From:	Repp, Pam
To:	Reeves, Julie
Cc:	Dave Carlson; Maria Boroja; Tyler Abbott; Amy Defreese; Creed Clayton; Susan E Cooper
Subject:	Re: Please review: TransWest Express transmission line DEIS comments
Date:	Thursday, September 26, 2013 10:58:43 AM
Attachments:	20130924_TWE_DEIScomments_USFWSPR (1).docx

Julie, you all did a great job! I have added some comments in redline/strikeout for your consideration. If this was not an ER, I am happy to have Mark sign it! Thanks for the good work!

On Tue, Sep 24, 2013 at 12:22 PM, Reeves, Julie <julie_reeves@fws.gov> wrote:

> Hi, Dave, Maria, and Pam (if you are there),
>
> If the RO is interested in reviewing the FOs' comments on the national priority TransWest Express transmission line project's DEIS, I am attaching them here, along with a cover sheet with WYES letterhead. If the RO would like to sign off on these comments, you can change the letterhead to your own and cc myself (highlighted currently).
>
> Please let me know as soon as possible: 1) if you plan to review these comments, and 2) if you plan to sign them out of the RO. If not, we can send them from Wyoming. The Service's comments are due to BLM by September 30th, so I would appreciate receiving the RO's response and/or signature by the 27th.
>
> Please let me know if you have any questions. Thanks!
>
> ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
> Julie Reeves
> Fish and Wildlife Biologist (Energy)
> U.S. Fish and Wildlife Service
> Wyoming Ecological Services Office
> 5353 Yellowstone Road, Suite 308A
> Cheyenne, WY 82009
> (307) 772-2374 x 232
> (307) 772-2358 fax
> Julie_Reeves@fws.gov
> ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
> A thing is right when it tends toward the integrity, stability, and beauty of the biotic community; it is wrong when it tends otherwise. ~Aldo Leopold

--

Pamela Repp
Division Chief - Water, Energy and Climate
US Fish and Wildlife Service, Mountain-Prairie Region
Lakewood, CO

(303) 236-4267

TransWest Express Transmission Line Project
DEIS Comments by U.S. Fish and Wildlife Service

Western Colorado: Creed Clayton, Southern Nevada: Susan Cooper, Utah: Amy Defreese, Wyoming: Julie Reeves

Note Figure, Table, and map reference in comment column.

Page	Section	Commenter	Comment	Response
General	General	Julie Reeves, USFWS WY	There does not appear to be a discussion of the interagency team's role in working through ~~tough~~ issues related to the Project or the consultation agreement that was signed in 2012 that established the roles of the various Federal agencies involved in guiding, permitting, and consulting on the Project. The Service recommends that the EIS include a section describing coordination and consultation to date for the Project.	
ES-5	ES.2.1.1	Julie Reeves, USFWS WY	In Design Options, the DEIS defines Design Option 2 and Design Option 3. We recommend that the EIS ~~clarifies~~ clarify this section ~~,~~by including reference to the proposed activity as Design Option 1.	
ES-7	ES.2.1.6	Julie Reeves, USFWS WY	We recommend that the purpose and need for ground electrode systems be defined here.	
ES-15	ES.3.4	Julie Reeves, USFWS WY	The Water Resources section of the ES for the DEIS states that "*Because existing water rights (current depletion) would be utilized, no new impacts to other water users or the water source would be anticipated.*" ~~Section 7 of the~~The Endangered Species Act ~~Service~~ requires ~~that~~ Federal agencies to ensure that projects they fund or carry out are not likely to jeopardize the continued existence of listed species or destroy or adversely modify their designated critical habitat. All activities that have an impact on water in the North Platte and the Colorado River basins have the potential for adverse effects to listed species or their designated critical habitat. We recommend that the applicant determine whether ~~current water usage~~the use of "existing water rights" has been consulted on with the Service.	
ES-15	ES.3.5	Julie Reeves, USFWS WY	The Vegetation section of the ES for the DEIS states that "*The removal of woody vegetation over 6 feet in height could result in changes in vegetation community structure.*" This is	

Comment [UF&WS1]: I do not think it is necessary to send this column to the BLM; all comments are Service comments. I do think it is useful, though, to have these in your records for future reference. I recommend deleting this column. Similarly above just reference which field offices commented, not which employee.

			the first mention in the DEIS of the removal of woody vegetation over 6 feet in height. We recommend justification for the removal of vegetation over 6-feet tall, particularly because the height of the transmission structures allows for greater than 50-feet of clearance beneath the sag of the cables.	
ES-16	ES.3.7	Julie Reeves, USFWS WY	The Wildlife section of the ES for the DEIS states that "*TransWest also has committed to implementing raptor seasonal timing restrictions in applicable areas.*" The Service ~~wishes to clarify that we~~ recommends seasonal restrictions outside of the nesting season for all migratory birds, ~~but~~ and we have specific guidance regarding seasonal and spatial buffers for nesting raptors. Additionally, the MBTA and Eagle Act apply to all lands, regardless of ownership. We recommend the above ~~, and so this~~ statement ~~should reflect that~~be reworded to say "*TransWest also has committed to implementing appropriate ~~…seasonal~~ timing restrictions ~~when~~for project activities that are planned within the vicinity of nesting birds.*"	
ES-16	ES.3.7	Julie Reeves, USFWS WY	The wildlife section of the ES for the DEIS ~~describes~~ states ~~following t~~the 2006 APLIC guidelines would be followed to minimize potential operation-related impacts to wildlife. We recommend ~~that you additionally~~the EIS also include reference to the 2012 Collision Manual.	
ES-17	ES.3.8	Julie Reeves, USFWS WY	Please define the "Special Status Wildlife Analysis Area" used here.	
ES-17	ES.3.8	Julie Reeves, USFWS WY	The special status wildlife species portion of the ES for the DEIS states "*Construction impacts account for all disturbances caused during construction of the proposed Project, including vegetation removal, increased human activity, and increased noise levels.*" We recommend rephrasing this sentence to ~~be more meaningful, such as~~say "Construction affects, such as vegetation removal, increased human activity, and increased noise levels, may affect special status wildlife species."	

TransWest Express Transmission Line Project
DEIS Comments by U.S. Fish and Wildlife Service

Western Colorado: Creed Clayton, Southern Nevada: Susan Cooper, Utah: Amy Defreese, Wyoming: Julie Reeves

ES-18	ES.3.9	Julie Reeves, USFWS WY	The aquatic biological resources section of the ES for the DEIS states "*Stream crossings would alter bottom substrates, and construction at stream crossings would remove riparian vegetation that provides cover for fish, shading, bank stability, and increased food and nutrient supply.*" Please clarify.	
ES-18	ES.3.9	Julie Reeves, USFWS WY	The Service appreciates that an "*Effect determination of new and existing water depletions would be made after the water sources are identified and an evaluation of their potential connection to surface flows is completed.*"	
1-9	1.4.1	Julie Reeves, USFWS WY	In this section, the DEIS refers to the U.S. Department of the Interior as (DOI) and as the USDI. The abbreviations and acronyms portion of the DEIS defines the U.S. Department of the Interior as USDI, though people employed by this branch refer to it as DOI. We recommend consistency throughout the document and use of the preferred DOI.	
2-1	2.1.1	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding the independent utility of this project with regard~~s~~ to existing and proposed renewable and non-renewable power generation sources in Wyoming.	
2-3	2.1.2	Julie Reeves, USFWS WY	We recommend that a "Design Option 1" be defined here prior to describing Design Options 2 and 3.	
2-7	2.2	Julie Reeves, USFWS WY	We appreciate the discussion regarding optimum spacing of parallel transmission lines (i.e. no closer than 1,500 feet from 345kV and higher and~~;~~ 250 feet from less than 345 kV lines). The Service recommends that the spacing of the Project from existing or proposed transmission lines remain flexible with regard to avoiding and minimizing impacts to sensitive and listed species' habitats.	
2-16 2-18 3.5-34	2.4.2.1 3.5.6.2	Susan Cooper, USFWS Las Vegas, NV	~~Strongly~~ We recommend reducing the amount of blading at tower sites and tension/stringing/pulling areas by taking a drive and crush approach rather than blading to reduce environmental impacts.	
2-17	Figure 2-10	Julie Reeves,	The Service supports the use of transmission structures	

Comment [UF&WS2]: Not sure what you want here – We recommend these individual affects be more fully articulated?

		USFWS WY	that do not include guy wires, particularly in areas where guy wires may pose an additional collision risk to low-flying birds. In areas where increased predation risk may adversely affect a federally listed species, we recommend the applicant utilize tubular steel towers with perch deterrents to limit perching opportunities for raptors.	
2-24	2.4.3.1	Julie Reeves, USFWS WY	The Northern Terminal description contains reference to the possibility for interconnection between the Energy Gateway West and Energy Gateway South 500 kV transmission lines. We recommend clarification for the purpose and need for such interconnections.	
2-32	Fig. 2-21.	Creed Clayton, USFWS, W. Colorado	The Little Snake (east and west) ground electrode areas in Moffat County, Colorado are in important breeding and priority habitat for the greater sage-grouse. We recommend selecting different ground electrode sites outside of priority habitat. At a minimum, we recommend locating any associated buildings, fences, access roads, and above-ground electrical lines well away from all sage-grouse leks (> 0.6 mile). The Little Snake East ground electrode site looks particularly problematic for sage-grouse due to its proximity to three GRGS leks.	
2-39	2.5.1.1	Julie Reeves, USFWS WY	The Service appreciates that Agency Preferred alternative (I-D) which parallels existing disturbance for much of its alignment. However, we are concerned that Alternative I-D creates a new disturbance corridor 2-5 miles west of and parallel to Hwy 789. We request that BLM further consider the potential impacts of this alternative and suggest that the preferred alternative be refined to further limit impacts to wildlife and other important features.	
2-40	2.5.1.1	Julie Reeves, USFWS WY	The Service supports Tuttle Easement Micro-siting Options 2 and 3 that avoid affects to the Tuttle Ranch Conservation Easement, which was established to protect high-quality wildlife habitat. Furthermore, we support a micro-siting option that allows for future transmission line	

			projects to follow a parallel corridor also avoiding impacts to the Tuttle Ranch Conservation Easement.	
Fig. 2-25. 2-41	2.5.1.1.	Creed Clayton, USFWS, W. Colorado	Colorado Parks and Wildlife obtained a conservation easement over portions of the Tuttle Ranch, located east of the town of Elk Springs in Moffat County, Colorado. The easement was obtained, in part, using funding from the U.S. Fish and Wildlife Service. Among other things, the easement protects habitat for the greater sage-grouse and various white-tailed prairie dog towns. At some future point, the prairie dog towns could provide excellent habitat for black-footed ferrets~~ as well~~. As stated previously, we recommend that the transmission line be routed around this conservation easement. Tuttle Easement Micro-siting Option 2 or 3 would accomplish this. If the transmission line was placed as close as is feasible to Highway 40, habitat fragmentation would be minimized.	
2-42	2.5.1.1	Julie Reeves, USFWS WY	The Service supports the ground electrode system alternative facilities that result in the fewest ~~a~~effects to habitat for federally listed species, migratory birds, and bald and golden eagles.	
2-49	2.5.1.3	Susan Cooper, USFWS Las Vegas, NV	For access roads, ~~need a~~please breakdown the number of acres and miles of ~~what will be~~ new disturbance, grading/improved roads, and existing roads with no improvement.	
2-56	2.8.1	Julie Reeves, USFWS WY	~~It is interesting that t~~The parameter for defining priorities for trade-offs between resources of concern focus on a subset of candidate and listed species and migratory birds that may occur in the Project area (parameter 3). We recommend further clarification regarding why and how ~~the way~~ these resources were prioritized.	
2-57	2.8.1	Julie Reeves, USFWS WY	Parameter 5 lists raptors as a resource not regulated by law. Under the Migratory Bird Treaty Act (MBTA), the Bald and Golden Eagle Protection Act (~~eagle~~ Eagle Act), and Executive Order 13186 (66 FR 3853; January 17, 2001), Federal agencies have an obligation to protect all species	

			of migratory birds, including eagles and other raptors, which may occur on lands under their jurisdiction. Of particular focus are the species identified in the Service's Birds of Conservation Concern (2008). In accordance with the Fish and Wildlife Coordination Act (16 USC 2912 (a)(3)), this report identifies "species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing" under the ESA. This report is intended to stimulate coordinated and proactive conservation actions among Federal, State, and private partners and is available at http://library.fws.gov/bird_publications/bcc2008.pdf. The MBTA, enacted in 1918, prohibits the taking of any migratory birds, their parts, nests, or eggs except as permitted by regulations, and does not require intent to be proven. Section 703 of the MBTA states, "Unless and except as permitted by regulations ... it shall be unlawful at any time, by any means or in any manner, to ... take, capture, kill, attempt to take, capture, or kill, or possess ... any migratory bird, any part, nest, or eggs of any such bird...." The Eagle Act prohibits knowingly taking, or taking with wanton disregard for the consequences of an activity, any bald or golden eagle~~s~~ or their body parts, nests, or eggs, which includes collection, molestation, disturbance, or killing. The ~~recommendations that the~~ Service makes recommendations regarding nest buffer distances ~~fall within the purview of the~~to assist in complying with the MBTA and Eagle Act. The Service recommends that the applicant develop a bird and bat conservation strategy (BBCS) as a stand-alone document appended to the FEIS that includes an impact assessment, avoidance and minimization measures, and compensatory mitigation for residual effects to migratory birds.	

Comment [UF&WS3]: This sentence is very confusing – please edit!

Comment [UF&WS4]: What Report?

2-59	Table 2-23	Julie Reeves, USFWS WY	The vegetation section of Table 2-23 states that wetlands and riparian areas will be affected by facilities construction. The Service understands that Western has a policy to avoid federally listed plants, and there is at least one listed plant species within riparian and wetland habitats throughout the length of the project. The Service recommends that riparian areas and wetlands be avoided by the project, and if that is not possible, ~~then~~ that they be spanned in locations that require the least amount of vegetation trimming and clearing. Any potential effects to federally listed plants should be evaluated and appropriately addressed through the ESA section 7 process in coordination with the Service.	
2-60	Table 2-23	Julie Reeves, USFWS WY	The Service recommends clarification that the number of IBAs crossed by the 2-mile transmission corridor is actually the number of acres crossed by the 2-mile corridor. Additionally, it should be clarified whether the value is the number of acres within the IBA or whether that is the number of acres that fall within the 2-mile corridor.	
2-60 to 2-61	Table 2-23	Julie Reeves, USFWS WY	The aquatic biological resources section of Table 2-23 does not include the effects of depletions on listed species downstream of the ~~impacts~~project. We recommend including an additional row that allows for the comparison of the number of structures built as well as the acres of access roads that may need dust abatement for each alternative that will be constructed using water from the Platte River and Colorado River basins. In general, depletions include evaporative losses and/or consumptive use of surface or groundwater within the affected basin, often characterized as diversions less return flows. Project elements that could be associated with depletions include, but are not limited to, ponds, lakes, reservoirs, hydrostatic testing of pipelines, wells, dust abatement, diversion structures, and water treatment facilities. Any actions that may result in a water depletion	

			should be identified. The document should include an estimate of the amount and timing of average annual water use (both historic and new uses) and methods of arriving at such estimates; location of where water use or diversion would occur~~s~~, as specifically as possible; if and when the water will be returned to the system; and the intended use of the water. Depending upon the details of the project, the Service may have more specific questions regarding the potential consumptive use of water. If the proposed action may lead to consumptive use of water or have the potential to affect water quality in the Platte River System or the Upper Colorado River, there may be impacts to threatened and endangered species inhabiting the downstream reaches of ~~this~~ these river systems, as well as their designated critical habitats. Formal interagency consultation under section 7 of the ESA is required for projects that may lead to depletions of water from any system that is a tributary to the Platte River System or the Upper Colorado River. ~~Federal agency actions resulting in water depletions to these systems may affect the federally listed plants and wildlife and their habitat downstream. In addition, upstream depletions may contribute to the destruction or adverse modification of designated critical habitat for these federally listed species.~~	
2-135	Table 2-27	Julie Reeves, USFWS WY	The Service requests clarification regarding the occupied greater sage-grouse leks within 4 miles of the reference line described for construction and operation acreages. The agency-preferred alternative is listed as having 62 acres of construction impacts occurring within 4 miles of occupied sage-grouse leks, but 0 acres of impacts resulting from operations. This either implies that the leks will move to outside the 4 mile buffer after construction or that on-going operations of a transmission line have no effect on sage-grouse.	

2-136	Table 2-27	Julie Reeves, USFWS WY	The Service recommends adding a row under aquatic biological resources or special status for impact to listed species as a result from depletions of the Platte River and Colorado River basins.	
3.4-21	3.4.6.3	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding water use for transmission line construction. We recommend discussing the effects of water use on federally listed species downstream of the project in the Platte River and Upper Colorado River basins. The FEIS should include a commitment to address the potential impacts of depletions on federally listed species in the Platte River and the Upper Colorado River basins, in addition to potential direct effects of project design, construction, and operation and maintenance.	
3.5-2	3.5.1.1	Julie Reeves, USFWS WY	The subsections defining the various states' management and regulatory requirements for invasive and noxious weeds all contain a definition of invasive plants except for Colorado.	
3.5-25 to 3.5-27	3.5.6.1	Julie Reeves, USFWS WY	It is not clear why 504 acres of vegetated land would be directly disturbed for the Northern Terminal, with the entire area being cleared, sterilized, and covered with crushed rock, and then 270 acres would be reclaimed, leaving 234 acres impacted during the life of the project. We recommend clarification on the locations and amounts of actual vegetation removal and site preparation and reclamation.	
3.5-33	3.5.6.2	Julie Reeves, USFWS WY	The DEIS states that "*Vegetation over 6 feet in height would be cleared or removed as described below. Vegetation over 6 feet in height predominantly would include trees and larger shrub species found in the following vegetation community types: Aspen Forest and Woodland, Conifer Forest, Deciduous Forest, Pinyon-Juniper, and Woody Riparian and Wetlands. Low-growing trees, shrubs, and ground vegetation under 6 feet in height would be left in place. Trees to be cleared would be cut off at ground level, and the stumps left in place for erosion*	

			control." The Service recommends that only woody vegetation that poses a threat to operations of the transmission line (i.e. conductor clearance) be removed, as a blanket removal of all vegetation over 6 feet is not necessary, particularly where the line may span valleys, canyons, and similar topography. Removal of woody vegetation beneath the wire zone of the Project could fragment important habitat for migratory birds and federally listed species, particularly for species that require large areas of treed habitat or use those areas for migration or dispersal.	
3.6-1 thru 3.6-84	3.6.6	Amy Defreese, USFWS UT	In anticipation of section 7 consultation under the ESA, we recommend that you create tables that identify which avoidance, minimization and mitigation measures will apply to each species. Please also identify the source of each measure (e.g. TWE, BLM, WWEC, etc.) In reading through Section 3.6.6 it is difficult to make this determination as the measures and analyses are found on a number of different pages depending on the alternative discussed and the project phase discussed.	
3.6-2 – 3.6-9	3.6.4.1	Amy Defreese, USFWS UT	In general, as I read through each plant description in this section, I found that there were errors in associating species documentation with the various Alternatives. For example, the text states that clay phacelia has only been documented within, and immediately adjacent to, the 2-mile transmission line corridor for Alternative II-E. ~~My understanding is that it is~~However, we believe it has ~~-~~also been documented within Alternative II-F. Recommend review of this section for accuracy.	
3.6-5	3.6.4.1	Amy Defreese, USFWS UT	Please update the section regarding Graham's ~~Penstemon~~ penstemon to reference the Service's most recent proposal for listing, dated August 6, 2013 (78 FR 47590). Also, please disclose the proposal of the same date for designation of critical habitat for the species (78 FR 47831-47858). You may wish to contact ~~our office~~the	

			Utah Field Office for proposed critical habitat shape files.	
3.6-5	3.6.4.1	Amy Defreese, USFWS UT	Please update the section about White River ~~Penstemon~~ penstemon to reference the Service's most recent proposal for listing, dated August 6, 2013 (78 FR 47590). Also, please disclose the proposal of the same date for designation of critical habitat for the species (78 FR 47831-47858). You may contact ~~our office~~the Utah Field Office for proposed critical habitat shape files.	
3.6-3 3.6-64 3.6-69 3.6-71	3.6	Susan Cooper, USFWS Las Vegas, NV	~~NV FWS botanist, Sarah Kulpa, is concerned that a known occupied location for LV~~Las Vegas buckwheat may be affected by the transmission line. Please evaluate the potential for project effects to this species.	
3.6-6	3.6.4.1	Amy Defreese, USFWS UT	Recent information suggests that clay phacelia is a true biennial as opposed to a winter annual as described in the text. (Citation: Meyer, S. 2011. Research Ecologist, USFS RMRS Shrub Sciences Lab, Provo, Utah. Personal communication.)	
3.6-16	3.6.6	Amy Defreese, USFWS UT	Table 3.6-6: For the resource topic "*Potential loss of individuals and/or suitable or occupied habitats as a result of construction and operation activities*", recommend that ~~you~~ the EIS add an evaluation of construction/operation-induced erosion and its effects to special status plant species. Project activities considered should include those associated with pre-construction (e.g. line surveys), construction, maintenance and operation.	
3.6-17	3.6.6	Amy Defreese, USFWS UT	Table 3.6-6: For the resource topic "*potential loss of pollinators*", recommend that you expand the Analysis Considerations to say, "The analysis will evaluate indirect effects associated with potential loss of pollinators due to fugitive dust emissions, herbicide application and drift, loss of alternate pollen/nectar plants, and habitat fragmentation."	
3.6-17	3.6.6	Amy Defreese, USFWS UT	Table 3.6-6: Recommend the addition of "*Exposure to herbicides*" as a Resource Topic. The Analysis could then	

			evaluate direct effects (e.g. decrease in viability/vigor/persistence and mortality) to special status species. It should also evaluate indirect effects to special status species from loss of pollinators that are directly killed by herbicides and that are indirectly affected by loss of alternate pollen/nectar plants.	
3.6-17	3.6.6	Julie Reeves, USFWS WY	The DEIS states that the analysis "*assumes that the USFWS will continue to have jurisdiction over the management of federally endangered, threatened, proposed, and candidate species populations.*" The state wildlife agency within a given state has jurisdiction over candidate species.	
3.6-18	3.6.6.1	Julie Reeves, USFWS WY	The DEIS states that both direct and indirect impacts can be grouped into two categories: 1) loss of individuals/ populations and 2) loss of potentially suitable habitat. However, these two categories should fall under only direct effect. Indirect effects have been broken into three main categories on page 3.6-19 (1) invasives, 2) loss of pollinators, and 3) fugitive dust). Therefore, we recommend removing "indirect" impacts from the discussion on page 3.6-18.	
3.6-20	3.6.6.1	Julie Reeves, USFWS WY	The Service ~~appreciates~~ supports the measures included in SS-1 to avoid and minimize impacts to federally listed plants. SS-1 states that *"(Species-specific Surveys for Federally-listed Species) – Site- and species-specific surveys for federally listed plant species would be conducted prior to the BA to identify the precise location of known individuals and populations and ground-truth modeled habitats. Surveys would be conducted in areas identified as potential habitat through models developed for the EIS, or from agency provided models for specific species. Surveys would be conducted as described in the TWE Project Special Status Species Survey Plan and subsequent Survey Plan Memos. Species not requiring surveys prior to the BA would be identified by the USFWS and BLM. For these species, pre-construction surveys still would be required. 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 need to be developed in consultation with the USFWS and BLM. Species-specific mitigation may include compensatory mitigation and transplanting of individuals."	
3.6-20	3.6.6.1	Amy Defreese, USFWS UT	We recommend an additional mitigation measure for federally proposed and listed plants: The site-specific design modifications proposed in SS-1 should be provided to the USFWS in the Biological Assessment to demonstrate where and how the company will achieve avoidance and minimization.	
3.6-20	3.6.6.1	Amy Defreese, USFWS UT	For SS-1, recommend that this measure be expanded to apply to species proposed for listing under ESA (e.g. Graham's penstemon and White River penstemon).	
3.6-20	3.6.6.1	Amy Defreese, USFWS UT	SS-1: Prior to the use of potential habitat models for federally listed or federally proposed species, recommend FWS review and approval of those models.	
3.6-20	3.6.6.1	Creed Clayton, USFWS, W. Colorado	SS-4 *Avoidance of Ute Ladies'-tresses Orchid Species and Habitat* states that "*Surface disturbance associated with facilities, access roads, and other Project-related construction activities would not occur within the areas identified as potential habitat or within a 50-foot buffer around known occurrences."* SS-6 states that "*A minimum 300-foot buffer distance would be incorporated between federally listed individuals and populations and surface disturbance."* This appears to be a discrepancy. We recommend all surface disturbance (e.g., for towers, ground electrodes, roads) avoid all known Ute ladies-tresses' individuals by 300 feet. We also recommend that areas of high occurrence potential (e.g., floodplain of Little Snake and Yampa Rivers in Colorado) also be avoided by 300 feet unless surveys demonstrate likely absence.	
3.6-20 to 3.6-21, App	3.6.6.1, Table C.5-1	Julie Reeves, USFWS WY	Measure SS-4 states that "(*Avoidance of Ute Ladies'-tresses Orchid Species and Habitat) – Known individuals and populations and areas identified as potential habitat through*	

C C-124			*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 potential habitat or within a 50-foot buffer around known occurrences. Presence of species in modeled habitat would be assumed for USFWS mitigation purposes. If potential habitat cannot be avoided, 2 years of surveys in potential habitat would be required, and USFWS formal consultation may be necessary.*" The Service recommends ~~that,~~ instead of a 50-foot buffer around known occurrences, the BMP state that a to-be-determined buffer outside of the potential habitat surrounding known populations will be implemented. For example, SS-6 states that "A minimum 300-foot buffer distance would be incorporated between federally listed individuals and populations and surface disturbance," which provides much more protection for ULT than SS-4's proposed 50-foot buffer.	
3.6-20	3.6.6.1	Amy Defreese, USFWS UT	SS-4: We recommend that you replace "50-foot buffer" with a "buffer to be determined". A 50-foot buffer may not be sufficient to protect a riparian plant from upstream or downstream culvert construction or maintenance for example.	
3.6-20	3.6.6.1	Amy Defreese, USFWS UT	SS-4: Recommend that you replace "USFWS mitigation purposes" with "section 7 consultation".	
3.6-20	3.6.6.1	Amy Defreese, USFWS UT	SS-4: 1) Recommend that you replace "potential" habitat, with "suitable" habitat. Ultimately, TWE should conduct a ground-truthing exercise to narrow the potential habitat locations (~~especially for species like Ute ladies'-tresses because potential habitat is extensive)~~. Because potential habitat can be extensive, it would be very difficult for TWE to demonstrate full avoidance as it wishes to do. 2) To facilitate a more manageable section 7 consultation, and in the absence of species surveys, we ~~strongly~~ recommend that TWE conduct an exercise to ground-truth potential	

Comment [UF&WS5]: By whom and when?

Comment [UF&WS6]: By whom and when?

			habitat prior to submittal of a BA.	
3.6-20	3.6.6.1	Amy Defreese, USFWS UT	SS-5: For some T&E species, a 300-foot buffer will not provide adequate protection when construction occurs upslope of an individual or population. We recommend that you exclude T&E species from this measure OR disclose that a buffer for T&E species will be determined on a case-by-case basis with the FWS. Also, please be aware that for some T&E species (e.g. clay phacelia), we also recommend a buffer between surface disturbance and suitable habitat.	
3.6-21	3.6.6.1	Amy Defreese, USFWS UT	SS-6: For some T&E species, a 300-foot buffer will not provide an adequate buffer between individuals and construction. We recommend that you articulate that buffers for T&E species will be determined on a case by case basis with the FWS. Also, please be aware that for some T&E species (e.g. clay phacelia, we also recommend a buffer between surface disturbance and suitable habitat.	
3.6-22	3.6.6.2	Amy Defreese, USFWS UT	Recommend that you add herbicide application and drift as a direct impact that may result in degradation/loss of individual or local populations; Recommend that you add herbicide application and drift as an indirect impact that may result in loss of pollinators.	
3.6-23	3.6.6.2	Amy Defreese, USFWS UT	ICF International, under a contract with Wyoming Infrastructure Authority, published the "Framework for Analyzing Separation Distances between Transmission Lines in Wyoming: Final Report" (August 26, 2009). The Report ~~authors determined a recommended~~ recommends a minimum line separation distance for new transmission lines of 260' feet to~~—~~ 1,500' feet. ~~This Framework may be applied in other western states.~~ We recommend that TWE include the following measure as a Design Feature: "Where potentially suitable habitat and known occurrences of T&E plant species exist, TWE will coordinate with Rocky Mountain Power to minimize separation distance between	

			the TWE transmission line and the RMP Energy Gateway South transmission line (below 1500~~'~~ feet). We further recommend that TWE disclose the results of its minimum line separation distance analysis for T&E plant species in the Biological Assessment for section 7 consultation.~~"~~	
3.6-24	3.6.6.3	Julie Reeves, USFWS WY	The DEIS states that Alternative I-A's effects to Ute ladies'-tresses would be avoided through the implementation of mitigation measure SS-2. However, SS-2 deals with USFS species. Therefore, we recommend that the DEIS instead state that SS-1, SS-4, and SS-6 would be implemented to avoid and minimize affects to potential habitat for this species.	
3.6-29 to 3.6-30	Table 3.6-10	Julie Reeves, USFWS WY	The Service supports the Region I ground electrode system that avoids and minimizes affects to federally listed plant and wildlife species as well as their habitats. Specific to federally listed plant species ~~(ULT),~~, this would include the Shell Creek, Little Snake East, Eight Mile Basin, and Separation Creek alternatives.	
3.6-31	3.6.6.4	Amy Defreese, USFWS UT	Table 3.6-11: Recommend that you add a Parameter ~~as follows~~such as: Acreage of Graham's ~~Penstemon~~ penstemon proposed critical habitat impacted (Alternatives II-D and II-F cross proposed critical habitat for this species).	
3.6-33	3.6.6.4	Amy Defreese, USFWS UT	To minimize the loss of habitat for Deseret milkvetch, we recommend that TWE work pro-actively with Rocky Mountain Power (Energy Gateway South transmission line) to minimize separation distance between the TWE transmission line and the RMP Energy Gateway South transmission line (< 1500~~'~~ feet). ICF International, under a contract with Wyoming Infrastructure Authority, published the "Framework for Analyzing Separation Distances between Transmission Lines in Wyoming: Final Report" (August 26, 2009). The ~~authors determined a~~Report recommended a minimum line separation distance for new transmission lines of 260 feet~~'—~~to 1,500~~'~~ feet. ~~This~~	

Comment [UF&WS7]: Is this the correct spelling?

			~~Framework may be applied in other western states.~~	
3.6-33	3.6.6.4	Amy Defreese, USFWS UT	SS-8 conflicts with SS-5 and SS-6 (all reflect proposed buffers for Deseret milkvetch). Recommend that ~~you~~ it is made ~~make it~~ clear which measure trumps the rest. We wish to avoid confusion when these measures are communicated and implemented by crews on the ground.	
3.6-38	3.6.6.4	Amy Defreese, USFWS UT	The impact analysis for clay phacelia under Alternative II-A does not seem accurate. We do not believe that there are relocation sites within the corridor for Alt II-A. We also disagree that the limited range for the species is located predominantly within the 2-mile corridor for Alt II-A. In addition, although there is modeled potential habitat within the 2-mile corridor for Alt II-A, there are no documented occurrences.	
3.6-38	3.6.6.4	Amy Defreese, USFWS UT	SS-9: The Utah Field Office FWS has developed a list of conservation measures for clay phacelia (Attachment 1 at the end of this table). We recommend that TWE follow these measures to avoid impacts to clay phacelia. We specifically recommend that you substitute the existing text in SS-9 with these conservation measures.	
3.6-38	3.6.6.4	Amy Defreese, USFWS UT	This page references the application of SS-3. Based on the definition of SS-3, it does not apply to Federally listed species. Recommend removing the reference to SS-3.	
3.6-38	3.6.6.4	Amy Defreese, USFWS UT	3rd paragraph on this page: It is not clear which species this paragraph is referencing; please clarify.	
3.6 - 38,55,58	3.6.6.4	Amy Defreese, USFWS UT	The impact analysis for clay phacelia, under Alternatives II-A, II-E and II-F, should be expanded. We specifically recommend that you discuss the impact of the proposed line to potential habitat in more detail. The ability to recover the species through reintroduction becomes more limited as potential habitat is lost. This point should be disclosed in the text.	
3.6-39	3.6.6.4	Amy Defreese, USFWS UT	We do not agree that implementation of SS-6 and SS-9 will prevent direct and indirect impacts to clay phacelia.	

Comment [UF&WS8]: Again, correct spelling?

			We recommend that TWE adopt the conservation measures developed by the Utah Field Office FWS (Attachment 1 at the end of this table).	
3.6-58	3.6.6.4	Amy Defreese, USFWS UT	We recommend a separate impact analysis for clay phacelia under Alternative II-F (preferred alternative). The impacts under this Alternative are very different than those under Alternatives II-A and II-E, which are referenced in this section as having similar impacts.	
3.6-58	3.6.6.4	Amy Defreese, USFWS UT	The Forest Service developed a potential habitat model for clay phacelia (July 2013) that was approved by the Utah Field Office FWS. We recommend that you use this model in your impact analysis as it appears it encompasses less acreage than the model AECOM developed and will likely be more precise. Alternatively, please be aware that you should use the July 2013 clay phacelia potential habitat model for your ESA section 7 biological analysis.	
3.6-59	3.6.6.4	Amy Defreese, USFWS UT	As of August 6, 2013, the Service has proposed critical habitat for Graham's penstemon (78 FR 47831-47858). We recommend that you disclose this information, as well as the acreage of proposed critical habitat impacted by Alt II-F, and the others that cross it.	
3.6-59	3.6.6.4	Amy Defreese, USFWS UT	Recommend that you provide additional impact analysis for Graham's penstemon. The existing text discloses the acreage of potential habitat crossed by the project and the avoidance/minimization measures proposed by the applicant. We are interested to see an analysis for the various ways in which the project will directly and indirectly affect the plant and its habitat.	
3.6-59	3.6.6.4	Amy Defreese, USFWS UT	As of August 6, 2013, the Service has proposed critical habitat for White River penstemon (78 FR 47831-47858). We recommend that you disclose this information, as well as the acreage of critical habitat impacted by Alt II-F, and the other Alternatives that cross it.	
3.7-1	Table 3.7-1	Julie Reeves,	The Service recommends including BLM's WO IM-2010-	

		USFWS WY	156 in Table 3.7-1 as it describes addressing eagles and migratory birds in NEPA for renewable energy projects.	
3.7-2 to 3.7-3	Table 3.7-2	Julie Reeves, USFWS WY	~~The f~~Footnote #1 states that "*The wildlife analysis area includes suitable habitat within the HUC 10 watersheds crossed by the Project.*" However, it appears that all habitat types are included in Table 3.7-2, ~~and~~but - no description of what is considered "suitable habitat" is ~~defined as is~~ provided. The Service requests clarification.	
3.7-8	3.7.4.3	Julie Reeves, USFWS WY	The Service appreciates the discussion of the MOUs between the Service and the FS and BLM regarding protections for migratory birds, specifically that the DEIS states that "*In order to comply with all applicable regulatory requirements outlined by the EO 13186 and the associated MOUs, TWE has committed to developing an operational policy and a comprehensive strategy for collecting data, minimizing impacts, and mitigating loss of migratory birds and essential habitats prior to the initiation of construction. This policy and strategy will be incorporated into a single, over-arching document (Avian Protection Plan or Bird Conservation Strategy) that will include a full listing of all minimization measures included in this EIS, as well as recommendations from the USFWS and additional information included within the Avian Protection Plan Guidelines, developed by the USFWS and APLIC in 2005 (APLIC 2012).*" The Service looks forward to working with the applicant and BLM in developing a Bird Conservation Strategy that includes avoidance, minimization, and restoration measures for the length of the project, as well as compensatory mitigation for loss of migratory bird habitats as a result of the Project. The Service would like to remind TWE that "migratory birds" includes all raptors, including ~~and~~ eagles ~~which must be included in any Bird Conservation Strategy~~.	
3.7-8	3.7.4.3	Amy Defreese, USFWS UT	This section (specific to raptors and migratory birds) is very good. Thank you for incorporating specific information about Important Bird Areas and Bird Habitat	

			Conservation Areas.	
3.7-9	3.7.4.3	Julie Reeves, USFWS WY	The Service appreciates that bird habitat conservation areas will be prioritized as areas for compensatory mitigation for the Project.	
3.7-10	3.7.4.3	Amy Defreese, USFWS UT	Figure 3.7-1: Recommend identifying the agency preferred alternative on this Figure.	
3.7-12	3.7.4.3	Amy Defreese, USFWS UT	Figure 3.7-2: Recommend identifying the agency preferred alternative on this Figure.	
3.7-36 and 37	3.7.6 and Table 3.7-19	Julie Reeves, USFWS WY	The Service appreciates the description of potential direct and indirect impacts that the Project will have on wildlife, and that not only direct mortality is considered as potential impact on wildlife, but also habitat loss and fragmentation, displacement of individuals, loss of breeding success, exposure to noise and human activity, and increased predation.	
3.7-36	3.7.6	Amy Defreese, USFWS UT	Table 3.7-19: Recommend that the first Resource Topic in Table 3.7-19 be revised as follows: Habitat loss, alteration, degradation, and fragmentation.	
3.7-36	3.7.6	Amy Defreese, USFWS UT	Table 3.7-19: To address habitat alteration and degradation resulting from project construction and operation, recommend adding the following as an Analysis Consideration: The acreage of habitat that will be converted (altered) from one habitat type (i.e. conifer forested, forb/grass understory) to another habitat type (i.e. no canopy, shrub understory). For migratory birds, this will assist in the analysis of project impacts and development of compensatory mitigation under TWE's proposed Bird Conservation Strategy.	
3.7-36	3.7.6	Amy Defreese, USFWS UT	Table 3.7-19: Recommend that under the second resource topic, Loss of or injury to a species, you add the following Analysis Consideration: Destruction of nests, eggs, and hatchlings from vegetation clearing activities	
3.7-36	3.7.6	Amy Defreese, USFWS UT	Table 3.7-19: Recommend that under the second resource topic, Loss of or injury to a species, you add the following	

			Analysis Consideration: Electrocution of birds	
3.7-37	3.7.6	Amy Defreese, USFWS UT	The introductory sentence to WLF-1 on this page is: "In addition the following mitigation measure for wildlife *should* be implemented". Recommend that the text specifically state whether the measure will be followed.	
3.7-37 and else-where. C.5 C-125	3.7.6 and else- where, Table C.5-1	Julie Reeves, USFWS WY	WLF-1 states that TWE will avoid habitat removal for migratory birds in currently undisturbed lands. This avoidance measure does not define "currently undisturbed," and implies that migratory bird habitat in disturbed areas will be removed during nesting season. Please clarify.	
3.7-46	3.7.6	Amy Defreese, USFWS UT	WLF-1 does not provide meaningful assurance that raptors or migratory birds will be protected. Use of the clauses, "on currently undisturbed lands" and "to the extent possible" significantly lessen the effectiveness of the measure. Ultimately, WLF-1 does not reflect the commitment from BLM to promote the conservation of bird populations under E.O. 13186.	
3.7-40	3.7.6.1	Julie Reeves, USFWS WY	The Service appreciates that "*A comprehensive raptor nest survey would be conducted along the agency preferred route prior to construction. This would provide the data needed to inform micro-siting adjustments and timing of construction activities to avoid or minimize impacts to nesting raptors*."	
3.7-44	3.7.6.2	Julie Reeves, USFWS WY	The Service appreciates the discussion of potential direct and indirect impacts to wildlife as a result of the Project.	
3.7-46	3.7.6.2	Amy Defreese, USFWS UT	We recommend use of the *Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances* which were developed in part to provide consistent application of raptor protection measures statewide and provide full compliance with environmental laws regarding raptor protection. Raptor survey and mitigation measures are provided in the Raptor Guidelines as recommendations to ensure that proposed projects will avoid adverse impacts to raptors. For WLF-1, please add	

			language that references an intent to comply with the Utah Field Office Guidelines for Raptor Protection from Human and Land Use Disturbances (Romin and Muck, 2002). This is a comment we provided during review of PDEIS2.	
3.7-46	3.7.6.2	Julie Reeves, USFWS WY	The Service recommends providing a more detailed discussion of potential direct and indirect impacts to raptors and other migratory birds as a result of the Project. Please note that while some raptor species "are not classified as special status," they are still protected species under the Migratory Bird Treaty Act.	
3.7-46	3.7.6.2	Julie Reeves, USFWS WY	In the second sentence of the second paragraph under Raptors and Other Migratory Birds, the text reads "The availability of *aptor* nest data." Please ~~revise~~correct this misspelling.	
3.7-47	3.7.6.2	Julie Reeves, USFWS WY	The Service appreciates that "*TWE has committed to developing an operational policy and a comprehensive strategy for collecting data, minimizing impacts, and mitigating loss of migratory birds and essential habitats prior to the initiation of construction. This policy and strategy will be incorporated into a single, over-arching document (Avian Protection Plan or Bird Conservation Strategy) that will include a full listing of all minimization measures included in this analysis, as well as recommendations from the USFWS and additional information included within the Avian Protection Plan Guidelines, developed by the USFWS and APLIC in 2005 (APLIC 2012).*" The Service anticipates working with the applicant and BLM in developing a plan or strategy that addresses the Project's effects, avoidance, minimization, and mitigation for migratory birds and their habitats.	
3.7-47	3.7.6.2	Amy Defreese, USFWS UT	TWE-32 is referenced on this page as a measure that will be applied by TWE to minimize and reduce impacts during the breeding season. Based on the text in Appendix C for TWE-32, we do not agree that application of the measure will reduce impacts to raptors and migratory birds during the breeding season. There is no language in this	

			measure that is binding or descriptive enough to assure ~~the reader that~~ the applicant will protect raptors or migratory birds during the breeding season. Recommend either deleting this measure, or ~~beefing it up to be~~state that it is binding and ~~more descriptive~~enhance the description. This is a comment we provided during review of PDEIS2.	
3.7-47	3.7.6.2	Amy Defreese, USFWS UT	The Migratory Bird Treaty Act (MBTA) prohibits the take of migratory birds, their parts, nests, eggs, and nestlings. Executive Order 13186, issued on January 11, 2001, affirmed the responsibilities of Federal agencies to comply with the MBTA. To ensure construction activities do not result in the "take" of an active nest or migratory bird protected under the MBTA, we recommend that TWE implement measures to avoid vegetation clearing and surface disturbance within critical breeding, nesting, and fledging seasons. We specifically recommend: a. Any ground-disturbing activities or vegetation treatments should be performed before migratory birds begin nesting or after all young have fledged to avoid ~~incidental~~ take; b. If activities must be scheduled to start during the migratory bird breeding season, take appropriate steps to prevent migratory birds from establishing nests in the potential impact area. These steps could include covering equipment and structures and use of various excluders (e.g., noise). Prior to nesting, birds can be harassed to prevent them from nesting on the site. c. If activities must be scheduled during the migratory bird breeding season, a site-specific survey for nesting birds should be performed starting at least two weeks prior to groundbreaking activities or vegetation treatments. Established nests with eggs or young cannot be moved, and the birds	

			cannot be harassed (see b., above), until all young have fledged and are capable of leaving the nest site; d. If nesting birds are found during the survey, appropriate spatial buffers should be established around nests. Vegetation treatments or ground-disturbing activities within the buffer areas should be postponed until the birds have left the nest. Confirmation that all young have fledged should be made by a qualified biologist. During construction, monitor equipment daily and deter any nesting activity by preventing access (exclusion) and through hazing that does not cause harm to the bird. Do not haze or exclude access if the adult birds are tending eggs or young. Do not haze or exclude access for eagles and threatened or endangered species. Nests (e.g., raven) may be removed while being constructed but cannot be removed once eggs or young are present. Shooting, killing and capturing birds, moving and possession of nests, and other similar activities are not allowed unless permitted by the U.S. Fish and Wildlife Service.	
3.7-47 to 48	3.7.6.2	Julie Reeves, USFWS WY	The Service appreciates the discussion about the effects of human disturbance and noise on migratory birds.	
3.7-49 to 50	3.7.6.2	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding potential impacts resulting from collision and electrocution from transmission structures, lines, and guy wires. Following APLIC's *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* is helpful guidance. We additionally recommend that the Project follow *Reducing Avian Collisions with Power Lines: State of the Art in 2012* (updated from 2005).	
3.7-53	Table 3.7-	Julie Reeves,	The agency-preferred alternative (I-D) appears to have	

Comment [UF&WS9]: REALLY? These two sentences seem contradictory. Get clarification from LE.

	23	USFWS WY	greater impacts on migratory birds (acres of construction, operation, and indirect impacts), raptor nests (nests within one mile of the reference line), and important bird areas (acres) than the other proposed alternatives. Based on this table, it does not appear that Alternative I-D would be the appropriate choice for avoiding impacts to these species. However, the survey effort regarding raptor nests relative to existing projects or ROWs potentially explains the higher number of raptor nests found within one mile of Alternative I-D. We recommend clarification about the values presented in Table 3.7-23 to better ~~assist the reader in~~ understand~~ing~~ the difference between potential effects and survey effort.	
3.7-53	3.7.6.3	Amy Defreese, USFWS UT	Thank you for including acreage of BHCAs crossed by the 250~~'~~ feet ROW for each alternative in Tables 3.7-23, 3.7-29, 3.7-39 and 3.7-42. We recommend that you also include the acreage of BHCAs crossed by the 2-mile corridor for each alternative. These acreages should also be discussed in the text. The 2-mile corridor will be criss-crossed by access roads. As stated on page 3.7-47, noise levels associated with construction may impact migratory bird species that occupy habitats in the 2-mile transmission line corridor. In addition, migratory bird habitat may be degraded, fragmented and eliminated due to the construction of new access roads and the widening of existing access roads. Additional impacts include destruction of nests/eggs during road construction and injury/mortality from collisions with vehicles.	
3.7-55 thru 3.7-106	3.7.6	Amy Defreese, USFWS UT	The impact analysis provided for each alternative does not incorporate the acres of BHCAs impacted by the alternative. According to Table 3.7-19, this should be part of the analysis. Recommend adding the acreage of BHCAs crossed/disturbed for all alternatives.	
3.7-55 and 3.7-	3.7.6	Amy Defreese, USFWS UT	For Alt-IA, the text presents acreage of habitat “lost” for raptors and other migratory birds. For Alt-IIF, the text presents acreage of habitat “disturbed” for raptors and	

80			other migratory birds. Recommend using consistent language to describe what is presented across alternatives.	
3.7-67	3.7.6.4	Amy Defreese, USFWS UT	Table 3.7-29: The Table does not seem to accurately represent the BHCA acreage crossed by Alternative II-F. Specifically, Alternative II-F crosses at least a few BHCAs, including the Green River BHCA, the Delta BHCA, and the Nebo BHCA, yet the Table does not reflect this.	
3.7-107 and 3.8-152	3.7.6.7, 3.7.6.10, 3.8.6.9,	Julie Reeves, USFWS WY	The DEIS states that "*It is anticipated that reclamation efforts would be successful and no residual impacts to habitats will occur.*" The Service requests a more thorough explanation of reclamation efforts, particularly given historical transmission projects have not been fully reclaimed and have instead been restrung or rebuilt. Even short-term use of habitat for the construction of the Project could result in long-term loss of habitat services. The Service believes that residual effects will likely occur as a result of the Project. An explicit commitment should be made not only to "reclaim" any disturbance, but also to "restore" these areas back to native vegetation communities: this commitment should include a monitoring plan with clearly articulated objectives to ensure restoration success.	
3.8-4	3.8.3	Susan Cooper, USFWS Las Vegas, NV	For SWFL – edit "Hooter-Parker" to Hoover-Parker.	
3.8-10/11	3.8.4.1	Susan Cooper, USFWS Las Vegas, NV	~~For other species analyzed, a description of potentially affected critical habitat is included.~~ Please include an assessment of potential impacts to ~~for~~ desert tortoise~~, especially because~~ critical ~~habitat is discussed on page 3.8-123~~.	
3.8-12 to 3.8-13	3.8.4.1	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding the current status of the greater sage-grouse. The DEIS points to BLM IM 2010 *[2012]*-043, which includes various conservation policies and procedures that BLM is directed to apply to the Project, including "In cooperation with	

			respective state wildlife agencies, determine that the proposed ROW would cumulatively maintain or enhance greater sage-grouse habitat." The Service believes that the installation of a transmission line via a right-of-way grant from the BLM is not likely to maintain or enhance greater sage-grouse habitat. Because the Project is likely to destroy and degrade greater sage-grouse habitat, a compensatory mitigation plan should be developed for this Project.	
3.8-13	3.8.4.1	Amy Defreese, USFWS UT	There may be a typo on this page. The first reference to BLM IMs on this page (mistakenly?) identifies IM 2012-043 as IM 2010-043.	
3.8-13	3.8.4.1	Amy Defreese, USFWS UT	In the section on this page entitled "Lekking, breeding, nesting habitat", we recommend that you reference the following literature which establishes that most (74-80%) hens nest within 4 miles of a lek: 1) Moynahan B. J. 2004. Landscape-scale factors affecting population dynamics of greater sage-grouse (*Centrocercus urophasianus*) in northcentral Montana, 2001-2004. Dissertation, The University of Montana, Missoula; and, 2) Holloran, M. J. and S. H. Anderson. 2005. Spatial distribution of greater sage-grouse nests in relatively contiguous sagebrush habitats. Condor 107: 742-752. This literature forms the basis for our recommendations regarding spatial and temporal buffers for lekking and nesting greater sage-grouse.	
3.8-12 to 3.8-13	3.8.4.1	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding the current status of the greater sage-grouse. The DEIS points to BLM IM 2010 *[2012]*-043, which includes various conservation policies and procedures that BLM is directed to apply to the Project, including "In cooperation with respective state wildlife agencies, determine that the proposed ROW would cumulatively maintain or enhance greater sage-grouse habitat." The Service believes that	

			the installation of a transmission line via a right-of-way grant from the BLM is not likely to maintain or enhance greater sage-grouse habitat. Because the Project is likely to destroy and degrade greater sage-grouse habitat, a compensatory mitigation plan should be developed for this Project.	
3.8-14	3.8.4.1	Julie Reeves, USFWS WY	The DEIS states that, for the whooping crane, "*No new depletions will occur by the proposed Project in the Platte River system in Wyoming. No impacts are expected to the whooping crane and no whooping crane analysis area has been defined for the Project.*" The Service appreciates the assessment of depletions out of the Platte River system in Wyoming, and we recommend that the applicant address the potential for impacts to whooping crane critical habitat downstream of the analysis area as a result of depletions. Additinoally, we recommend that the applicant contact the Wyoming State Engineer's Office to determine if water to be used for the Project would be a new or existing use. Any effects from water use that cannot be identified as having already been consulted on under the ESA will need to be addressed under section 7 consultation with the Service for this Project. Formal interagency consultation under section 7 of the ESA is required for projects that may lead to depletions of water from any system that is a tributary to the Platte River. Federal agency actions resulting in water depletions to the Platte River system may affect the endangered whooping crane, pallid sturgeon, least tern, and threatened western prairie fringed orchid, and their habitat downstream. In addition, upstream depletions may contribute to the destruction or adverse modification of designated critical habitat for the whooping crane. Any actions that may result in a water depletion should be identified. The document should include an estimate of the amount and timing of average annual water use (both	

			historic and new uses) and methods of arriving at such estimates; location of where water use or diversion occurs, as specifically as possible; if and when the water will be returned to the system; and the intended use of the water. Depending upon the details of the project, the Service may have more specific questions regarding the potential consumptive use of water. Any depletions (whether new or historic that result from any consumptive water use within the Platte system) not already consulted on would result in a may affect, likely to adversely affect determination for whooping crane and its designated critical habitat.	
3.8-16	3.8.4.1	Julie Reeves, USFWS WY	The DEIS states that "*It is unlikely that nesting interior least terns/piping plovers would be present within the special status wildlife analysis area. No new depletions will occur by the proposed Project in the Platte River system in Wyoming. No impacts are expected to the interior least tern/piping plover and no interior least tern/piping plover analysis area has been defined for the Project.*" See comment above. Any effects that cannot be identified as having already been consulted on under the ESA will need to be addressed under consultation with the Service for this Project. Any depletions (whether new or historic that result from any consumptive water use within the Platte system) not already consulted on would result in a may affect, likely to adversely affect determination for the interior least tern and ~~/~~piping plover.	
3.8-16 and 17	3.8.4.1	Julie Reeves, USFWS WY	The DEIS is correct in stating that Federal candidate species receive no statutory protection under the ESA. However, Federal agencies should consider conferencing on a candidate species when there is a possibility that the species may be proposed or listed under the ESA during the course of the project. Conferencing on candidate species allows the Federal agency the opportunity to officially request concurrence about the project's impacts	

			to the species, which can then be converted into a consultation should the species become listed.	
3.8-17 3.8-125	3.8.3 3.8.6.6	Susan Cooper, USFWS Las Vegas, NV	YBCU has also been documented occurring along the Virgin River and in the Pahranagat Valley in Nevada.	
3.8-18	3.8.3	Susan Cooper, USFWS Las Vegas, NV	Under the 3rd full paragraph: it is ~~U~~unclear what is meant by "In the NV portion of the southwestern willow flycatcher analysis area, essential habit for the SWFL is identified on the Pahranagat and Muddy Rivers." Is this referring to critical habitat? If so, this is incorrect; critical habitat for the SWFL was not designated along the Muddy River or in Pahranagat Valley in Nevada. Perhaps this section needs to be updated with ~~what~~ the final redesignation of CH for the SWFL ~~is~~.	
3.8-35 to 3.8-36	3.8.6	Julie Reeves, USFWS WY	The Service appreciates the inclusion of direct and indirect impacts in Table 3.8-15, the relevant analysis considerations for special status wildlife species, as well as the text on page 3.8.36. However, limiting the impact assessment analysis area to a 250-foot-wide transmission line ROW for special status species does not appear to adequately address all potential direct and indirect effects that the Project may have on these species.	
3.8-37 and C-126	3.8.6, Table C.5-1	Julie Reeves, USFWS WY	Mitigation measure SSWS-6 states "To prevent impacts to the western yellow-billed cuckoo during the breeding season, TWE would avoid construction within potentially suitable habitat from March 15 to October 15, or, alternatively, would conduct breeding western yellow-billed cuckoo surveys and implement appropriate mitigation in coordination with the BLM, Western, USFWS, and applicable state wildlife agencies." The Service recommends that the measure include the avoidance of construction within potentially suitable habitat as well as within a to-be-determined buffer from potentially suitable habitat during nesting season for this species.	

3.8-39	3.8.6	Julie Reeves, USFWS WY	The DEIS should also address impacts to designated critical habitat for the whooping crane, as critical habitat for this species is affected by depletions of the Platte River basin.	
3.8-39	3.8.6	Julie Reeves, USFWS WY	The DEIS states that "TWE has indicated that all water requirements for the Project will be met using existing water rights. Required water will be procured from municipal sources, from commercial sources, or under a temporary water use agreement with landowners holding existing water rights. No new water rights will be required. Therefore, construction of the Northern Terminal is anticipated to result in no new depletions within the Platte River basin, including the upper portion of the North Platte River and the downstream section of the Platte River basin in Nebraska. Confirmation of this determination will be ultimately made by the Wyoming State Engineers Office (SEO). Therefore, downstream impacts to habitat for these three federally listed species would not occur." The Service seeks clarification regarding water use and water rights: although no new water rights may be required for the project, existing water uses that have not previously been consulted on by ~~with~~ the Service ~~regarding~~ may have downstream impacts to the federally listed species and their designated critical habitats and would result ~~are a~~in new effects with respect to the Platte River Recovery Implementation Program.	
3.8-49 to 3.8-50	3.8.6.4	Julie Reeves, USFWS WY	Table 3.8-20 shows the various alternatives for Region I and the number of occupied leks within certain distances of the reference line of the Project. Alternative I-D appears to have more occupied leks closer to it than other alternatives in Wyoming and in total, but is currently the agency-preferred alternative. It does not appear that the information contained in Table 3.8-20 supports Alternative I-D as the least impactful alternative to greater sage-grouse.	

3.8-50 through 3.8-60	3.8.6.4	Amy Defreese, USFWS UT and Julie Reeves, USFWS WY	An objective of the Framework for greater sage-grouse is to conduct the impact analysis addressing all direct and indirect impacts of the project to both the sage-grouse and its habitat prior to developing the Mitigation Plan. Thus, we recommend that the final assessment of the full range of impacts resulting from construction, operation, and maintenance of the TWE project include all impacts identified and evaluated within bullet point #1 and #2 of the Framework, as well as those identified within the HEA. Consequently, the Mitigation Plan should include compensatory measures to offset not only impacts associated with habitat services lost (i.e., using the HEA), but also should include measures to offset all other impacts to the sage-grouse – not accounted for in the HEA – as well.	
3.8-51	3.8.6.4	Amy Defreese, USFWS UT	In Table 3.8-21, Summary of Region I Alternative Route Impact Parameters for greater sage-grouse habitat, recommend that you clarify the term "impact" to specify either impact within the 2-mile ROW or impact within the 250 ~~'~~foot ROW. It is currently unclear. Also recommend a footnote to disclose that there may be disturbance to habitat that falls outside the 2-mile ROW that is not captured in this table. Same comment for the respective tables in the other Regions (II~~,~~ and III)	
3.8-52	3.8.6.4	Julie Reeves, USFWS WY	Table 3.8-22 shows lek attendance within ~~four~~ 4 miles of the reference line for alternatives in Region I. Alternative I-D appears to have a high number of leks as well as average lek attendance compared to the other alternatives.	
3.8-52	3.8.6.4	Julie Reeves, USFWS WY	Table 3.8-23 presents the number of visible leks within a certain distance of the reference line, and Alternative I-D appears to have more leks closer to it than other alternatives in Wyoming.	
3.8-56	3.8.6.4	Julie Reeves, USFWS WY	The DEIS states that "Fragmentation of sagebrush habitats also may interrupt the exchange of genetic	

			material between distinct isolated areas of suitable breeding habitat." The Service recommends that this be rephrased into "...may interrupt gene flow between distinct isolated areas…" as this is more common terminology when referring to the exchange of genes.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	In your analysis of construction impacts to greater sage-grouse, recommend that you separate the impact analysis into effects to habitat and effects to individuals/populations by life stage.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	In your analysis of construction impacts to greater sage-grouse, recommend that you disclose how the spread of invasive and noxious plant species may affect greater sage-grouse. For example, invasive and noxious plants may out-compete native forbs which greater sage-grouse rely on for forage during brood-rearing.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	In your analysis of construction impacts to greater sage-grouse, recommend that you additionally discuss the effect of the project in disrupting seasonal migration and movement between populations. Also recommend that in your discussion of bird displacement and loss of habitat, you identify the availability of "refuge" habitat for displaced birds in each Region.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	This section discusses impacts to greater sage-grouse in Region I as a result of Transmission Line Construction and Operation. It also discusses Off-site Compensatory Mitigation and the Habitat Equivalency Analysis for greater sage-grouse. We recommend the following: a) In your evaluation of construction impacts to greater sage-grouse, we recommend that you disclose and evaluate the effect of disturbance to birds that may encounter construction activity as they migrate for example, from brood-rearing habitat to wintering habitat. b) In your evaluation of construction impacts to greater sage-grouse, we recommend that you tie	

			proposed avoidance/minimization measures to each impact and then identify residual impacts to be mitigation using compensatory mitigation.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	For the following reasons, we do not agree that the application of ECO-1, ECO-4 and TWE-32 will require TWE to identify sensitive areas for greater sage-grouse and implement seasonal timing restrictions and protection buffers: 1) ECO-1 uses non-binding language, "to the extent feasible", where it suggests the applicant shall identify sensitive habitats and design the project to avoid, minimize or mitigate impacts. ECO-1 does not acknowledge the need for spatial buffers for sensitive habitats. ECO-1 is also only applicable to the planning phase of the project. Consequently, any micro-siting that happens after the planning phase may not incorporate this measure; 2) ECO-4 applies only to "ESA-listed species". The rest of the document refers separately to Federally listed and Candidate species, which leads one to believe that Candidate species such as greater sage-grouse are not considered ESA-listed in this document. 3) TWE-32 is also non-binding and not descriptive enough to ensure that TWE will adhere to seasonal restrictions for greater sage-grouse. 4) None of the measures (ECO-1, ECO-4, or TWE-32) references spatial buffers for greater sage-grouse. There is only a reference to potential avoidance buffers for nesting raptors. To address the deficiencies in these measures, we recommend that you: a) Revise ECO-1 to use binding language, mark it as applicable to the construction phase, and add that applicants shall also identify spatial and temporal buffers for avoidance, minimization and mitigation; b) Revise ECO-4 to include the identification and marking of geographic buffers for sensitive habitats and specify that the measure also applies to candidate species; c) Make TWE-32 binding and disclose specific seasonal restrictions; and d) specifically call out seasonal restrictions in lekking and	

			nesting habitat (*eg.* Utah: Feb 15 – June 15), and wintering habitat (*eg.* Utah: Nov 15 – March 15).	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	Recommend that you include the following spatial buffers to avoid and minimize impacts of construction to greater sage-grouse: 1) Avoid construction activity and earth disturbance within a 4-mile buffer surrounding leks during the lekking and nesting season. 2) Avoid construction activity and earth disturbance in winter habitat between November 15 – March 15.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	Recommend that you incorporate the following design feature: Where the line crosses through occupied greater sage-grouse habitat, TWE will coordinate with Rocky Mountain Power for the proposed Energy Gateway South transmission line to co-locate the lines as close to one another as possible. We are aware that industry safety standards allow for separation distances as minimal as 250' feet. This recommendation is consistent with objectives outlined in the COT report (pages 43-44, 51).	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	Recommend that you identify the remaining (or residual) impacts to greater sage-grouse and its habitat (i.e. those that will not be fully avoided with measures ECO-1, ECO-4 and TWE-32). These remaining measures should form the basis for compensatory mitigation discussions.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	Where you state that TWE will follow measures included in various BLM IMs, Executive Orders, state management plans, BLM RMPs and forest management plans, we recommend that you specifically outline those measures for disclosure and comment in the NEPA document. Measures can be inconsistent between documents and plans, so in the absence of additional specifics, it isn't clear to the reader what may or may not be implemented.	
3.8-56	3.8.6.4	Amy Defreese, USFWS UT	In general, the section regarding construction impacts does not identify how the project and BLM has followed the direction and principles provided by various BLM IMs,	

			LUPs, and its National Strategy as discussed on pages 3.8-12 and 3.8-13. We recommend that you go beyond providing a general Design Feature to "avoid sensitive habitats" and specifically identify how the project has protected un-fragmented habitats for example by identifying where un-fragmented habitats exist and how these habitats were avoided.	
3.8-56 through 3.8-61	3.8.6.4	Amy Defreese, USFWS UT	After disclosure of construction and operation impacts and Off-site compensatory mitigation on these pages, BLM should determine and disclose whether the "proposed ROW and mitigation measures would cumulatively maintain or enhance greater sage-grouse habitat" per BLM IM 2012-043.	
3.8-57	3.8.6.4	Julie Reeves, USFWS WY	The Service appreciates the discussion of the threats that static wires and guy wires pose to greater sage-grouse.	
3.8-58 – 3.8-59	3.8.6.4	Amy Defreese, USFWS UT	We recommend that you establish a 0.6 mile buffer on either side of the transmission line and calculate the acreage of greater sage-grouse habitat within that buffer. Based on available literature (Attachment 2 at the end of this table), we find that this buffer adequately represents the area of indirect effects resulting from the presence of a transmission line.	
3.8-59 to 3.8-60	3.8.6.4	Julie Reeves, USFWS WY	The Service appreciates that TWE has developed a framework for impact analysis for the greater sage-grouse, and has utilized the habitat equivalency analysis process to quantify habitat services lost as a result of the project. We anticipate ongoing coordination with TWE in developing and directing compensatory mitigation measures for this project as well. The Service recommends that the greater sage-grouse mitigation framework, including the HEA, be included in the FEIS as an appendix, along with a general review of the potential impacts of the proposed compensatory mitigation projects.	
3.8-60	3.8.6.4	Amy Defreese, USFWS UT	We recommend that the Habitat Equivalency Analysis for greater sage-grouse incorporate a buffer of 0.6 mile on	

			either side of the transmission line (in greater sage-grouse occupied habitat) to represent greater sage-grouse habitat subject to indirect effects of the transmission line. This acreage should be considered for compensatory mitigation as it represents degradation and fragmentation of sage-grouse habitat that cannot be avoided.	
3.8-60 to 3.8-61	3.8.6.4	Julie Reeves, USFWS WY	The proposed compensatory mitigation projects outlined here (fence marking, modification, or removal; sagebrush restoration or enhancement projects; understory improvement projects; conifer removal; brood-rearing habitat improvement; and conservation easements) appear to be listed in order of preference by TWE. Please clarify whether these projects are currently listed in order and if additional projects may be considered. A stand-alone Mitigation Plan should be developed for this project that includes mitigation associated with the HEA as well as mitigation to address impacts associated with any and all other direct and indirect effects to sage-grouse as laid out in bullet points #1 and #2 of the Impacts Analysis Framework for sage-grouse.	
3.8-61, 3.8-68, 3.8-71, and 3.8-73	3.8.6.4	Julie Reeves, USFWS WY	Regarding potential impacts to federally listed species in the Platte River basin, the use of the water, not the water rights, should be determined whether it is existing and whether it has been consulted on with the Service previously. Additionally, potential impacts to designated critical habitat for the whooping crane should also be addressed.	
3.8-76 and 3.8-77	3.8.6.4	Julie Reeves, USFWS WY	Table 3.8-27 summarizes micrositing options for impacts to federally listed species at the Tuttle Easement. The way the information is currently presented, it is difficult for the reader to understand what these alternatives mean and how they differ from each other.	
3.8-81	3.8.6.5	Amy Defreese, USFWS UT	For Table 3.8-32, Summary of Region II Alternative Route Impact Parameters for greater sage-grouse habitat, recommend that you identify how and why the impact	

			parameters differ from those presented for Regions I and III. This could be added as a footnote to the table.	
3.8-91	3.8.6.5	Amy Defreese, USFWS UT	For section 3.8.6.5, Region II, recommend providing a paragraph that discusses why the impact parameters for greater sage-grouse changed between Region I and Region II.	
3.8-116	3.8.6.6	Amy Defreese, USFWS UT	For section 3.8.6.6, Region III, recommend providing a paragraph that discusses why the impact parameters for greater sage-grouse changed between Regions I, II and III.	
3.8-117	3.8.6.6	Susan Cooper, USFWS Las Vegas, NV	Desert tortoise section needs to be edited. It goes from describing tortoise to describing sage-grouse leks then back to tortoise.	
3.8-117 C-6	3.8.6.6 Appendix C	Susan Cooper, USFWS Las Vegas, NV	The BLM should consider proposing minimization measures for travel management. Typically this includes reduced speed limits during more active periods, increasing the number of authorized desert tortoise biologists, decreasing traffic trips, etc. The BLM ~~folks out of~~in Las Vegas will be able to provide the main BLM contact with this information.	
3.8-118	3.8.6.6	Amy Defreese, USFWS UT	For Table 3.8-44, Summary of Region III Alternative Route Impact Parameters for greater sage-grouse habitat, recommend that you identify how and why the impact parameters differ from those presented for Regions I and II. This could be added as a footnote to the table.	
3.8-123	3.8.6.6	Susan Cooper, USFWS Las Vegas, NV	The following statement is included under Yuma clapper rail but it can also be a big impact on desert tortoises: "*Improved access as a result of Project roads under Alternative III-A may result in increased human disturbance to the species. These impacts would be more pronounced if construction were to occur during the breeding season.*" Include a similar statement for desert tortoise.	
3.9-10	3.9.6.2	Julie Reeves, USFWS WY	The DEIS states that construction impacts to flowing streams would include fords and culverts; and, if needed,	

Comment [UF&WS10]: This comment needs to be re-written as its sentence structure is incorrect.

			that culverts would be installed under the direction of engineers, hydrologists, and biologists from the BLM, USFS, and state agencies. The Army Corps of Engineers should be included in this list.	
3.9-12	3.9.6.2	Julie Reeves, USFWS WY	The DEIS states that "*The estimated water use required per mile of transmission line construction is approximately 3,400 gallons for foundation concrete and 240,000 gallons for dust control. Water would be obtained from municipal sources, commercial sources, or a temporary water use agreement with landowners or irrigation companies holding existing water rights. The effect determination of new and existing water depletions would be made after the water sources are identified and an evaluation of their potential connection to surface flows is completed.* *Existing water rights would be used for concrete production and dust control during construction of project transmission line and associated facilities. The determination of potential depletions would be made after specific water sources are identified. The evaluation would determine if water use could affect surface water quantity or habitat used by aquatic species*." This description of water uses and whether they are considered a new or existing depletion contradicts DEIS chapter 3.8 Special Status Wildlife, which states that there would be no new water use and therefore no effect to federally listed species as a result of water use. We recommend clarification in DEIS chapter 3.8 Special Status Wildlife that states that the determination of potential depletions would be made after specific water sources are identified. See comment regarding pages 3.8-61, 3.8-68, 3.8-71, and 3.8-73.	
3.9-33	3.9.6.8	Julie Reeves, USFWS WY	The Service appreciates the discussion of potential residual effects the project will have on aquatic resources.	
3.10-4 to 3.10-7	3.10.4.1	Julie Reeves, USFWS WY	Federally listed fish species (bonytail, Colorado pikeminnow, humpback chub, and razorback sucker) all have designated critical habitat that could be affected by water use for the Project. We recommend including	

			reference to these designated critical habitats as well as potential impacts that depletions may have on designated critical habitat.	
3.10-8	3.10.4.2	Julie Reeves, USFWS WY	The DEIS states that the Columbia spotted frog "was placed on a candidate list in 1993." The Service recommends clarification about what type of list this was (i.e. state or Federal, under state laws or the ESA).	
3.10-9	3.10.5.1	Julie Reeves, USFWS WY	The Service appreciates that Table 3.10-4 lists special status species potentially occurring in Region I of the Project, ~~which~~ includ~~e~~ings the pallid sturgeon, which may be affected by depletions of the Platte River basin.	
3.10-11 to 3.10-12	3.10.6	Julie Reeves, USFWS WY	Table 3.10-8 summarizes the relevant analysis considerations for special status aquatic species, and includes effects of construction water use on aquatic habitat and species. The Service appreciates that water depletions out of the Platte River and Colorado River basins will be analyzed for their effects on federally listed species and their designated critical habitats.	
3.10-12	3.10.6.1	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding water use and its potential effects on federally listed species downstream: "*Water use for substation/converter station construction would require approximately 1.8 acre-feet for dust control. Water would be obtained from municipal sources, commercial sources, or a temporary water use agreement with landowners or irrigation companies holding existing water rights. The effect determination of new and existing water depletions in Wyoming would be made by the Wyoming State Engineer. Consultation with the USFWS would be completed to determine if construction water use could affect surface flows for species using the Platte River system such as pallid sturgeon.*"	
3.10-13	3.10.6.1	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding water use and its potential effects on federally listed species downstream: "*Water required for the construction of the Southern Terminal is estimated to be 1.2 acre-feet. The source of the water would be existing rights. The effect determination of*	

			new and existing water depletions would be made after the water sources are identified and an evaluation of their potential connection to surface flows is completed. Consultation with the USFWS would be completed to determine if construction water use could affect federally listed fish species (razorback sucker) in the Lower Colorado River Basin." However, any such analysis must include an evaluation of impacts to all federally listed fishes— and designated critical habitat— occurring in the Colorado River Basin. Additionally, potential impacts to Colorado River fishes and critical habitat occur within the "upper" Colorado River Basin rather than the "lower" as stated.	
3.10-13 to 3.10-14	3.10.6.2	Julie Reeves, USFWS WY	The Service appreciates the discussion regarding water use and its potential effects on federally listed species downstream: "*The estimated quantities of water needed per mile for construction would include approximately 3,400 gallons for foundation concrete and 240,000 gallons for dust control, totaling approximately 243,000 gallons or 0.75 acre-feet per mile. Water would be obtained from municipal sources, commercial sources, or a temporary water use agreement with landowners holding existing water rights. An effect determination of new and existing water depletions would be completed after identifying the water sources for construction and whether there is any connection between these water sources and surface flows in the Colorado Basin, Utah Lake/Provo River drainage, and the Platte sub-basin. Additional discussion for water use effects on federally listed species is provided in each of the Region impact sections. The following mitigation measure is recommended to protect habitat for conservation agreement trout species, Colorado River cutthroat trout, and Bonneville cutthroat trout. Potential water depletion effects on federally listed fish species in the Upper Colorado River Basin are mitigated by the Recovery Implementation Program for Endangered Fish in the Upper Colorado River (Recovery Plan), as discussed in Section 3.10.6.3, Region I, and Section 3.10.6.4, Region II.*"	

3.10-18	3.10.6.3	Julie Reeves, USFWS WY	The DEIS states that "*Water use for this project (i.e., approximately 2 acre-feet for foundation concrete and 114 acre-feet for dust control) would be obtained from municipal sources, commercial sources, or a temporary water use agreement with landowners holding existing water rights.*" Please note that once the sources of the water to be used have been identified, TWE should determine whether those sources have previously been consulted ~~on that use~~ with the Service.	
5-1 to 5-2	5.1.1	Julie Reeves, USFWS WY	The design options that connect the Project with other projects other than at the northern and southern portions of the line may need to be considered in the overview of related actions.	
5-3 to 5-4	5.2.1.1	Julie Reeves, USFWS WY	Table 5-1, column three does not have units identified.	
5-7	5.2.1.2	Julie Reeves, USFWS WY	Table 5-3, column two does not have units identified.	
5-27	5.3.4.2	Julie Reeves, USFWS WY	Table 5-15, column three does not have units identified.	
5-28 thru 5-29	5.3.6	Amy Defreese, USFWS UT	The cumulative effect analysis for special status plants could benefit from additional information. The incremental effect of the TWE line to clay phacelia habitat for example is much greater than that for Ute ladies'-tresses. We recommend that you categorize the special status plants by size of range relative to the 2-mile corridor. What percentage of a species' habitat falls within the 2-mile corridor? What percentage of all known occurrences for a species falls within the 2-mile corridor? The text should mark that distinction for plants, like clay phacelia, with limited ranges.	
5-28 to 5-29	5.3.6.2	Julie Reeves, USFWS WY	The cumulative impacts section of the DEIS discusses potential impacts to federally listed plant species that may be affected by three parallel transmission lines 1500 feet apart. To help avoid and minimize cumulative impacts to	

			these plants, the Service recommends that the projects consider collocating transmission lines on the same structure or placing parallel lines closer than 1500 feet from each other, i.e. 250 feet.	
5-37	5.3.10.2	Julie Reeves, USFWS WY	The DEIS states that "*The Project plans to utilize existing water rights, thereby avoiding depletions in the Colorado and Platte systems.*" This is an inaccurate generalization, as water rights and water use are different things with respect to depletion impacts on Platte River and Colorado River basin species. Any water use is a depletion, the Service is concerned with whether that use has already been consulted on ~~the depletion or not~~.	
App C, C-5	Appendix C	Susan Cooper, USFWS Las Vegas, NV	For the biological assessment and consultation, BLM should be ~~thinking about informative~~considering data on blasting and explosives (as described in PHYS-1 and PHYS-2) and specific ways to minimize effects to the desert tortoise.	
App C, C-8	C.1, Table C.1-1	Julie Reeves, USFWS WY	BMP ECO-1 states that "*Applicants shall identify important, sensitive, or unique habitats and BLM sensitive, FS sensitive, and state-listed species in the vicinity and, to the extent feasible, design the project to avoid, minimize, or mitigate impacts to these habitats and species.*" This BMP does not address federally listed species or migratory birds. The Service recommends that this measure additionally address species under the Service's purview either in this BMP or in a new BMP.	
App C, C-8	C.1	Amy Defreese, USFWS UT	ECO-4: In this measure, recommend that you specify when TWE will identify areas known to support ESA-listed species, etc. and mark them with flagging. We recommend adding "prior to construction".	
App C, C-8	C.1, Table C.1-1	Julie Reeves, USFWS WY	BMP ECO-4 should include migratory birds, as they are protected by the Migratory Bird Treaty Act (MBTA) and any direct take of a migratory bird is a violation of the MBTA.	

App C, C-16	C.2, Table C.2-1	Julie Reeves, USFWS WY	Applicant committed design feature TWE-13 states that surface restoration will occur as required by the landowner or land management agency. The Service recommends that this measure additionally include monitoring of the restored area for successful restoration, and reporting of successful restoration.	
App C, C-17	C.2, Table C.2-1	Julie Reeves, USFWS WY	Applicant committed design feature TWE-30 states that "*In applicable areas, the TWE Project will be designed to meet or exceed the raptor safe design standards described in the* Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006 (*Avian Power Line Interaction Committee (APLIC) 2006).*" The Service recommends that this measure should be applied to the entire length of the Project, and not just "in applicable areas." Additionally, the Service recommends that the Project meet or exceed the raptor safe design standards described in the APLIC 2012 Collision Manual.	
App C, C-17	C.2, Table C.2-1	Julie Reeves, USFWS WY	Applicant committed design feature TWE-31 should include reference to consultation with the U.S. Fish and Wildlife Service under Section 7 of the ESA.	
App C, C-18	C.2, Table C.2-1	Amy Defreese, USFWS UT	Recommend that you avoid combining Design Features for raptors, T&E species, other sensitive species, and general wildlife into one (i.e. TWE-32). Greater sage-grouse ~~call for~~require specific geographic and temporal buffers that are very different from those for raptors, T&E species, and other general wildlife.	
App C, C-24	C.3.1.3	Creed Clayton, USFWS, W. Colorado	Appendix B (Greater Sage-grouse Disturbance Guidelines) of the Colorado Greater Sage-Grouse Conservation Plan (2008) makes recommendations to protect GRSG habitat and avoid disturbance within GRSG seasonal habitats. It states (p. B-12), "*Powerlines (transmission, service lines) – Whenever possible, avoid the construction of powerlines in lek habitat [0.6 mile].*" For nesting, early-brood-rearing, summer-fall, and winter habitats it states (B-14), "*Powerlines—If possible, powerlines should be*	

			avoided in these seasonal habitats." Nesting, early-brood-rearing, and summer-fall habitats are defined as the appropriate vegetation communities (sagebrush, wet meadows, etc.) within 4 miles of a lek (p. B-4). Thus, although not specifically listed as a NSU, CSU, or TL, the disturbance guidelines in the Colorado state plan are similar to those listed in C.3.1.1 for Wyoming.	
App C, C-28	C.2, Table C.2-1	Julie Reeves, USFWS WY	The Service appreciates that TWE-32, TWE-33, and TWE-34 will be implemented to avoid and minimize potential impacts to federally listed species and migratory birds. TWE-34 should additionally include that construction within the vicinity of the newly located protected species would be halted and would reconvene when a biologist from the appropriate agency, after being contacted by the contractor, determines that the species would not be affected by continued construction.	
App C, C-35 to C-37, Table C.3-8	C.3, Table C.3-8 Sage-grouse, greater	Creed Clayton, USFWS, W. Colorado	A No Surface Occupancy area will be established within 0.6 mile of sage-grouse leks. However, the agency preferred alternative alignment appears to be mapped less than 0.6 mile from the Elk Springs Draw lek, an active lek located within the Wolf Creek ferret reintroduction area. The agency preferred alternative also appears to travel less than 0.6 mile from 4 inactive leks, and within 0.1 mile from three of these. We recommend that the proposed alignment be micro-sited to avoid all leks by at least 0.6 mile, in keeping with Table C.3-8. Avoidance of leks will help to reduce the exposure of lekking and nesting grouse to raptors that could perch on transmission towers. Raptors can even perch on towers or H-frame supports with anti-perching devices, although with reduced frequency. Sage-grouse will likely also simply avoid transmission towers, tall structures, and other potential perch sites to some extent to reduce their exposure to avian predators. Areas avoided by grouse no longer provide suitable nesting, foraging, or sheltering habitats.	

App C, C-39	Table C.3-9 Little Snake FO Timing Restrictions, GRSG	Creed Clayton, USFWS, W. Colorado	The BLM Little Snake FO RMP contains a Timing Limitation to protect lekking and nesting grouse from March 1 to June 30. It stipulates a 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 with the 4 mile radius of the lek during this time period." The "Timing" column in Table C.3-9 should be fixed and changed to "3/1 to 6/30."	
App C, C-47	Table C.3-12, WRFO GRSG NSU	Creed Clayton, USFWS, W. Colorado	The WRFO RMP is currently being amended. We recommend noting that the proposed language in the current draft WRFO RMP amendment extends the lek NSO to 6 tenths of a mile. Similarly, there are newly proposed Timing Limitations identified in the draft WRFO RMP amendment.	
App C, C-124 to C- 125	C.5, Table C.5-1	Julie Reeves, USFWS WY	The Service appreciates that SS-1, SS-4, SS-5, SS-6, SS-7, SS-8, SS-9, and SS-11 will be implemented to avoid and minimize potential construction impacts to federally listed plant species.	
App C, Table C.5-1	C.5 Special Status Plant Species	Creed Clayton, USFWS, W. Colorado	We recommend adding a mitigation measure to safeguard threatened and endangered plants during vegetation management activities. Vegetation removal, herbicide use, and OHV access should not be conducted around listed plants without first coordinating with BLM and FWS.	
App C, C-125	C.5, Table C.5-1	Julie Reeves, USFWS WY	SSWS-5 states "*To reduce impacts to greater sage-grouse from operation of the proposed Project, several design features specific to black-footed ferret would be implemented*." The remainder of the mitigation measure discusses greater sage-grouse measures, and so it appears that the reference to black-footed ferret was unintentionally included (i.e. black-footed ferret has a similar mitigation measure SSWS-9). This measure also discusses marking guy wires within high quality greater sage-grouse habitat or using alternative structure types.	

			The Service supports the use of alternate structure types to minimize effects to greater sage-grouse during operations of the Project.	
App C, C-126	C.5, Table C.5-1	Amy Defreese, USFWS UT	SSWS-5 should be edited to remove all referenced to black-footed ferret as it appears to be a measures specific to greater sage-grouse.	
App C, C-126	C.5, Table C.5-1	Amy Defreese, USFWS UT	Measure SSWS-5a appears to address geographic buffers for greater sage-grouse leks, however there is no reference to this measure in the text of Section 3.8. Recommend that you incorporate the measure into the text so that the reader can understand under what circumstances it will apply.	
App C, C-127	C.5, Table C.5-1	Julie Reeves, USFWS WY	SSWS-9 states that "*TWE would be required to construct anti-perching devices and alternative structure types…near high quality black-footed ferret habitat…in consultation with the BLM, Western, and applicable state wildlife agencies.*" The Service would appreciate the inclusion of our agency to the list of those that would be consulted ~~with a~~about this measure.	
App C, C-127	C.5, Table C.5-1	Julie Reeves, USFWS WY	The * (asterisk) following SSWS-5A, SSWS-10, and SSWS-11 states that those mitigation measures will be applied only in the State of Utah. The Service recommends that these mitigation measures are valuable to the affected resource and should be applied throughout all appropriate lands affected by the Project, regardless of where those fall along the Project's length.	
App C, C-128	C.5, Table C.5-1	Julie Reeves, USFWS WY	SSS-1 pertains to no new water use in areas that are hydrologically connected to streams containing Colorado River cutthroat trout and Bonneville cutthroat trout. The Project may adversely affect other federally listed aquatic species through depletions (Bonytail, Colorado pikeminnow, Humpback chub, and Razorback sucker). The Service recommends that this mitigation measure additionally consider those species or that an additional measure be created to include those species.	

App D PDTR, 5-9	2.3.1	Julie Reeves, USFWS WY	The Service appreciates the discussion in section 2.3.1 regarding the Level 1, Level 2, and Level 3 Co-location distances. This information will help to inform the public about parallel line minimum separation distances with respect to sensitive resources on the landscape.	
App G	Table G-1	Julie Reeves, USFWS WY	The Western prairie fringed orchid is a federally threatened plant species that occurs outside of the Project area, but may be affected by the Project due to depletions of the Platte River basin. The Service recommends that this species be added to the table of special status plant species that may be affected by the Project.	
App G, G-6	Table G-1	Amy Defreese, USFWS UT	Hamilton milkvetch: Mistakenly noted in Appendix G as Federally Endangered In Utah. It is not a federally listed species.	
App G, G-18	Table G-1	Julie Reeves, USFWS WY	The Las Vegas buckwheat is a Federal candidate species that may be affected by the Project.	
App G, G-29	Table G-1	Julie Reeves, USFWS WY	The blowout penstemon is a federally endangered plant species that occurs in sand-dune blowout habitats. Based on the information included in the table about this species and the proposed Project alignment, it is unlikely that the Project would affect blowout penstemon habitat. The Service agrees that this species can be eliminated from further detailed analysis in the EIS.	
App G, G-29 to G-50	Table G-2	Julie Reeves, USFWS WY	The Migratory Bird Treaty Act serves to protect migratory birds, and so each of the birds assessed in the special status wildlife table should also be described as being protected by the MBTA (i.e. Federal protection).	
App G, G-43 and G-44	Table G-2	Julie Reeves, USFWS WY	The bald eagle and the golden eagle should additionally be described as being protected by the Bald and Golden Eagle Protection Act (i.e. Federal protection) in the status column of this table.	
App G-49 3.8-18	Appendix G 3.8.4.1	Susan Cooper, USFWS Las Vegas, NV	Update language regarding critical habitat for the southwestern willow flycatcher. Redesignation was finalized in 2012.	

App G, G-54	Table G-2	Julie Reeves, USFWS WY	The Preble's meadow jumping mouse is a federally threatened mouse that occurs along the Front Range of Colorado and north in the foothills of southeastern Wyoming. Based on the information included in the table about this species, and the proposed Project alignment, it is unlikely that the Project would affect the Preble's meadow jumping mouse. The Service agrees that this species can be eliminated from further detailed analysis in the EIS.	
App G, G-57	Appendix G	Susan Cooper, USFWS Las Vegas, NV	Relict leopard frog: potential for occurrence within the project area – has been reintroduced to and now also occurs on BLM lands; eliminated from detailed analysis – the statement it doesn't occur within Lake Mead NRA is incorrect because it does occur in springs within the NRA. I suggest updating the potential for occurrence section and deleting the statement in the eliminated from detailed analysis section to be correct.	
App G, G-57	Table G-3	Julie Reeves, USFWS WY	The Wyoming Toad is a federally endangered amphibian that occurs in very limited habitats in southeastern Wyoming, and is not listed in this table. It is unlikely that the Project would affect the Wyoming toad because the proposed Project alignment occurs outside of the species' range.	
App G, G-58 and G-60	Table G-3	Julie Reeves, USFWS WY	The federally endangered Colorado pikeminnow, Bonytail, Humpback chub, and Razorback sucker may have some potential for occurrence within the Project area, but they may also be affected by depletions from the Colorado River basin as a result of the Project. These species also have designated critical habitat that may be impacted by depletions of the Colorado River basin.	

Comment [UF&WS11]: Please correct the sentence structure in this comment.

Attachment 1

TransWest Express Transmission Line Project
DEIS Comments by U.S. Fish and Wildlife Service

Western Colorado: Creed Clayton, Southern Nevada: Susan Cooper, Utah: Amy Defreese, Wyoming: Julie Reeves

Clay phacelia conservation measures

1. Avoid suitable habitat (as modeled).
2. If avoidance of suitable habitat is not possible disturbance will not exceed 10% cumulatively. Mitigation measures will be necessary for any disturbance in clay phacelia suitable habitat.
3. No roads within 650 feet buffer (200 m) of suitable clay phacelia habitat.
4. No vegetation treatments, site preparation in suitable clay phacelia habitat; 200 feet buffer for mechanical vegetation treatments, 2500 feet for herbicide treatments, no aerial herbicide treatments. In lieu of these buffers a vegetation management plan that outlines methods for control of invasive, exotic species in greater detail while protecting clay phacelia and its habitat can be developed.
5. No ground disturbance such as poles, pads, towers etc. in suitable clay phacelia habitat or within 650 feet buffer.
6. Wire to be strung between towers aerially with little to no ground disturbance in clay phacelia suitable habitat.
7. NO new development in known occupied sites or within 650 feet (this would preclude our ability to recover the species). Existing sites need to be surveyed to determine site boundaries prior to development site selection if development is to occur close to the 650 feet buffer area.
8. Once the footprint of the development is determined then clearance surveys should be conducted prior to construction to determine presence where development will take place in suitable clay phacelia habitat.
9. All project employees, especially contractors, brought onsite for the duration of a project will be informed of the occurrence of clay phacelia in the project area and of the endangered status of the species. All project employees shall be advised as to the potential penalties (up to $200,000 in fines and one year in prison) for damaging, destroying or removing and possessing a plant species on Federal lands listed under the Act. A qualified biologist is required to perform this instruction.
10. A qualified botanist should be on-site during all ground disturbing activities to ensure plants are identified and avoided in suitable habitat.
11. Transmission lines should be minimally spaced and use the same corridor to prevent further fragmentation in suitable habitat.
12. Develop a wildfire mitigation plan to prevent suitable habitat from being impacted by emergency fire operations in the event of a wildfire.
13. All equipment should be cleaned and inspected for presence of invasive, non-native plants and seeds before being brought in suitable habitat.

Compensatory mitigation

If the above cannot be followed and activity, development or ground disturbance (even temporarily) occurs in clay phacelia modeled habitat then the following compensatory mitigation measures shall be considered:

1. Acquisition of occupied habitat and placement into permanent conservation

2. Successful introduction of clay phacelia into new sites on USFS land (up to 5 sites where presence of flowering adults occurs for a period of 5 years)
3. Fencing of existing and suitable sites to protect from herbivores
4. Contribution to a fund for ongoing management of populations and protection (fencing, caging, control of herbivores) of occupied habitat

The following measures will be considered and weighted into the final mitigation calculation:
1. Amount of modeled habitat disturbed and proximity to occupied habitat
2. Type of disturbance: permanent development, temporary development, temporary construction activity, intermittent activity
3. Amount of time of disturbance: 1 month or less, up to 6 months, up to 1 year, more than 1 year or continuous
4. Habitat fragmentation: Location and spacing of transmission lines from each other and other development

Attachment 2

TransWest Express Transmission Line Project
DEIS Comments by U.S. Fish and Wildlife Service

Western Colorado: Creed Clayton, Southern Nevada: Susan Cooper, Utah: Amy Defreese, Wyoming: Julie Reeves

Summary of Literature – Greater sage-grouse and Effects of Transmission Lines

Disturbance	Citation	Affect ?	Life Cycle/Behavior Affected	Affect Distance (mi)	Life Cycle/Behavior Not Affected
Transmission Lines	Knick et al. 2013	Yes	Habitat suitability highest where powerline densities <0.06 km/km2 Leks absent where powerline densities >0.20 km/km^2		
	Nonne et al. 2013[1]	No			Male survival and movement Female survival Pre-fledging chick survival Nest survival Nest distance from line
	LeBeau 2012	No			Nest success
	Hagen et al. 2011[2]	Yes	Collisions with lines Predation Avoidance	0.45 mi	
	Johnson et al.	No			Lek count trends not consistently related to

[1] Nonne et al. 2013 indicate that these are preliminary results. They plan to continue to investigate 1) the influence of distance to the transmission line on numerous sage-grouse demographics, 2) the influence of the transmission line on habitat use.
[2] Study on greater and/or lesser prairie chickens

	2011				the distance to nearest powerline or length of powerline within 11 mi.
	Pruett et al. 2009[1]	Yes	Avoidance[3]	.06 mi	
	Beck et al. 2006	Yes	Collisions with lines – adults and juveniles		
	Pitman et al. 2005[1]	Yes	Nest site selection	0.25 mi	
	Braun 1998	Yes	Habitat use	0.4 mi	
	Ellis 1985	Yes	Predation (golden eagles) Lek site, feeding, and loafing areas moved further from the line (affected dispersal patterns)	0.75 mi	

Beck, J.L., K.P. Reese, J.W. Connelly, and M.B. Lucia. 2006. Movements and survival of juvenile greater sage-grouse in southeastern Idaho. Wildlife Society Bulletin 34(4):1070-1078.

Braun, C.E. 1998. Sage-grouse declines in western North America: what are the problems? Proceeding of the Western Association of State Fish and Wildlife Agencies 78:139-156.

Ellis, K.L. 1985. Effects of a new transmission line on distribution and aerial predation of breeding male sage grouse. Final report, Deseret Generation and Transmission Cooperative, Sandy, UT. 28 pp.

Hagen, C.A., J.C. Pitman, T.M. Loughin, B.K. Sandercock, R.J. Robel, and R.D. Applegate. 2011. Impacts of anthropogenic features on habitat use by lesser prairie chickens *in* Sandercock, B., K. Martin, and G. Segelbacher. Ecology, Conservation, and Management of Grouse. Berkley and Los Angeles, University of California Press. pp. 63-75.

Johnson, D.J., M.J. Holloran, J.W. Connelly, S.E. Hanser, C.L. Amundson, and S.T. Knick. 2011. Influences of environmental and anthropogenic features on greater sage-grouse

[3] Pruett et al 2009 indicates that their results are likely conservative because they only evaluated birds with home ranges that overlapped the transmission line feature. Therefore, there was a high probability of recording bird locations near the feature.

populations, 1997-2007. pp. 407-450 *in* S.T. Knick and J.W. Connelly (editors). Greater sage-grouse: ecology and conservation of a landscape species and its habitats. Studies in Avian Biology (vol. 38). University of California Press, Berkeley, CA.

Knick, S.T., S.E. Hanser, and K.L. Preston. 2013. Modeling ecological minimum requirements for distribution of greater sage-grouse leks: implications for population connectivity across their western range, U.S.A. Ecology and Evolution. John Wiley & Sons, Ltd; publishers. 13 pp.

LeBeau, C. 2012. Evaluation of greater sage-grouse reproductive habitat and response to wind energy development in south-central, Wyoming, M.S. Thesis, Department of Ecosystem Science and Management, University of Wyoming, Cheyenne. August 2012. 120pp.

Noone, D, E. Bloomberg, J. Sedinger. 2013 Dynamics of Greater Sage-Grouse populations in Response to Transmission Lines in Central Nevada. Department of Natural Resources and Environmental Sciences. University of Nevada-Reno.

Pruett, C.L., M.A. Patten, and D.H. Wolfe. 2009. Avoidance behavior by prairie grouse: Implications for development of wind energy. Conservation Biology 23:1253-1259.