of additional greater sage-grouse mitigation measures to be implemented in local areas would be completed prior to finalization of the POD in coordination with the Applicant, BLM, Western, and local interdisciplinary teams comprised of applicable federal and state land and wildlife management agency staff. Criteria for determining site-specific measures could include, but would not be limited to: existing vegetation communities, existing fragmentation, proximity to active leks, visibility of the proposed transmission line and towers from active lek locations, presence of noxious and invasive weed species, topography, proximity to USFWS PACs, proximity to designated winter concentration areas, proximity to nesting habitat, proximity to brood rearing habitat, proximity to available water sources, proximity to other anthropogenic sources of disturbance, and co-location with existing transmission infrastructure.</p> <p>Additional measures identified by the BLM and Western for consideration on a site-specific basis in coordination with appropriate federal and state agencies would include:</p> <ul style="list-style-type: none"> - Installation of alternative structure types consisting of self-supporting tubular steel monopole structures to reduce the potential for perching and nest construction by avian predators of greater sage-grouse. - Installation of perch deterrents on transmission structures to reduce the potential for perching by avian predators of greater sage-grouse. - In areas determined to be unsuitable for the installation of self-supporting tubular steel monopoles, applicants may be required to install agency-approved guy wire marking devices on all transmission tower guy lines to increase the visibility of each wire and reduce the risk of collision by flying greater sage-grouse. - Outfit all newly–constructed fencing with agency–approved bird diverters/wire markers.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SSWS-6	To prevent impacts to the western yellow-billed cuckoo during the breeding season, TransWest would avoid vegetation clearing, spraying, and other surface-disturbing activities within 0.25 mile of potentially suitable habitat from March 15 to October 15. If avoidance is not possible, the following mitigation measures would apply. Breeding season surveys would be completed for western yellow-billed cuckoo along the Project ROW in accordance with established protocols. If western yellow-billed cuckoos are documented along, or adjacent to the ROW, additional avoidance and minimization measures would be identified and implemented in coordination with the BLM, Western, USFWS, and applicable state wildlife agencies. If an active western yellow-billed cuckoo nest is identified during surveys, it will be avoided by a minimum of 500 feet, and Project activities would ensure that sufficient cottonwood-willow habitat within a 50- to 100-acre habitat patch size is retained. Vegetation management would ensure that a 65 percent canopy cover with a mean canopy height of 23 to 33 feet would be retained. Herbicide application would be avoided within riparian areas, as described in NX-2.
SSWS-7	To reduce impacts to Utah prairie dogs, TransWest has conducted surveys to determine whether occupied habitat occurs within the disturbance footprint of the proposed Project. Surveys were conducted following USFWS protocols and did not identify any locations of occupied habitat within the Project refined transmission line corridor. If general pre-construction surveys identified active Utah prairie dog colonies within the Project area, TransWest would be required to re-initiate consultation with the BLM, Western, USFWS, and UDWR in order to develop appropriate mitigation measures determined on a site specific basis.
SSWS-8	To prevent impacts to the southwestern willow flycatcher during the breeding season, TransWest would avoid vegetation clearing, spraying, and other surface-disturbing activities within 0.25 mile of potentially suitable habitat from May 15 to July 17. If avoidance is not possible, the following mitigation measures would apply. Breeding season surveys would be completed for southwestern willow flycatcher along the Project ROW in accordance with established protocols. If southwestern willow flycatchers are documented along, or adjacent to the ROW, additional avoidance and minimization measures would be identified and implemented in coordination with the BLM, Western, USFWS, and applicable state wildlife agencies. If an active southwestern willow flycatcher nest is identified during surveys, it will be avoided by a minimum of 500 feet, and Project activities would ensure that sufficient riparian habitat within a minimum 2-acre habitat patch size is retained. Vegetation management would ensure that a 65 percent canopy cover with a mean canopy height of 10 to 33 feet would be retained. Herbicide application would be avoided within riparian areas, as described in NX-2.
SSWS-9	To limit raptor predation on black-footed ferret and associated prey populations (i.e., white-tailed prairie dog colonies >200 acres in area), TransWest would be required to construct perch discouragers and alternative structure types (e.g., tubular monopoles) on segments of the proposed Project near high quality black-footed ferret habitat (e.g., within areas of active white-tailed prairie dog colonies) in consultation with the BLM, USFWS, Western, and applicable state wildlife agencies.
SSWS-10	<p>To avoid and minimize impacts to Mexican spotted owl in Utah, TransWest would implement the following measures in accordance with the conservation measures outlined in BLM Utah's Programmatic Land Use Plan:</p> <ol style="list-style-type: none"> 1. Surveys, conducted according to USFWS protocol, would be required prior to any disturbance-related activities that have been identified to have the potential to impact Mexican spotted owl, unless current species occupancy and distribution information is complete and available. All surveys must be conducted by USFWS-certified individuals, and approved by the BLM authorized officer. 2. Habitat suitability would be assessed for both nesting and foraging owls using accepted habitat models in conjunction with field reviews. The following conservation measures would be applied if project activities are to occur within 0.5 mile of suitable owl habitat, dependent in part on if the action is temporary¹ or permanent²: <ol style="list-style-type: none"> a. For all temporary actions that may impact owls or suitable habitat: <ul style="list-style-type: none"> - If action occurs entirely outside of the owl breeding season, and leaves no permanent structure or permanent habitat disturbance, action can proceed without an occupancy survey. - If action would occur during a breeding season, survey for owls prior to commencing activity. If owls are found, activity should be delayed until outside of the breeding season. - Eliminate access routes created by a project through such means as raking out scars, revegetation, gating access points, etc.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
<p>SSWS-10 (Cont.)</p>	<p>b. For all permanent actions that may impact owls or suitable habitat:</p> <ul style="list-style-type: none"> - Survey two consecutive years for owls according to established protocol prior to commencing of activity. - If owls are found, no actions will occur within 0.5 mile of identified nest site. - If nest site is unknown, no activity will occur within the designated Protected Activity Center (PAC). - Avoid placing permanent structures within 0.5 mi of suitable habitat unless surveyed and not occupied. - Reduce noise emissions (e.g., use hospital-grade mufflers) to 45 dBA at 0.5 mile from suitable habitat, including canyon rims (Delaney et al. 1999). Placement of permanent noise-generating facilities should be determined by a noise analysis to ensure noise does not encroach upon a 0.5 mile buffer for suitable habitat, including canyon rims. - Limit disturbances to and within suitable owl habitat by staying on designated routes. - Limit new access routes created by the project. <p>3. For all BLM actions that “<i>may adversely affect</i>” the primary constituent elements in any suitable Mexican spotted owl habitat, BLM will implement measures as appropriate to minimize habitat loss or fragmentation, including rehabilitation of access routes created by the project through such means as raking out scars, revegetation, gating access points, etc.</p> <p>4. Prior to surface disturbing activities in Mexican spotted owl PACs, breeding habitats, or designated critical habitat, specific principles should be considered to control erosion. These principles include:</p> <ul style="list-style-type: none"> - Conduct long-range transportation planning for large areas to ensure that roads will serve future needs. This will result in less total surface disturbance. - Avoid surface disturbance in areas with high erosion hazards to the greatest extent possible. Avoid mid-slope locations, headwalls at the source of tributary drainages, inner valley gorges, and excessively wet slopes such as those near springs. In addition, avoid areas where large cuts and fills would be required. - Locate roads to minimize roadway drainage areas and to avoid modifying the natural drainage areas of small streams. <p>5. Project developments should be designed and located to avoid direct or indirect loss or modification of Mexican spotted owl nesting and/or identified roosting habitats.</p> <p>¹ Temporary activities are defined as those that are completed prior to the start of the following raptor breeding season, leaving no permanent structures and resulting in no permanent habitat loss.</p> <p>² Permanent activities continue for more than one breeding season and/or cause a loss of owl habitat or displacement of owls through disturbance, e.g., creation of a permanent structure including but not limited to roads, communication facilities, and power lines.</p>
<p>SSWS-11</p>	<p>To avoid or minimize impacts to Canada lynx, TransWest would:</p> <ol style="list-style-type: none"> 1. Limit disturbance to and within suitable habitat by staying on approved access routes. 2. Limit new access routes created by the Project. 3. Dirt and gravel roads traversing lynx habitat (particularly those that could become highways) should not be paved or otherwise upgraded (e.g., straightening of curves, widening of roadway, etc.) in a manner that is likely to lead to significant increases in traffic volume, traffic speed, increased width of the cleared ROW, or would foreseeably contribute to development or increases in human activity in lynx habitat.
<p>SSWS-12</p>	<p>To reduce impacts to the banded Gila monster from the construction and operation of the Project, TransWest would be required to implement measures outlined in the NDOW 2012 Gila Monster Status, Identification, and Reporting Protocol for Observations.</p>
<p>SSWS-13</p>	<p>To prevent impacts to bald eagles, TransWest would be required to avoid disturbance within 0.25 mile of an active winter roost site (0.5 mile if there is a direct line of sight to disturbance) from November 15 to March 15, and avoid disturbance within 0.5 mile of communal winter roosts from November 1 to April 1. Construction of above-ground structures would be restricted within 0.5 mile of bald eagle nests and communal winter roost sites. Below ground structures (e.g., pipelines, buried power lines, fiber optic lines) may be sited closer as long as construction occurs outside of the active nesting or roosting season and will not result in the loss of alternate nest sites or roost trees.</p>

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SSWS-14	This mitigation measure was removed after review of the Draft EIS.
SSWS-15	If evidence of a protected species not previously identified or known is found in the construction area, the Contractor would immediately notify the appropriate land management agencies and provide the location and nature of the findings. Construction in the vicinity of the newly located protected species would be halted and would resume when a biologist from the appropriate agency determines that the species would not be affected by continued construction.
SSWS-16	To reduce impacts to federally listed wildlife species, TransWest would be required to obtain approval from the USFWS, lead agencies, and all applicable land management agencies prior to applying dust palliatives to construction areas located within areas designated as suitable habitat for federally listed species.
Aquatic Biological Resources (FINAL EIS Section 3.9)	
AB-1	(Fish Passage): When avoidance of perennial streams with fish populations is not feasible and a culvert is required during construction, flow would be maintained in a portion of the stream to allow unrestricted fish passage. Any plan for dewatering the stream at the culvert site must be approved by the appropriate federal and state agencies. Culvert size and type would be selected to facilitate the continued and long-term connectivity and movement of target aquatic species. If the culvert is proposed to be in place during project operation, approval must be obtained from the federal or state agency management authority. An alternative crossing method may be required.
AB-2	(Avoid Game Fish Spawning Periods): If spawning areas for game fish species are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance would be scheduled to avoid the spawning period. The exact dates for avoidance would be determined through discussions with WGFD, CPW, UDWR, or USFS. All disturbed areas would be restored to pre-construction conditions prior to the next spawning season.
AB-3	(Invasive Aquatic Species Protection): It is assumed that any waterbody could contain aquatic invasive species and invasive weed species. If work occurs in or near a waterbody, all equipment would be decontaminated. Decontamination would occur before arrival at a Project site to avoid the transfer of aquatic invasive species from a previous work site in or near water. Decontamination would consist of either of these actions: 1) Drain all water from equipment and compartments; clean equipment of all mud, plants, debris, and aquatic organisms; and dry equipment for specified time by season (5 days in June through August, 18 days in March through May, and 3 days in December through February when temperatures are at or below freezing); or 2) Use a high pressure (2,500 psi) hot water (140°F) pressure washer to thoroughly clean equipment and flush all compartments that may hold water. A field monitor would be present to ensure that the cleaning was completed prior to vehicle and equipment moving to other streams and drainages.
AB-4	(Herbicide Use Plan): As part of vegetation management, the applicant would prepare an Herbicide Use Plan. The Plan would identify a list of approved herbicides that may be used as well as locations of areas that may be treated. Licensed herbicide applicators would be used in the treatment process. All herbicides would be used in accordance with label instructions for the chemical. The Plan also would discuss compliance with applicable federal, state, and local agencies.
Special Status Aquatic Species (FINAL EIS Section 3.10)	
SSS-1	(Sediment Protection for Streams with Federally listed and Special Management Fish Species): Mitigation measure WR-3 (Section 3.4.6.3) would be applied to perennial streams providing habitat for federally listed fish species or fish species requiring special management as mandated by existing federal land use plans. The measure would require coordination with the federal agencies having land jurisdiction. This coordination would include location and design of access roads and temporary work areas within 300 feet of streams providing habitat for these species to minimize erosion and sedimentation effects. The agencies would coordinate and provide input to TransWest for potential modification of locations and designs within TransWest's final engineering schedule.
SSS-2	(Avoidance of Water Withdrawal and Entrainment/Impingement Effects for Federally Listed Fish Species): Where critical habitat for the Colorado River federally endangered fish species cannot be avoided as water sources for construction purposes, TransWest would be required to obtain approval from the USFWS and state or federal agencies responsible for managing the land and critical habitat areas. Agency approval would ensure that water withdrawal methods would avoid or minimize entrainment or impingement effects to early life stages of endangered fish species. Requirements for water pumping in critical habitat areas would include: 1) avoidance of pumping between approximately April 1 through August 31, with specific dates dependent upon the water year; 2) intake hoses would be screened with 3/32-inch mesh size; 3) intake velocity would not exceed 0.33 feet/second in an area where larval stages of the federally endangered fish may be present; and (4) pumping from off-channel locations (i.e., no connection to the river during high spring flows) would use an infiltration gallery constructed in a USFWS-approved location. Additional guidance on pumping methodology is provided in the National Marine Fisheries Service's (1997) document entitled Fish Screening Criteria for Anadromous Salmonids.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SSS-3	(Avoidance of Water Withdrawal and Entrainment/Impingement Effects for Conservation Agreement Fish Species): Where waterbodies containing conservation agreement fish species (bluehead sucker, Bonneville cutthroat trout, Colorado River cutthroat trout, flannelmouth sucker, least chub, southern leatherside chub, and Virgin River spinedace) and other special status fish species cannot be avoided as construction water sources, approval must be obtained from federal, state, and/or land management agencies regarding water withdrawal sites and methods. A site specific withdrawal plan will be prepared by TransWest for review/approval by the agencies. Requirements for water pumping for hose screening and intake velocities would be the same as identified in mitigation measure SSS-2 . Additional requirements include the use of private, off-stream water sources if possible; withdrawal sites must reviewed/approved by applicable agencies; and approval should include provisions to maintain adequate instream flows to protect aquatic species and their habitat.
SSS-4	(No Permanent Structures or New Roads in Critical Habitat for Federally Listed Fish Species): No permanent structures or new roads would be constructed in critical habitat for federally endangered fish species. Any temporary disturbance to soils in the 100-year floodplain within critical habitat would be minimized to the extent possible and restoration would be completed to maintain existing conditions. TransWest would avoid siting temporary facilities such as staging areas and helicopter pads in the 100-year floodplain that is designated critical habitat. Additionally, TransWest would avoid temporary river crossings by vehicles within designated critical habitat.
SSS-5	(Avoid Spawning Habitat Disturbance for Special Status Trout Species): If spawning areas for special status trout species (Colorado River and Bonneville cutthroat trout) are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance would be scheduled to avoid the spawning period from April through May. The exact dates for avoidance would be determined through discussions with WGFD, CPW, UDWR, or USFS. All disturbed areas would be restored to pre-construction conditions prior to the next spawning season. The state agencies also would determine if a habitat survey would be required prior to any Project disturbance, which would assist in defining habitat conditions for restoration. A stream crossing plan would be prepared by TransWest, with approval required by the state agencies' aquatic biologists.
SSS-6	(Approval of Water Use from June Sucker Habitat Areas): Any potential water use from Utah Lake, Provo River and the Spanish Fork River that would represent a new depletion must be approved by UDWR and the Utah State Engineer, Utah Division of Water Rights.
SSS-7	(Avoid Spawning Habitat Disturbance for Southern Leatherside Chub): If spawning areas for southern leatherside chub are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance would be scheduled to avoid the spawning period from April through June. The exact dates for avoidance would be determined through discussions with UDWR. All disturbed areas would be restored to pre-construction conditions prior to the next spawning season.
SSS-8	(Avoid Direct Disturbance to Habitat for Southern Bonneville Pyrg): No vehicle or equipment disturbance from ROW work or access road construction would be allowed within 300 feet of the unnamed spring located near Thistle Creek that contains southern Bonneville pyrg.
SSS-9	(Survey to Avoid Direct Disturbance to California Floater Habitat): If instream construction is proposed for Currant Creek, a survey would be conducted to determine if California floater is present. If the species is absent, construction would be allowed after meeting UDWR requirements for restoration. If the species is present, relocation of individuals in the disturbance area would be considered to avoid impacts to it.
SSS-10	(Reduce Crossings of Sowers Creek to Protect Boreal Toad Breeding Habitat): The ROW alignment would be evaluated so that the number of Sowers Creek crossings can be reduced. The portion of the creek that would be crossed by the ROW also would be evaluated as breeding habitat for boreal toad to identify any priority areas that should be avoided if possible.
SSS-11	(No Vehicle Crossings or New Roads in the Muddy River): No vehicle crossings or new roads would be constructed across the Muddy River. This measure would protect habitat for special status fish species (Virgin River chub, Moapa speckled dace, Moapa White River springfish, Meadow Valley Wash desert sucker, and Meadow Valley Wash speckled dace) in the Muddy River.
SSS-12	(Avoid Direct Disturbance to Abe and Hiway springs used by Arizona Toad): No vehicle or equipment disturbance from ROW work or access road construction would be allowed in Abe and Hiway springs to protect Arizona toad breeding habitat.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
Cultural Resources (FINAL EIS Section 3.11)	
CUL-1	On-site and off-site mitigation to compensate specifically for cumulative impacts, as well as direct and indirect adverse effects to the Old Spanish National Historic Trail (OSNHT) in Nevada, as directed in the National Trails System Act (NTSA). Mitigation may include development of interpretive material; signage and protection for the trail; and development of education materials that may include support for the Project Archaeology: Investigating Migration curriculum context and a OSNHT module for Nevada. Future discussion with consulting parties will provide further mitigation guidance.
CUL-2	On-site and off-site mitigation to compensate specifically for cumulative impacts, as well as unavoidable direct and indirect adverse effects to Gypsum Cave Traditional Cultural Property in Nevada. Mitigation may include clean-up and graffiti removal; post and cable fencing to further prevent vehicles from approaching the cave; road closures and mitigation of road scars within the TCP; bat gates for the inner chambers of the cave; support for tribal involvement in mitigation efforts; interpretation of the archaeological site; and development of educational materials regarding the archaeological site. Future discussion with consulting parties will provide further mitigation guidance.
CUL-3	On-site and off-site mitigation to compensate for adverse cumulative impacts under NTSA, as well as direct and indirect adverse effects under NHPA to the Old Spanish National Historic Trail, the California Wagon Road and other historic trails in Wyoming, Colorado, and Utah. Mitigation may include, and is not limited to, development of interpretive material; signage and protection for the trails; and development of educational materials to include support for the Project Archaeology: Investigating Migration curriculum context and modules for each affected resource. Future discussion with consulting parties as part of the Historic Properties Treatment Plan will provide further mitigation guidance.
CUL-4	On-site and off-site mitigation to compensate for direct and indirect adverse effects to historic properties in Wyoming, Colorado, Utah and Nevada. Future discussion with consulting parties as part of the Historic Properties Treatment Plan will provide further mitigation guidance.
Visual Resources (FINAL EIS Section 3.12)	
VR-1	Remove pinyon-juniper woodlands only as necessary for construction and maintenance of transmission towers and access roads (TWE Level 3 Selective Vegetation Management) for foreground, middleground, and background views from linear or stationary KOPs on BLM lands, foreground, middleground, and background views in ROS Pristine, Semi-primitive Non-motorized, Semi-primitive Motorized, and Roaded Natural on USFS lands, and Class A Scenic Quality on BLM lands (Figures 3.12-17, 3.12-18, 3.12-19, and 3.12-20 and Tables 3.12-9, 3.12-10, 3.12-11, and 3.12-12). This information is shown in detail by segment in Appendix I, Figure I-12 (Level 3 Mitigation by Segment). Feather the edges of any clearings along the 250-foot-wide transmission line ROW. The USFS allows for clearing of hazardous materials and edge-feathering outside of the 250-foot-wide transmission line ROW, based on a cooperative agreement between the USFS and Applicant. Any clearing beyond the areas analyzed in this EIS would be subject to site-specific NEPA on a case-by-case basis. While feathering, leave in place as many as possible of the pinyon-juniper woodlands in the ROW that are outside of the tower and road construction zone. Leave other trees in the ROW that would not present a safety or engineering hazard or otherwise interfere with operations. Where feasible, top rather than remove trees that exceed the allowable height. Openings in pinyon-juniper woodlands for facilities, structures, and roads should mimic, to the extent possible, the size, shape, and characteristics of naturally occurring openings.
VR-2	Use BLM environmental colors (Standard Environmental Colors, Color Chart CC-001, 2008) for surface coatings of permanent buildings, gates, and tanks at terminal sites. Color selection is based on a site-specific assessment. Paint grouped structures the same color to reduce visual complexity and color contrast.
VR-3	Locate structures, roads, and other project elements as far back from road, trail, and river crossings (linear KOPs) as possible, and, where feasible, employ terrain and vegetation to screen views from crossings.
VR-4	In areas with no existing transmission lines, move the transmission line (alignment) away from the immediate foreground of stationary (non-linear) KOPs to a distance of 0.5 mile or more. Where feasible, approach and cross at right angles to linear KOPs such as roads, trails, and rivers
VR-5	Materials and surface treatments of structures and land disturbances (e.g., Permeon) should repeat and/or blend with the existing form, line, color, and texture of the landscape and have little or no reflectivity (non-specular).

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
VR-6	Where paralleling an existing transmission line, where possible, place the structures to match the locations of structures in the existing line.
VR-7	Where possible, position roads at the toe of a slope, at the edge of vegetation openings, and perpendicular with the line of sight.
VR-8	Minimize lighting at terminal and construction facilities to the extent permitted by Occupational Safety and Health Administration (OSHA) and down-shield lights to reduce night glare and light pollution.
VR-9	Where possible in tree-covered moderate to steep terrain, perform construction operations for towers and conductors with helicopters to reduce the need for access roads and laydown clearings.
VR-10	Feather hard ROW edges along the 250-foot-wide transmission line ROW in USFS landscapes with vegetation types taller than 6 feet (mountain maple and taller) while employing TWE Level 3 Selective Vegetation Management in areas of intact landscapes, including ROS lands designated as Pristine, Semi-primitive Non-motorized, Semi-primitive Motorized, and Roaded Natural categories in the foreground, middleground, and background distance zones, views in the same three distance zones from linear and stationary KOPs on BLM lands, and Class A Scenic Quality on BLM lands (Figures 3.12-17, 3.12-18, 3.12-19, and 3.12-20). The USFS allows for clearing of hazardous materials and edge-feathering outside of the 250-foot-wide transmission line ROW, based on a cooperative agreement between the USFS and Applicant. Any clearing beyond the areas analyzed in this EIS would be subject to site-specific NEPA on a case-by-case basis.
VR-11	Where co-locating with existing cleared ROW(s) that have feathered ROW edges, feather edges along the 250-foot-wide transmission line ROW to match the character of feathering in the existing ROW(s). The USFS allows for clearing of hazardous materials and edge-feathering outside of the 250-foot-wide transmission line ROW, based on a cooperative agreement between the USFS and Applicant. Any clearing beyond the areas analyzed in this EIS would be subject to site-specific NEPA on a case-by-case basis.
VR-12	Reconfigure hard ROW edges with the naturalistic-, landform-related patterns similar to those of controlled fire management, where possible. The USFS allows for clearing of hazardous materials and edge-feathering outside of the 250-foot-wide transmission line ROW, based on a cooperative agreement between the USFS and Applicant. Any clearing beyond the areas analyzed in this EIS would be subject to site-specific NEPA on a case-by-case basis.
Recreation Resources (FINAL EIS Section 3.13)	
REC-1	Where practicable, operation phase vegetation maintenance activities within dispersed RAs or key hunting locales would not occur during big game hunting seasons.
REC-2	Within designated recreation management areas, access shall be limited to existing roads whenever practicable. If new and improved access cannot be avoided within these areas, access roads shall be closed or rehabilitated through methods and monitoring developed through consultation with the landowner or land management agency. Methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour or vegetation.
REC-3	If designated corridors exist within the RA, new roads and ancillary construction areas shall only be located within designated utility corridors.
REC-4	Where practicable, construction activities within key hunting locales such as WHMAs/WMAs/SWAs would not occur during big game hunting seasons.
REC-5	No construction shall be allowed after 5:00 p.m. on weeknights, and no construction shall be allowed on weekends, holidays, or the opening of big game hunting seasons in areas that are within 1 mile of developed recreation sites.
REC-6	Construction zones will be sited such that access to high use recreational areas and trails is not impeded. If public safety concerns are such that current access or use cannot be maintained, the applicant will work with the appropriate land manager to develop alternative access points or redirect users to alternative existing points of access.
REC-7	Ancillary construction areas would not be located within 1 mile of developed RAs (trails, trailheads, campgrounds, etc.)
REC-8	Temporary roads and ancillary construction areas would not be located within the view of boaters on the Yampa River.
REC-9	The applicant shall use self-supporting structures in place of guyed-lattice structures in the Salt Lake and Fillmore FOs. The applicant shall use orange, visibility-enhancing guy-wire sleeves in areas where guy-wire visibility is a safety concern. These measures would be implemented on a site-specific basis and in coordination with the BLM and Western.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
REC-10	Construction shall be scheduled to occur when the fewest students are at Wasatch Academy in the Manti-La Sal National Forest.
REC-11	Due to the conservation easement, there should be no ground disturbance within the Northwest Manti WMA-Hilltop Unit.
REC-12	The applicant shall plan construction activities to occur outside of specially permitted event areas or times; or work with organizers to ensure adequate access and use if feasible given notice of permit timing.
REC-13	The Applicant shall consider the view from key recreational areas in its placement of the transmission line ROW to locate the line where it best blends in with the surrounding environment, and/or is co-located with other existing transmission lines.
Land Use (FINAL EIS Section 3.14)	
AGRI-1	Coordinate with farm and ranch operators to identify problems with structure placement and determine structure locations to ensure implementation of design feature TWE-40. Locate structures along fence lines, field lines, or adjacent to roads. Use longer spans between structures to clear fields. Consider use of non-guyed free-standing transmission structures in agricultural areas.
AGRI-2	Schedule construction activities to avoid planting and harvesting activities.
AGRI-3	Minimize locating access roads within the analysis area in areas with croplands. For croplands that cannot be avoided by access roads, establish procedures for determining temporary and permanent access road locations with landowners and operators, and establish protection methods for roads over croplands that cannot be avoided by construction activities. Restore locations of temporary access roads to pre-construction conditions and leave permanent access roads intact through mutual agreement with the landowner and operator.
AGRI-4	Minimize the use of guy wires in crops and hay lands to the extent possible. If guy wires have to be used in crop and hay lands, highly visible shield guards will cover the wires.
LU-1	The Applicant would develop an approved POD and coordinate with land owners, land managers, and agencies with jurisdictional authority on final structure placement, including all aboveground components, access roads, and permanent disturbance areas, to ensure optimal compatible land use with valid existing land uses and rights. If this coordination results in alternative routing or impacts outside of the scope of this EIS analysis, additional analysis and/or NEPA disclosure may be required.
LU-2	On private lands, access shall be limited to existing roads whenever practicable or as desired by the landowner. If new and improved access cannot be avoided on private lands, access roads shall be closed or rehabilitated at the direction of the landowner and through methods and monitoring developed in consultation with the landowner. Methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour and/or vegetation.
LU-3	For transmission line construction within the Sowers Canyon utility window, TransWest will work collaboratively with the USFS on placement of tower structures to avoid steep side slopes, define areas where helicopter tower placement would be required, and identify areas where plowing would be required for reseeding efforts. These areas would be defined in the construction POD.
LU-4	Lines connecting to the Halfway Wash-Virgin River and Halfway Wash-East ground electrode sites may need to be adjusted or placed underground at the discretion of FAA so as to not interfere with the future potential land use of an airport.
LU-5	In the event that Project towers are more than 10 feet higher than existing structures in the Sevier B Military Operating Area, the Applicant would coordinate with University of Utah and DOD to develop tower lighting systems to reduce the impact to dark skies and, subsequently, operation of University of Utah's Telescope Array Project to the extent practicable while still meeting DOD safety requirements.
RANGE-1	<p>Prior to construction of each segment, access road, or ancillary facility crossing a BLM or USFS grazing allotments, TransWest shall coordinate with the associated BLM FO and USFS national forest concerning planned development and operations activities that will occur and identify potential livestock management issues. Coordination will include identification of:</p> <ul style="list-style-type: none"> - Site-specific routing options, and surface disturbance locations. - Site-specific mitigation for individual grazing allotments, such as micro-siting around areas of concern, and additional reclamation activities. - Proposed application of vegetation management activities on individual grazing allotments. - Identification of areas of low reclamation potential that may require additional restoration activities. <p>Identification of areas where trespassing and increased access could require additional mitigation.</p>

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
RANGE-2	Prior to construction of transmission line segments, access road, or ancillary facilities, active range improvement locations shall be inventoried. Based on the results of these inventories, no roads, or ancillary facilities would be placed within 200 meters of range improvements, including livestock and wildlife water sources/systems. If avoidance is not feasible, features would be relocated to an alternate location in coordination with the permittee and applicable land management agency.
RANGE-3	Damage to livestock and livestock facilities shall be reported as quickly as possible to BLM, USFS, and affected livestock operators. If damage is caused by the construction, operation, or maintenance of this project, TransWest will be financially responsible for the replacement of the livestock and/or livestock facilities.
RANGE-4	<p>The Flagging, Fencing, and Signage Plan would include:</p> <ul style="list-style-type: none"> - Prevention measures to avoid damaging fences, gates, and cattleguards during construction and operation activities. - Mitigation to prevent livestock from passing through breaks in fences as a result of construction and operation activities. Measures would include the installation of temporary gates, or cattleguards, and coordination with landowners and grazing permittees. - Limit the placement of guy wires where livestock water or where they would fall in stock driveways. Shield guards would be used as appropriate. - Upgrading cattleguard gate widths and load-bearing requirements as appropriate for construction and operation vehicles on access roads. - Require heavy equipment to use by-pass gates to avoid damage to cattleguards. - If a by-pass gate is not already in place, install a by-pass gate adjacent to existing cattleguards to prevent damage by heavy equipment. - Existing cattle guards would be cleaned as determined necessary by the appropriate land management agency post-construction activities. - Following construction activities any Range Improvement Projects that are damaged from construction and maintenance activities would be repaired at a minimum to pre-construction conditions. - Mitigation for loss of livestock due to damaged fences and gates that were result of construction and operation activities. - Mitigation for loss of livestock as a result of construction and operation vehicle collisions.
RANGE-5	If construction or operation activities disrupt the transport of water to water locations for livestock or wildlife, an alternative water source will be provided until the transport of water is resumed. Alternative water sources could include the hauling of water to watering locations, an alternate pipeline, or the establishment of a temporary watering facility for the livestock and wildlife.
RANGE-6	Prior to construction and placement of permanent facilities and access roads, TransWest shall coordinate with the associated BLM FO and USFS national forest to identify areas where the placement of tower structures, facilities, and access roads would prevent access to either a portion or all of a livestock grazing allotment resulting in the livestock grazing allotment becoming unusable or decreasing the AUMs available to a point that requires the grazing permit to be modified. In these areas, corrective actions would then be identified including rearranging of grazing allotment fences, additional access roads to the grazing allotment, re-arrangement of project facilities and access roads as feasible, etc.
RANGE-7	Speed limits would be followed and signs would be erected in lambing/calving areas, shipping pastures, or adjacent to working corrals to warn vehicle operators of the agricultural operations.
Special Designations (FINAL EIS Section 3.15)	
SDA-1	Within SDAs, access shall be limited to existing roads whenever practicable, and construction staging areas/fly yards, material storage yards and batch plant sites shall not be placed in SDAs. ROWs that currently are not sited within SDAs shall not be placed within the SDA during subsequent micro-siting efforts associated with development of the POD.
SDA-2	If new or improved access roads cannot be avoided within SDAs, roads shall be closed or rehabilitated through methods developed through consultation with the landowner or land management agency. Methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour or vegetation.
SDA-3	If designated corridors exist within the SDA, the transmission alignment, new roads, and ancillary construction areas shall only be located within designated utility corridors.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SDA-4	Ground electrode systems shall be sited outside of any designated SDAs located within the ground electrode siting areas.
SDA-5	Within all SDAs, Level 3 (Selective ROW Clearance Based) vegetation management methods would be utilized as necessary and as determined by the land management agency to reduce impacts to visual, recreation, wildlife and other resources.
SDA-6	During ROW clearing, root-mat and low growing understory would retained to minimize sediment erosion. Construction would span sensitive resources to reduce resource impacts.
SDA-7	Overland travel access within IRAs would be developed in collaboration with the USFS responsible official, USFS implementation project lead, and construction contractor. If “drive and crush” methods cannot be used and vegetation removal is required, only small diameter trees would be removed; root-mat and low growing understory would retained.
SDA-8	Construction schedules for work within IRAs would be developed as part of the construction POD and in coordination with USFS officials to minimize resource impacts.
SDA-9	If unauthorized roads or closed roads are used for access into IRAs, the Applicant will work with USFS to ensure that Project use does not further inhibit management of the IRA and that road reclamation activities are coordinated with USFS to return the area to, at a minimum, its pre-Project condition.
SDA-10	There would be at least one preconstruction coordination meeting with USFS responsible official, USFS implementation project lead, and construction contractor to review IRA site-specific construction plans, and one post-construction meeting to review results.
SDA-11	Herbicides use within IRAs would be limited to noxious weed control only and will not be used for general ROW vegetation maintenance.
SDA-12	Roadless construction techniques shall be applied within all portions of URUD areas located outside of IRA, unless the national forests have completed their LRMP revisions and have determined not to manage the area as an IRA or wilderness area.
SDA-13	All proposed SDA mitigations shall be applied to URUD areas.
SDA-14	Placement of any project component within/across river segments that are eligible or suitable for inclusion in the NWSRS shall be micro-sited in coordination with BLM to minimize surface or visual disturbances from towers, roads, or other facilities to the outstandingly remarkable features that led to segment eligibility/suitability.
SDA-15	Series compensation stations shall not be sited in any SDA
Transportation and Access (FINAL EIS Section 3.16)	
No additional mitigation measures cited in this section.	
Social and Economic Resources (FINAL EIS Section 3.17)	
SOCIO-1	TransWest would address temporary housing needs in conjunction with a Wyoming Industrial Siting Permit that must be obtained prior to the commencement of construction. That plan should address the combined housing needs during construction of the northern terminal, ground electrode, and Spread 1, particularly given potential competition for housing from other development in the area. Local officials should be consulted in the development of that plan. The housing plan should address housing needs associated with construction related indirect and induced jobs that would be supported.
SOCIO-2	TransWest should encourage its contractors, to the maximum extent practicable, to purchase materials, equipment and supplies locally, have non-locally purchased materials and supplies delivered to the counties in which the materials would be utilized, and complete all sales and use reports regarding taxable purchases in a timely manner so that proper attribution of sales and use tax revenues to the local jurisdictions can occur.
SOCIO-3	TransWest should conduct annual coordination meetings with local emergency management officials (law enforcement, fire, health care, state prison, etc.) to review and update emergency coordination and situation management.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
SOCIO-4	If not required by existing regulations or included in the various operations plans to be developed (see Section 2.4), TransWest should develop and implement a plan for on-going communications with local county and municipal governments to inform them of construction schedules and progress, specifically as they relate to the anticipated timing of activity across each spread, or other about other aspects of the Project that could affect local communities and service providers.
Public Health and Safety (FINAL EIS Section 3.18)	
PH-1	Develop, implement, and maintain a noise complaint reporting and review process to deal with potential queries and issues as they arise. This would include a toll-free telephone number for receiving question or complaints during Project construction and a public liaison person before and during Project construction to respond to concerns over noise.
Wild Horse Management Areas (FINAL EIS Section 3.19)	
WH-1	Construction activities would be suspended as needed during wild horse gathers, as determined through consultation with the BLM.
WH-2	Series compensation stations shall not be sited in any HA or HMA.
Lands with Wilderness Characteristics (FINAL EIS Section 3.20)	
LWC-1	Applicable SDA mitigations noted in Section 3.15 shall be applied to areas managed to protect wilderness characteristics and, to the extent feasible and practicable through coordination with the local BLM Field Office at their discretion, to inventoried areas that have been documented to contain wilderness characteristics.
Wildland Fire (FINAL EIS Section 3.21)	
FR-1	<p>The fire protection plan to be developed as part of the Construction, Operation and Maintenance (COM) Plan in addition to the items outlined in TWE-64 would include the following:</p> <ul style="list-style-type: none"> - TransWest would implement line patrols to inspect the ROW for hazard trees, damage to any component of the Project, and other potentially unsafe conditions that could increase wildland fire ignition risk. - TransWest would develop a wildland fire traffic control plan which would stipulate mechanisms through which narrow roads shall be kept passable for emergency service providers in a wildland fire emergency situation; designate the point of contact to administer the wildland fire traffic control plan and facilitate emergency service providers access; identify vehicle parking for construction and maintenance vehicles during wildland fire emergencies; and identify alternative routes for large equipment and vehicle evacuation during wildland fire emergencies. - TransWest would outline communication methods to ensure that immediate reporting of fires during construction activities and maintenance activities is feasible. Each crew member would carry a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. The cards would be updated as needed, and redistributed to crew members. - In consultation with land management agencies, TransWest would identify when and where construction and maintenance work would cease in response to Red Flag Warning events as issued daily by the National Weather Service. Overland drive-and-crush travel would be prohibited or limited (at land management agencies' discretion) during times of high fire risk. - TransWest would develop a fire protection plan in consultation with the appropriate land management agencies.
FR-2	No open trash burning would occur, unless specifically permitted by the appropriate authorities.
FR-3	Activities that could generate a spark such as refueling, smoking, blasting, and welding would only occur on areas that have been cleared. A spotter would be used for welding and other similar activities. The spotter would be equipped with water and tools to quickly extinguish any sparks.
FR-4	All engines used in the ROW would have an approved spark arrestor.
FR-5	TransWest would consult with the land management agencies to ensure vegetation management activities are in line with land management agencies fire management objectives.

Table C.5-1 Mitigation Measures

Final EIS Mitigation Measure Number	Mitigation Measures
FR-6	Where appropriate and feasible, micro-siting of the route would occur in recently burned areas.
Migratory Birds (FINAL EIS Section 3.22)	
WLF-1	<p>To minimize disturbance to migratory birds during the breeding and nesting season, no vegetation clearing or trimming, blasting, or other new surface-disturbing activities would occur during the avian breeding season as defined by Project Region and illustrated in Figures 3.22-5, 3.22-8, and 3.22-13. If avoidance of vegetation clearing during the nesting season is not possible, then a qualified biologist would conduct nest searches no more than 7 days prior to clearing and trimming activities. Active nests would be identified and protected in accordance with the following procedure.</p> <p>On lands administered by the BLM and USFS, spatial avoidance buffers and seasonal restrictions would be applied as required by applicable land and resource management plan stipulations (Appendix C). On federal lands for which there are no stipulations applicable to non-raptorial migratory birds, the habitat- or species-specific nest buffers recommended by the BLM Ely District (BLM 2012) would apply. Seasonal and spatial nest buffers that are more restrictive than the applicable required BLM and USFS plan stipulations and BLM Ely District recommendations would be applied at the discretion of local federal and state wildlife management agency biologists. Additionally, the BLM Ely District-recommended nest buffers would be applied to all other land jurisdictions in coordination with TransWest and respective landowners whose lands would be crossed by the Project.</p>
WLF-2	<p>To minimize disturbance to nesting raptors, no vegetation clearing or trimming, blasting, or other new surface-disturbing activities would occur within the appropriate spatial buffer for an occupied nest during the breeding season of the species using it. Raptor breeding seasons vary widely based on species, weather conditions, prey availability, latitude, elevation, and other factors. Figures 3.22-5, 3.22-8, and 3.22-13 present approximate raptor breeding seasons by species and Project region. If surface-disturbing activities within the appropriate spatial buffer cannot be avoided during the associated raptor nesting season, preconstruction raptor nest surveys and monitoring using agency-approved protocols would be performed to identify and protect occupied nests.</p> <p>Spatial avoidance buffers and seasonal restrictions would be applied as required by applicable BLM and USFS land and resource management plan stipulations (Appendix C) on lands administered by these agencies. Seasonal and spatial raptor nest buffers recommended by the USFWS and the appropriate state wildlife agency that are more restrictive than the applicable, required BLM and USFS plan stipulations would be applied at the discretion of these land management agencies (Table 3.22-4). Additionally, raptor seasonal and spatial buffers recommended by USFWS and the appropriate state wildlife agency would be applied to all other land jurisdictions in coordination with TransWest and respective landowners whose lands would be crossed by the Project.</p>
WLF-4	For the protection of migratory birds, TransWest would be required to install dark-sky lighting at all terminals, sub-stations, and series compensation facilities that is fully shielded to keep light from extending above the horizontal plane and is designed to provide the minimum amount of illumination necessary for safety and security purposes.
WLF-5	In Audubon Important Bird Areas crossed by the 250-foot-wide transmission line ROW, TransWest would employ line marking as recommended in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012). In addition, vegetation management Level 3, as described in the Project Vegetation Management Plan, would be employed in IBAs crossed by the 250-foot-wide transmission line ROW.
WLF-7	In BHCA's, TransWest would employ line marking as recommended in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012). In addition, vegetation management Level 3, as described in the Project Vegetation Management Plan, would be employed in BHCA's crossed by the 250-foot-wide transmission line ROW on public lands.
WLF-10	To avoid or minimize long-term disturbance to wildlife associated with public use of the ROW and new access roads during Project operation, these roads would be closed or rehabilitated using methods and monitoring developed through consultation with the landowner or land management agency. Depending on facility and ROW maintenance needs, methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour and vegetation.