Appendix F

Mitigation Measures

The following table lists the additional mitigation measures developed during the TWE Project NEPA process. These measures avoid, minimize, or other mitigate environmental impacts as disclosed in the Final EIS. The USFS Record of Decision requires the implementation of these mitigation measures listed below. The process used by the USFS to finalize the mitigations included a work session with the Applicant to verify the technical and economic feasibility of implementing these measures during construction, operation, and maintenance of the Project. During the work session, the Final EIS mitigations and the desired outcome were considered in light of the Applicant's engineering practices and requirements. Mitigations were revised as necessary to ensure applicability and feasibility while still meeting the original intent of the mitigation measure. .

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
GE-1	In areas with geologic hazards (e.g., ground shaking, liquefaction, landslides, groundwater withdrawal, and historic mining) and active mining; placement of Project structures and other Project related disturbance will be avoided to the extent practical. Where avoidance is not possible a site-specific geotechnical investigation and engineering design will be implemented during construction and operation of the Project. Depending on the type of potential geologic hazards, the designs may vary and will address specific needs for enhanced structural supports. Site specific assessment of geologic hazards will include review of available information concerning areas of mapped hazards and consultation with Forest Service personnel who are knowledgeable about the hazards. Assessment also will include, if necessary, field surveys and gathering of geotechnical information to determine what engineering design methods will mitigate or lessen potential risks.	In areas with geologic hazards (e.g., ground shaking, liquefaction, landslides, subsidence from karst, groundwater withdrawal, underground mining, and historic mining) and active mining; placement of Project structures and other Project related disturbance would be avoided to the extent practical. Where avoidance is not possible a site-specific geotechnical investigation and engineering design would be implemented during construction and operation of the Project. Depending on the type of potential geologic hazards, the designs may vary and should address specific needs for enhanced structural supports. Site specific assessment of geologic hazards shall include review of available information concerning areas of mapped hazards and consultation with appropriate governmental agency (USFS, BLM, UGS, USGS) personnel who are knowledgeable about the hazards. Assessment also shall include, if necessary, field surveys and gathering of geotechnical information to determine what engineering design methods would mitigate or lessen potential risks. If active mines cannot be avoided, applicant will conduct similar due diligence in regard to hazards from underground and historic mining to ensure that Project facilities will not hinder access to mineral resources or create dangers to mining activities.	Minimize or mitigate the risk of geologic hazards and active mining. If active mines cannot be avoided, applicant will conduct similar due diligence in regard to hazards from underground and historic mining to ensure that Project facilities will not hinder access to mineral resources or create dangers to mining activities.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
S-1	Where permanent facilities or structures will be located, the entire topsoil horizon will be salvaged for use in reclamation, prior to surface disturbance. Topsoil will be spread evenly around the permanent structure (not left in piles) and revegetated for future use.	Where permanent facilities or structures would be located, the entire topsoil horizon would be salvaged for use in reclamation, prior to surface disturbance. Topsoil would be spread evenly around the permanent structure (not left in piles) and revegetated for future use.	Salvage topsoil during construction to be redistributed and used in reclamation.
S-2	Construction, excavation, and other soil disturbing activities will not be conducted with frozen or saturated soils.	Construction, excavation, or re-spreading with frozen or saturated soils would be prohibited.	Avoid soil compaction during construction or reclamation activities.
S-3	During reclamation, compacted areas (typically any area that receives repeated traffic of three or more passes by heavy equipment) will be decompacted, by subsoiling, paraplowing, or parabolic ripping on the contour to the depth of compaction. This will help prepare the seed bed, encourage infiltration, and help to prevent accelerated runoff and erosion. Scarification will only be used on shallow soils. Compaction depth will be determined on a case by case basis, by a qualified environmental inspector or soil scientist.	During reclamation, compacted areas (typically any area that receives repeated traffic or 3 or more passes by heavy equipment) would be decompacted, to the depth of compaction, by subsoiling, paraplowing, or parabolic ripping on the contour to the depth of compaction. This would help prepare the seed bed, encourage infiltration and help to prevent accelerated runoff and erosion. Scarification would only be used on shallow soils. Compaction depth would be determined on a case by case basis, by a qualified environmental inspector or soil scientist.	Reclamation practices would ensure that soil has been sufficiently decompacted to allow successful re-vegetation, encourage infiltration, and prevent accelerated runoff and erosion.
S-5	Surface disturbing activities will not be conducted when soils or road surfaces become saturated to a depth of 3 inches or less if mixing of the topsoil and subsoil would occur or the soil surface becomes unsafe for vehicular travel.	Surface activities would be prohibited when soils or road surfaces become saturated to a depth of 3 inches or less if mixing of the topsoil and subsoil would occur or the soil surface becomes unsafe for vehicular travel.	Avoid soil compaction during construction or reclamation activities.
S-6	During construction, erosion control measures will be inspected after every storm event and will be properly maintained.	During construction, erosion control measures would be inspected after every storm event and maintained.	Avoid soil erosion by inspecting erosion control measures after each storm event and performing appropriate maintenance.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
S-8	No new permanent roads will be added to the Travel Management System for the Project and existing roads in the Travel Management System will not be permanently altered. Temporary Project access routes will be gated during construction to restrict motorized use by the public. In some instances, other methods may be employed to prevent public access. After construction is complete, Project access routes will be obliterated with the following procedures or in accordance with local Forest Service implementation team and line officer direction: 1. Remove all stream crossings and restore stream banks to natural contours; 2. Reestablish natural drainage patterns; 3. Decompact the travel surface by subsoiling along the entire disturbed length; 4. Recontour the road prism to the original land contours; 5. Seed with a Forest Service approved seed mixture; and 6. Install permanent public access barriers; and 7. Install temporary closure signage, leaving in place until adequate regeneration/rehabilitation occurs.	Temporary and permanent access roads would be gated to restrict motorized use by the public. In some instances, other methods may need to be employed to prevent public access. After construction is complete, permanent access roads would remain gated at the land management agency or landowner's discretion. If the road is no longer needed for operations, it would be obliterated with the following procedures or in accordance with the land-managing agencies direction: 1. Remove all stream crossings and restore stream banks to natural contours; 2. Reestablish natural drainage patterns; 3. Decompact the road surface by subsoiling along the entire disturbed length; 4. Recontour the road prism to the original land contours; 5. Seed with an agency or landowner approved seed mixture; and 6. Gates and closure signage should be left in place until adequate regeneration/rehabilitation occurs.	Prevent unauthorized public access through a variety of methods. Return stream crossings to natural contours, natural stream banks, and original drainage patterns. Avoid soil compaction during construction and reclamation activities. Reclaim the road prism to original land contours. Vegetation will be successfully reclaimed to original type and structure.
S-9	Excess subsoil that is excavated for foundations will not be spread on the soil surface (on top of topsoil) or on access routes. Excess subsoil will be disposed of in accordance with Forest Service requirements.	Excess subsoil that is excavated for foundations would not be spread on the soil surface (on top of topsoil) or on access roads. Excess subsoil would be disposed of in accordance with federal, state, and local requirements.	Subsoil will not be placed on top of topsoil.
S-11	Permanent erosion control measures will be installed on all Project access routes allowed to remain for operations and maintenance. Erosion control measures will be inspected and maintained bi-annually.	Permanent erosion control measures would be installed on all project access roads used for operations and maintenance. Erosion control measures would be inspected and maintained bi-annually.	Erosion control measures will be installed, inspected, and maintained on permanent access roads.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
S-13	On areas of surface disturbance that experience reclamation failure, reseeding will be done with a Forest Service approved seed mix and/or corrective erosion control measures will be taken.	Follow-up seeding using native seed or corrective erosion control measures would be required on areas of surface disturbance that experience reclamation failure.	Successful reclamation will be achieved.
WR-1	Existing stream crossings will be utilized to the extent possible as directed by the Forest Service. Stream crossings will be developed on a site-specific basis during POD development. Stream crossings will be reclaimed and maintained to original contours, banks, and drainage patterns.	Existing stream crossings would be utilized wherever requested by agencies. This would be developed on a site-specific basis during POD development. Stream crossings would be maintained as appropriate.	Prevent erosion and sedimentation in streams.
WR-2	Drive-through stream crossings (e.g., "Arizona crossings") will not be utilized when the stream beds are wet or are flowing water unless the crossing has engineered erosion protection or is not prone to erosion (e.g., bedrock channel).	When existing crossings were not used, drive through (Arizona) crossings would not be utilized when un-protected (bare soil) streambeds are wet or when the stream is flowing water.	Prevent erosion and sedimentation in streams.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
WR-3	Prior to the final Forest Service authorization for construction, TransWest will consult with Forest Service personnel regarding location and design of access roads and temporary work areas within drainages containing streams with nutrient or sediment impaired streams (according to 303(d) listing) to avoid increased erosion and sedimentation effects to these sensitive water resources. The proposed design and location of new and upgraded access roads and temporary work areas within the Soldier Creek Watershed (HUC1602020201) and Middle Strawberry River Watershed (HUC 1406000403) would be provided by TransWest to the Forest Service upon completion of conceptual design of these facilities. The Forest Service would coordinate and provide input to TransWest for modification of locations and designs within TransWest's final engineering schedule to prevent the Project from contributing additional sediment to impaired waters. The Forest Service will perform or oversee, at their discretion, modeling of soil erosion and sedimentation effects from proposed roads and temporary work areas in the Soldier Creek Watershed and within 1,000 feet of impaired streams or in areas of soils with high water erosion potential to quantify potential impacts to impaired streams. This modeling will be completed using an agency approved erosion prediction model (e.g., Forest Service Water Erosion Prediction Project (WEPP) Model, WEPP: Road Batch, or other similar approved model). Across National Forest System lands, TransWest will design access that will minimize road building and emphasize cross country travel for their construction equipment. Prior to the final road construction plan by TransWest, the Forest Service would have the opportunity to review and approve these locations.	As part of the ROW Grant and prior to the final agency authorization for construction, TransWest would consult with federal agencies having land jurisdiction regarding location and design of access roads and temporary work areas near impaired streams to avoid erosion and sedimentation effects. The proposed design and location of new and upgraded access roads and temporary work areas within watersheds (HUC10) containing sediment- or ion-impaired waters (according to 303(d) lists) would be provided by TransWest to the agencies upon completion of conceptual design of these facilities. The agencies would coordinate and provide input (as deemed applicable by the agencies) to TransWest for modification of locations and designs within TransWest's final engineering schedule to prevent the Project from contributing additional sediment to impaired waters.	Prevent additional erosion or sedimentation to sediment- or ion-impaired streams.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
WR-4	As part of the Erosion Control Plan, TransWest will monitor erosion and sedimentation effects and record them as part of the construction stormwater permits. In the event that the Forest Service deems erosion control measures ineffective, TransWest will coordinate to develop additional measures to implement for erosion control.	As part of the Erosion Control Plan, TransWest would include monitoring of erosion and sedimentation effects that would be recorded as part of the construction stormwater permits. In the event that the agencies deem erosion control measures ineffective, the agencies and TransWest would coordinate to develop additional measures for TransWest to implement for erosion control.	Prevent additional erosion or sedimentation to sediment- or ion-impaired streams.
NX-1	The noxious weed management plan to be developed as part of the TWE Plan of Development will include the following: 1. Pre-construction surveys for noxious weeds in the footprints of the ROW, access roads, and permanent and temporary facilities; 2. Pre-construction weed control; 3. Education of construction and operation personnel; 4. Washing of vehicles and equipment before entering and leaving the ROW; 5. Herbicide spraying; and 6. Annual monitoring and reporting. Pre-construction survey information will include species name, GPS location of weed infestations, percent cover, and approximate size of weed infestations. Control of noxious and invasive species could include chemical, physical, and biological methods and will be developed in consultation with the Forest Service. The plan will identify species of concern for the Uinta Planning Area and the Manti-La Sal National Forests and will focus monitoring and control methods on these species. The plan will comply with the existing Forest Service regulations concerning noxious weed management. Post construction annual monitoring will be determined by the Forest Service.	The noxious weed management plan to be developed as part of the COM Plan would include the following: 1. Pre-construction surveys for noxious weeds in the footprints of the ROW, access roads, and ancillary facilities; 2. Pre-construction weed control; 3. Education of construction and operation personnel in each Project region; 4. Washing of vehicles and equipment before entering and leaving the ROW; 5. Herbicide spraying; and 6. Annual monitoring and reporting. Survey information collected during pre-construction surveys would include species name, GPS location of weed infestations, percent cover, and approximate size of weed infestations. Control of noxious and invasive species could include chemical, physical, and biological methods and would be developed in consultation with the land agencies and private landowners. The plan would identify species of concern for each BLM FO and USFS forest and would focus monitoring and control methods on these species. The plan would comply with the existing BLM, USFS, USFWS, state, and federal regulations concerning noxious weed management. Post construction annual monitoring would be determined with the appropriate land management agencies.	Minimize the spread of noxious weeds.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
NX-2	Herbicide spraying will be conducted in accordance with product labels and following all applicable state and federal laws regarding chemical use, adverse weather, chemical storage, and chemical drift. Further guidelines and protocols for herbicide spraying on National Forest System land are provided in the Final Environmental Assessment for Control of Noxious Weeds and Other Undesirable Vegetation on the Uinta National Forest (1994). Standard operating procedures for herbicide spraying include buffers for sensitive areas such as riparian and wetland areas and threatened and endangered species habitat, timing restrictions, and safety protocols. Only hand application methods of herbicide spraying will be utilized within a minimum-500 foot bufffer around known sensitive species.	Herbicide spraying would be conducted following all applicable state and federal laws regarding chemical use, adverse weather, chemical storage, and chemical drift. Further guidelines and protocols for herbicide spraying on BLM land are provided in the Final BLM Vegetation Treatment Using Herbicides Programmatic EIS (BLM Vegetation EIS) (BLM 2007b,c). Standard operating procedures for herbicide spraying include buffers for sensitive areas such as riparian and wetland areas and threatened and endangered species habitat, timing restrictions, and safety protocols. No aerial spraying of herbicides would be permitted within 500 feet of known sensitive species with hand-only application methods allowed.	Conduct herbicide use in a safe and efficient manner.
NX-3	On lands managed by the Forest Service, an approved Pesticide Use Proposal (PUP) will be obtained from the Uinta Planning Area and the Manti-La Sal National Forest prior to herbicide spraying. PUPs will have site-specific information about the herbicides to be used. The PUPs and associated reporting requirements will be submitted in accordance with the schedule required for the Uinta Planning Area and the Manti-La Sal National Forest.	On lands managed by the BLM, an approved Pesticide Use Proposal (PUP) would be obtained from each BLM FO prior to herbicide spraying. PUPs would have site-specific information about the herbicides to be used. The PUPs and associated reporting requirements would be submitted in accordance with the schedule required for each BLM FO. Herbicide spraying in desert tortoise habitat in Nevada would require consultation with the BLM and USFWS.	Ensure herbicide application is in accordance with USFS BMPs and site-specific considerations determined by the Forest Service.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
VG-1	Native seed mixes to be used for reclamation will be developed in consultation with the Forest Service. Seed mixes will meet the requirements of the Uinta Planning Area and the Manti-La Sal National Forest. Site-specific seed mixes for soils with LRP will be developed. The LRP seed mixes will be specifically designed for alkaline, saline, or sodic soils and will be used in areas where reclamation will potentially be difficult based on soil conditions. Additional soil amendments may be required in these areas, and will be implemented at the direction of the Forest Service. Reclaimed areas will be monitored annually by TransWest to ensure successful reclamation is occurring. The length of time for the annual monitoring and the definition of successful reclamation will be determined by the Forest Service. Subsequent actions in areas without successful reclamation will be determined in consultation with the Forest Service.	Native seed mixes to be used for reclamation would be developed in consultation with the land managers for the various regions crossed by the Project. Seed mixes would meet the requirements of the individual agency FOs crossed by the Project. Site-specific seed mixes for soils with LRP would be developed. The LRP seed mixes would be specifically designed for alkaline, saline, or sodic soils and would be used in areas where reclamation would potentially be difficult based on soil conditions. Additional soil amendments may be required in these areas, and would be implemented at the direction of the land manager. Reclaimed areas would be monitored annually by the Applicant to ensure successful reclamation is occurring. The length of time for the annual monitoring and the definition of successful reclamation would be determined by the appropriate land management agency. Subsequent actions in areas without successful reclamation would be determined in consultation with the appropriate land management agency.	Ensure successful reclamation is accomplished with native seed mixes.
VG-3	A vegetation reclamation and monitoring plan will be developed as part of the TWE Plan of Development. The reclamation monitoring plan will define reclamation success for each vegetation type, list reclamation seed mixes, and detail reclamation monitoring for both interim and final reclamation. Interim and final reclamation success will be monitored quarterly for the first year, and then annually for at least 3 years, or until reclamation success as defined by the Forest Service, is achieved. Reporting of construction, reclamation progress, and monitoring results will be submitted to the Forest Service per reporting requirements.	A vegetation reclamation and monitoring plan would be developed as part of the COM Plan. The reclamation monitoring plan would define reclamation success for each vegetation type and management agency, list reclamation seed mixes, and detail reclamation monitoring for both interim and final reclamation. Interim and final reclamation success would be monitored quarterly for the first year, and then annually for at least 3 years, or until reclamation success as defined by each land management agency crossed by the Project, is achieved. Reporting of construction, reclamation progress, and monitoring results would be submitted to each land management agency per each office's reporting requirements.	Ensure successful reclamation is accomplished with native seed mixes.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
VG-4	During vegetation clearing, if chipping and spreading woody material in the ROW, wood chips will not exceed 3 inches in depth. Chips will be distributed in discontinuous patches that will not result in a continuous chip mat (less than 40 percent of surface covered by 3 inches of chips).	During vegetation clearing, if chipping and spreading woody material in the ROW, wood chips would not exceed 3 inches in depth. Chips would be distributed in discontinuous patches that would not result in a continuous chip mat (less than 40 percent of surface covered by 3 inches of chips).	Ensure successful reclamation is accomplished with native seed mixes.
VG-5	Masticated material spread in the ROW will not exceed a depth of 3 to 6 inches. Materials will be distributed in discontinuous patches that will not result in a continuous chip mat (less than 40 percent of surface covered 3 to 6 inches thick).	Masticated material spread in the ROW would not exceed a depth of 3 to 6 inches. Materials would be distributed in discontinuous patches that would not result in a continuous chip mat (less than 40 percent of surface covered 3 to 6 inches thick).	Ensure successful reclamation is accomplished with native seed mixes.
WET-1	Wetland surveys will be conducted along the ROW, at ancillary facilities, and along proposed access route corridors to identify wetlands, Waters of the U.S., and riparian areas. Survey data will include wetland type, type and cover of hydrophytic and riparian vegetation species present, soil characteristics, site hydrology, Global Positioning System (GPS) location of the wetland, and associated information required to determine jurisdictional status. Based on survey results, no surface disturbance including the construction of temporary and permanent facilities, placement of fill material, or vegetation clearing will occur (as feasible) within the avoidance buffer or surface use restriction defined in the resource management plans for the Uinta Planning Area and the Manti-La Sal National Forest. If avoidance is not feasible, USACE, Forest Service, and USFWS crossing and construction techniques for wetlands and riparian areas will be employed. The wetland crossing and construction techniques will be approved by these agencies and will be outlined in the Final POD.	Wetland surveys would be conducted at terminals, above the ROW, at ancillary facilities, and along proposed access roads corridors to identify wetlands, waters of the U.S., and riparian areas located in these areas. Survey information collected would include wetland type, type and cover of hydrophytic and riparian vegetation species present, soil characteristics, site hydrology, Global Positioning System (GPS) location of the wetland, and associated information required to determine jurisdictional status. Based on survey results, no surface disturbance including temporary and permanent facilities, the placement of fill material or vegetation clearing for storage, parking, construction activities, or construction work areas as feasible would occur within the avoidance buffer or surface use restriction defined in the resource management plan for each BLM FO and USFS national forest. If avoidance is not feasible, USACE, BLM, USFS, and USFWS crossing and construction techniques for wetlands and riparian areas would be employed. The wetland crossing and construction techniques would be approved by the USACE, BLM, USFS, and USFWS and will be outlined in the Final POD.	Ensure protection of wetlands, Waters of the U.S., and riparian areas during construction.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
WET-2	For any features identified during field surveys as jurisdictional under the USACE and USEPA guidance under Section 4 of the CWA, consultation with the USACE will occur prior to construction. Mitigation for these features will be determined in consultation with the USACE and Forest Service.	For any features identified during field surveys as jurisdictional under the USACE and USEPA guidance under Section 4 of the CWA, consultation with the USACE will occur prior to construction. Mitigation for these features would be determined in consultation with the USACE and BLM.	Ensure protection of jurisdictional wetlands during construction.
WET-3	Access routes will be routed around riparian areas, wetlands, intermittent or perennial drainages, and ephemeral channels to the extent practical. If jurisdictional wetlands or waters of the U.S. cannot be avoided, USACE approved construction techniques for construction in wetlands and Waters of the U.S. will be applied. Forest Service construction techniques for non-jurisdictional wetlands, riparian areas, intermittent drainages, and ephemeral channels will be applied on National Forest System lands, as appropriate. These include the use of timber mats, erosion controls, and the placement of equipment outside of the wetland, riparian area, intermittent drainage, and ephemeral channel boundaries.	Access roads would be routed around riparian areas, wetlands, intermittent or perennial drainages, and ephemeral channels to the extent practical. If jurisdictional wetlands or waters of the U.S. cannot be avoided, USACE approved construction techniques for construction in wetlands and waters of the U.S. would be applied. BLM and USFS construction techniques for non-jurisdictional wetlands, riparian areas, intermittent drainages, and ephemeral channels would be applied on BLM and USFS lands, as appropriate. These include the use of timber mats, erosion controls, and the placement of equipment outside of the wetland, riparian area, intermittent drainage, and ephemeral channel boundaries.	Ensure protection of wetlands, Waters of the U.S., and riparian areas during construction.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SS-1	Species requiring surveys will be identified by the Forest Service in consultation with USFWS. For those species, site- and species-specific surveys will be conducted. The timing and methodology of the surveys will be determined by the Forest Service in consultation with the USFWS and TransWest. Surveys will be conducted in areas identified as potential habitat through models developed for the EIS or from agency-provided models for specific species. If individuals or populations are identified during surveys in potential habitat areas, species-specific avoidance through structure and ROW design modifications will be developed and implemented. For species that cannot be avoided, species-specific mitigation will be developed in consultation with the Forest Service and USFWS. Species-specific mitigation may include compensatory mitigation and transplanting of individuals. For federally listed species, the species-specific mitigation will be identified as conservation measures in the BA. For Forest Sensitive species, field surveys of sensitive plant species may be required to delineate the entire contiguous patch or population of species intersected by the 250-foot wide transmission line ROW (not just those plants that fall within the 250-foot wide transmission line ROW) and species-specific mitigation is described in the BE. Final survey results must be consistent with results described in the BE and the BA, as appropriate. Measures will need to be consistent with the BO.	(Species-specific Surveys) – Species requiring surveys would be identified by the BLM and Western in consultation with the appropriate agency. For the species that are identified as requiring surveys, site- and species-specific surveys would be conducted. The timing and methodology of the surveys would be determined by the BLM in consultation with the appropriate agency and the Applicant. Surveys would be conducted in areas identified as potential habitat through models developed for the EIS or from agency-provided models for specific species. If individuals or populations are identified during surveys in potential habitat areas, species-specific avoidance through structure and ROW design modifications would be developed and implemented. For species that cannot be avoided, species-specific mitigation would be developed in consultation with the appropriate agency and BLM. Species-specific mitigation may include compensatory mitigation and transplanting of individuals. For federally listed species, the species-specific mitigation would be identified as conservation measures in the BA. For Forest Service Sensitive species, field surveys of sensitive plant species may be required to delineate the entire contiguous patch or population of species intersected by the 250-foot wide transmission line ROW (not just those plants that fall within the 250-foot wide transmission line ROW) and species-specific mitigation would be described in the BE.	Ensure protection of special status plants and mitigation, as appropriate.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SS-2	Please refer to the TWE Project BA and BO for the measures that have been adopted in the ROD to avoid, minimize, and mitigate impacts to Ute ladies'-tresses orchids and habitat.	(Avoidance of Ute Ladies'-tresses Orchid Species and Habitat) – Known individuals and populations and areas identified as suitable habitat through consultation with the USFWS would be spanned by the transmission line. Surface disturbance associated with facilities, access roads, and other Project related construction activities would not occur within the areas identified as suitable habitat or as having known occurrences. A minimum 300-foot buffer distance would be incorporated between known occurrences and surface disturbance. Presence of species in modeled habitat would be assumed for ESA Section 7 consultation purposes. If potential habitat cannot be avoided, 2 years of surveys in potential habitat would be required and formal consultation may be necessary.	Ensure protection of Ute ladies' tresses orchid.
SS-3	Construction will occur downslope of special status plants and populations where feasible. If surface disturbance must be sited upslope, erosion controls will be implemented at the direction of the Forest Service or USFWS, as appropriate, to prevent sedimentation and erosion from upslope surface disturbance. Additional buffer distances greater than the minimum 300-foot buffer distance described in measure SS-4 may be required.	Construction would occur downslope of special status plants and populations where feasible. If surface disturbance must be sited upslope, erosion controls would be implemented at the direction of the BLM, USFS, or USFWS, as appropriate, to prevent sedimentation and erosion from upslope surface disturbance. Additional buffer distances greater than the minimum 300-foot buffer distance described in measure SS-4 may be required.	Ensure protection of special status plants.
SS-4	A minimum 300-foot buffer distance will be established between individual Ute ladies' tresses orchids, Deseret milkvetch, or field-verified suitable habitat, populations and surface disturbance. Avoidance areas will be visible during construction through fencing, signing, rebar, etc. Construction and operation traffic will utilize only designated routes and other cleared or approved areas.	A minimum 300-foot buffer distance would be established between federally listed individuals, field verified suitable habitat, populations and surface disturbance. Avoidance areas would be visible during construction through fencing, signing, rebar, etc. Construction and operation traffic would stay on designated routes and other cleared or approved areas.	Ensure avoidance of Ute ladies' tresses orchid and its known or potential habitat.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SS-5	The Dust Control and Air Quality Plan will include dust abatement measures to minimize impacts to special status plant species, including use of slower speed limits on unpaved roads, gravel on roads in occupied habitat and avoidance areas, and the application of water for dust abatement.	The Dust Control and Air Quality Plan would include dust abatement measures to minimize impacts to special status plant species, including use of slower speed limits on unpaved roads, gravel on roads in occupied habitat and avoidance areas, and the application of water for dust abatement.	Ensure protection of Ute ladies' tresses orchid and its known or potential habitat.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SS-7	Please refer to the TWE Project BA and BO for the measures that have been adopted in the ROD to avoid, minimize, and mitigate impacts to Deseret milkvetch and habitat.	To avoid and minimize impacts to the Deseret milkvetch, TransWest would coordinate with the BLM and USFWS to implement appropriate mitigation measures during construction, including but not limited to: 1. If the Project can avoid all suitable habitat (as modeled) and occupied habitat (as documented) with a 300-foot buffer, no surveys are necessary. If avoidance of suitable habitat is not possible, surveys will be performed within 300 feet of the Project area to determine occupancy prior to construction or 400 feet if upslope of suitable or occupied habitat. 2. If surveys are necessary, they must be performed by qualified individual(s) and according to USFWS accepted survey protocols. Surveys will be conducted during the flowering and/or fruiting period when the plant can be detected and correctly identified. Surveys will be valid for one calendar year. 3. No new development or permanent ground disturbance, including but not limited to poles, pads, towers, etc., will occur within a 300 foot buffer of suitable or occupied Deseret milkvetch habitat. If construction activities occur upslope of suitable or occupied habitat, the buffer may be increased to 400 feet to prevent additional erosion within the habitat. 4. Wire will be strung between towers aerially with no ground disturbance in suitable or occupied Deseret milkvetch habitat. 5. No new roads will be established within a 300 foot buffer of suitable or occupied Deseret milkvetch habitat. If construction activities occur upslope of suitable or occupied habitat, the buffer may be increased to 400 feet to prevent additional erosion within the habitat	Ensure protection of Deseret milkvetch and its known or potential habitat, including mitigation as appropriate.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
		6. Existing access roads will be utilized to the extent practicable to limit additional fragmentation within the species' habitat from new road development. 7. The existing access road to the north of Birdseye that connects to Blind Canyon Road contains plants alongside the road and within 300 feet of the road edge. If this road will be used, formal consultation that incorporates the following conservation measures is recommended: a. Existing road sections where the plants occur will not be bladed or widened. b. A 300 foot buffer will be maintained between the edge of disturbance from blading or widening activities and individual plants. Widening of existing roads will not occur if occupied habitat is immediately upslope or downslope of the existing road. c. This road will not be used during the flowering period of Deseret milkvetch, between May 1 and June 30 to minimize the impact of dust on pollination and reproduction. d. This road may be used during the active growing season, outside the flowering period: March 1 through April 30 and July 1 through August 31. During these time periods, dust abatement will be employed during all phases of construction, maintenance, and operation. 8. For the existing road to the south of Birdseye, if plants are found within 300 feet of the road edge, formal consultation that incorporates the conservation measures identified in #7 is recommended. 9. Occupied Deseret milkvetch habitats within 300 feet of the edge of newly installed roads, poles, pads, towers, etc. shall be monitored for a period of 3 years after ground disturbing activities. Monitoring will include annual plant surveys to determine plant and habitat impacts relative to project facilities. Annual reports shall be provided to the USFWS and the Utah Natural Heritage Program.	

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
		10. All Project employees, including contractors, brought onsite for the duration of the construction project and ongoing maintenance activities will be informed of the occurrence of Deseret milkvetch in the project area and of the threatened status of the species. Maps with areas of avoidance, including buffers, will be provided to all employees accessing the project area. A qualified biologist or botanist is required to perform this instruction and update maps as necessary.	
SS-8	Please refer to the TWE Project BA and BO for the measures that have been adopted in the ROD to avoid, minimize, and mitigate impacts to clay phacelia and habitat.	Avoidance of Clay Phacelia and Minimization of Indirect Impacts 1. 100% clearance surveys (within 650 feet of the centerline through all modeled suitable habitat) would establish the extent of occupied habitat that occurs in the area and any Project constraints. These surveys should occur between late May and early July. 2. Avoid placement of the 250-foot-wide Project transmission line ROW (including structures, facilities, and new roads) within 650 feet of known occupied (i.e. existing locations and USFS transplant sites) clay phacelia habitat. 3. All occupied sites would be avoided by development within the of the 250-foot-wide Project transmission line ROW (including structures, facilities, and new roads) by at least 650 feet. The distance could be adjusted in coordination with the authorizing agency and the USFWS in order to properly protect the plants from all disturbances. (Example: May be a larger distance if there is a higher risk of erosion or shorter distance if there is a lower risk chance of erosion).	Ensure protection of clay phacelia and its known or potential habitat, including mitigation as appropriate.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
		4. Appropriate erosion (i.e. silt fence, straw waddles) control measures would be constructed if disturbance is allowed within 650 feet of occupied habitat or if such measures are needed to prevent sedimentation or dust deposition. 5. A qualified botanist would be on-site to monitor surface-disturbing activities when clay phacelia is within 650 feet of those surface disturbing activities. 6. Only water (no chemicals, reclaimed production water or other) would be used for dust abatement measures within occupied clay phacelia habitat. 7. Dust abatement would be employed during maintenance activities in modeled suitable clay phacelia habitat over the life of the project during the time of the year when the plant is most vulnerable to dust-related impacts (March through August). 8. No herbicide treatments within 2,500 feet of occupied clay phacelia habitat and no aerial herbicide treatments within modeled suitable habitat. 9. Limit upgrades to existing access roads within 650 feet of occupied clay phacelia habitat to those that eliminate the need to construct a new road, or are necessary for safety. Upgrades would also be designed to limit impacts to clay phacelia.	

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SS-9	In instances where complete high quality habitat avoidance is not possible due to topographical, biological, or engineering constraints, all such habitats as determined during site- and species-specific surveys will be avoided by all direct disturbances during construction and operational activities. High quality habitats are defined as areas that are within the geographic range of the species and have been field-verified as having the majority of required habitat characteristics, and/or the species has been observed in the immediate vicinity, resulting in high occurrence potential for the identified species.	(Avoidance of High Quality Habitats) – In instances where complete habitat avoidance is not possible due to topographical, biological, or engineering constraints, all "high quality" habitats as determined during site- and species-specific surveys would be avoided by all direct disturbances during construction and operational activities. High quality habitats are defined as areas that are within the geographic range of the species and have been field-verified as having the majority of required habitat characteristics, and/or the species has been observed in the immediate vicinity, resulting in high occurrence potential for the identified species.	Ensure protection of special status plant species and high quality habitats.
WLF-3	To ensure wildlife access to existing wildlife water developments (e.g., "guzzlers"), TransWest will avoid impacts to these developments to the extent possible during final Project siting and development. TransWest will be required to offset the loss of any permanently impacted wildlife water developments by installing new developments of equal capacity, in coordination with the Forest Service.	To ensure wildlife access to existing wildlife water developments (e.g., "guzzlers"), TransWest would avoid impacts to these developments to the extent possible during final project siting and development. TransWest would be required to offset the loss of any permanently impacted wildlife water developments by installing new developments of equal capacity, in coordination with the appropriate state wildlife agency.	Ensure wildlife access to existing wildlife water developments.
WLF-6	To minimize fragmentation impacts to forested habitats on National Forest System lands, TransWest will employ vegetation management Level 3, as described in the Project Vegetation Management Plan, to portions of the 250-foot-wide transmission line ROW located in forest and woodland habitat areas identified by Forest Service biologists as being of particular importance to wildlife (e.g., mature or old growth forests). In these areas, TransWest also will be required to leave downed woody debris greater than 3 inches in diameter in place, up to approximately 5 to 10 tons per acre, to provide habitat for insects, small mammals, and other small prey species utilized by raptors and other predators.	To minimize fragmentation impacts to forested habitats on public lands, TransWest would employ vegetation management Level 3, as described in the Project Vegetation Management Plan, to portions of the 250-foot-wide transmission line ROW located in forest and woodland habitat areas identified by local federal or state wildlife management agency biologists as being of particular importance to wildlife. In these areas, TransWest also would be required to leave downed woody debris greater than 3 inches in diameter (not including merchantable timber) in place to provide habitat for insects, small mammals, and other small prey species utilized by owls, raptors, and other predators.	Minimize impacts to wildlife and migratory bird species from habitat fragmentation.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
WLF-8	To minimize avian collision potential, TransWest will coordinate with the Forest Service Implementation Team and USFWS to implement the Avian Protection Plan developed for the Project (TransWest Express LLC 2014) and install avian flight diverters on all guy wires in priority migratory bird habitats. Particular emphasis will be given to high-quality and high bird-use areas such as the Upper Strawberry Watershed IBA, Nebo Creek BHCA, Upper Strawberry/Avintaquin BHCA, in wetland and riparian areas, forested areas, and other sensitive habitats. TransWest also will install flight diverters on guyed structures at tower locations identified by post-construction monitoring as having high collision potential.	To minimize collision potential for avian species, TransWest would design the Project to meet or exceed the standards described in the Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012).	Minimize collision potential for migratory birds.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SSWS-5	To avoid or minimize Project-related impacts to greater sage-grouse and its habitat, the BLM and Western have coordinated with applicable federal and state land and wildlife management agencies and other stakeholders to develop a suite of measures for this species. In addition, TransWest has developed a Habitat Equivalency Analysis (HEA) to quantitatively determine an appropriate level of compensatory mitigation that will be implemented to offset unavoidable impacts to sage-grouse habitat. Applicant-committed measures proposed as part of the HEA process are further discussed in Final EIS Section 3.8.6.3. The BLM and Western support the implementation of the applicant's HEA process and compensatory mitigation measures in conjunction with the following impact avoidance and minimization measures developed through the NEPA process. General Measures: To reduce impacts to greater sage-grouse from construction and operation of the proposed Project, TransWest, in consultation with the BLM, Western, and applicable federal and state land and wildlife management agencies, will implement the following general design features:	To avoid or minimize Project-related impacts to greater sage-grouse and its habitat, the BLM and Western have coordinated with applicable federal and state land and wildlife management agencies and other stakeholders to develop a suite of measures for this species. In addition, TransWest has developed a HEA to quantitatively determine an appropriate level of compensatory mitigation that would be implemented to offset unavoidable impacts to sage-grouse habitat. Applicant-committed measures proposed as part of the HEA process are further discussed in Section 3.8.6.3. The BLM and Western support the implementation of the applicant's HEA process and compensatory mitigation measures in conjunction with the following impact avoidance and minimization measures developed through the NEPA process. General Measures: To reduce impacts to greater sage-grouse from construction and operation of the proposed Project, TransWest, in consultation with the BLM, Western, and applicable federal and state land and wildlife management agencies, would be required to implement the following general design features:	Minimize impacts to greater sage-grouse and its habitat, including mitigation as appropriate.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
	1. Placement of Project structures and access roads will maximize use of topographic features to visually screen Project facilities from high quality greater sage-grouse habitat (i.e., within occupied habitat and within 4 miles of active leks in Utah). 2. To minimize fragmentation of suitable sage-grouse breeding, brood-rearing, and wintering habitats, the approved transmission line ROW will use existing roads, create no new permanent roads, be accessed via drive and crush wherever possible, and be micro-sited in coordination with the Forest Service. 3. To limit corvid predation on greater sage-grouse, TransWest will develop a Raven Management Plan that outlines active adaptive management strategies for controlling raven predation and nesting within the Project ROW and includes post–construction monitoring for ravens and removal of raven nests. 4. To limit disturbance to lekking and nesting activity, disruptive construction and maintenance activities within 4 miles of occupied/active leks will be prohibited between March 1 and June 30. Activities determined to be non-disruptive by the Forest Service would be permitted between March 1 and June 30. 5. To limit the potential for adverse impacts resulting from contact with construction equipment, vehicles, and personnel, TransWest will implement a vehicle speed limit of 15 mph on roads without posted speed limits in areas of occupied sage-grouse habitat. 6. Under Applicant Committed Design Feature TWE-26, TransWest has committed to developing a Noxious Weed Management Plan in accordance with existing BLM Pesticide Use Plan requirements. Control of noxious weeds will minimize the potential for weed-related degradation of occupied sage-grouse habitat.	1. Placement of Project structures and access roads would maximize use of topographic features to visually screen Project facilities from high quality greater sage-grouse habitat (i.e., Wyoming – within sage-grouse core habitat and within 4 miles of active leks; Colorado – within preliminary priority habitat; Utah – within occupied habitat and within 4 miles of active leks; 2. To minimize fragmentation of suitable sage-grouse breeding, brood-rearing, and wintering habitats, the approved transmission line ROW would use existing roads, create no new permanent roads, be accessed via drive and crush wherever possible, and be micro-sited in coordination with applicable state and federal wildlife management; 3. To limit corvid predation on greater sage-grouse, TransWest would develop a Raven Management Plan that outlines active adaptive management strategies for controlling raven predation and nesting within the Project ROW and includes post–construction monitoring for ravens and removal of raven nests; 4. To limit disturbance to lekking and nesting activity, disruptive construction and maintenance activities within 4 miles of occupied/active leks would be prohibited between March 1 and June 30. Activities determined to be non-disruptive by the BLM, Western, and applicable federal and state land and wildlife management agencies would be permitted between March 1 and June 30. 5. To limit the potential for adverse impacts resulting from contact with construction equipment, vehicles, and personnel, TransWest would implement a vehicle speed limit of 15 mph on roads without posted speed limits in areas of occupied sage-grouse habitat.	

	Prior to the use of chemical weed control agents, herbicide applications will be reviewed by Forest Service wildlife biologists to ensure consistency with state and local greater sage-grouse conservation goals. Site-specific Measures: In addition to requiring implementation of the general mitigation measures discussed above, the Forest Service will consider requiring additional impact avoidance and minimization measures on a site-specific basis in areas of greater sage-grouse habitat located within areas that meet all of the following state-specific criteria: ~ Areas within 4 miles of active leks and within areas of designated brood-rearing habitats and winter concentration areas in Utah; Identification of additional greater sage-grouse mitigation measures to be implemented in local areas will be completed prior to finalization of the POD in coordination with TransWest, the Forest Service implementation team, and local interdisciplinary teams comprised of applicable federal and state land and wildlife management agency staff. Criteria for determining site-specific measures could include, but will not be limited to: existing vegetation communities, existing fragmentation, proximity to active leks, visibility of the proposed transmission line and towers from active lek locations, presence of noxious and invasive weed species, topography, proximity to USFWS PACs, proximity to designated winter concentration areas, proximity to nesting habitat, proximity to brood rearing habitat, proximity to available water sources, proximity to other anthropogenic sources of disturbance, and co-location with existing transmission infrastructure. Additional measures identified by the BLM and Western for consideration on a site-specific basis in coordination with the local Forest Service implementation team will include:	6. Under Applicant Committed Design Feature TWE-26, TransWest has committed to developing a Noxious Weed Management Plan in accordance with existing BLM Pesticide Use Plan requirements. Control of noxious weeds would minimize the potential for weed-related degradation of occupied sage-grouse habitat. Prior to the use of chemical weed control agents, herbicide applications would be reviewed by agency wildlife biologists to ensure consistency with state and local greater sage-grouse conservation goals. Site-specific Measures: In addition to requiring implementation of the general mitigation measures discussed above, the BLM and Western would consider requiring additional impact avoidance and minimization measures on a site-specific basis in areas of greater sage-grouse habitat located within areas that meet all of the following state-specific criteria: - Areas within 4 miles of active leks and within Wyoming Core Areas designated under EO 2011-05; - Areas within 4 miles of active leks and within areas of PPH in Colorado; - Areas within 4 miles of active leks and within areas of designated brood-rearing habitats and winter concentration areas in Utah; Identification of additional greater sage-grouse mitigation measures to be implemented in local areas would be completed prior to finalization of the POD in coordination with the Applicant, BLM, Western, and local interdisciplinary teams comprised of applicable federal and state land and wildlife management agency staff. Criteria for determining site-specific measures could include, but would not be limited to: existing vegetation communities, existing fragmentation, proximity to active leks, visibility of the proposed transmission line and towers from active lek locations, presence of noxious and invasive weed species, topography, proximity to USFWS PACs,	

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
	~ Installation of perch deterrents on transmission structures to reduce the potential for perching by avian predators of greater sage-grouse. ~ Installation of agency-approved guy wire marking devices on transmission tower guy lines to increase the visibility of each wire and reduce the risk of collision by flying greater sage-grouse. ~ Outfit all newly–constructed fencing with agency–approved bird diverters/wire markers.	proximity to designated winter concentration areas, proximity to nesting habitat, proximity to brood rearing habitat, proximity to available water sources, proximity to other anthropogenic sources of disturbance, and co-location with existing transmission infrastructure.	
SSWS-11	To avoid or minimize impacts to Canada lynx, TransWest will limit disturbance to and within suitable habitat by staying on approved access routes. New temporary access routes for the Project will be limited. Dirt and gravel roads traversing Canada lynx habitat (particularly those that could become highways) will not be paved or otherwise permanently upgraded (e.g., straightening of curves, widening of roadway, etc.) in a manner that is likely to lead to significant increases in traffic volume, traffic speed, increased width of the cleared ROW, or will foreseeably contribute to development or increases in human activity within lynx habitat.	To avoid or minimize impacts to Canada lynx, TransWest would: 1. Limit disturbance to and within suitable habitat by staying on approved access routes. 2. Limit new access routes created by the Project. 3. Dirt and gravel roads traversing lynx habitat (particularly those that could become highways) should not be paved or otherwise upgraded (e.g., straightening of curves, widening of roadway, etc.) in a manner that is likely to lead to significant increases in traffic volume, traffic speed, increased width of the cleared ROW, or would foreseeably contribute to development or increases in human activity in lynx habitat.	Ensure protection of Canada lynx

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SSWS-13	To prevent impacts to bald eagles, TransWest will avoid disturbance within 0.25 mile of an active winter roost site (0.5 mile if there is a direct line of sight to disturbance) from November 15 to March 15, and avoid disturbance within 0.5 mile of communal winter roosts from November 1 to April 1. Construction of above-ground structures will be restricted within 0.5 mile of bald eagle nests and communal winter roost sites. Below ground structures may be sited closer as long as construction occurs outside of the active nesting or roosting season and will not result in the loss of alternate nest sites or roost trees.	To prevent impacts to bald eagles, TransWest would be required to avoid disturbance within 0.25 mile of an active winter roost site (0.5 mile if there is a direct line of sight to disturbance) from November 15 to March 15, and avoid disturbance within 0.5 mile of communal winter roosts from November 1 to April 1. Construction of above-ground structures would be restricted within 0.5 mile of bald eagle nests and communal winter roost sites. Below ground structures (e.g., pipelines, buried power lines, fiber optic lines) may be sited closer as long as construction occurs outside of the active nesting or roosting season and will not result in the loss of alternate nest sites or roost trees.	Ensure protection of wintering bald eagles.
SSWS-15	If evidence of a protected species not previously identified or known is found in the construction area, the Contractor will immediately notify the Forest Service and provide the location and nature of the findings. Construction in the vicinity of the newly located protected species will be halted and will resume when a Forest Service biologist determines that the species will not be affected by continued construction.	If evidence of a protected species not previously identified or known is found in the construction area, the Contractor would immediately notify the appropriate land management agencies and provide the location and nature of the findings. Construction in the vicinity of the newly located protected species would be halted and would resume when a biologist from the appropriate agency determines that the species would not be affected by continued construction.	Ensure protection of special status wildlife species.
SSWS-16	TransWest will obtain approval from the Forest Service prior to applying dust palliatives to construction areas located within areas designated as suitable habitat for federally listed species.	To reduce impacts to federally listed wildlife species, TransWest would be required to obtain approval from the USFWS, lead agencies, and all applicable land management agencies prior to applying dust palliatives to construction areas located within areas designated as suitable habitat for federally listed species.	Ensure protection of special status wildlife species.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
AB-1	When avoidance of perennial streams with fish populations is not feasible and a culvert is required during construction, flow will be maintained in a portion of the stream to allow unrestricted fish passage. Any plan for dewatering the stream at the culvert site will be approved by the Forest Service. Culvert size and type will be selected to facilitate the continued and long-term connectivity and movement of target aquatic species. If the culvert is proposed to be in place during Project operation, Forest Service approval must be obtained; an alternative crossing method may be required.	(Fish Passage): When avoidance of perennial streams with fish populations is not feasible and a culvert is required during construction, flow would be maintained in a portion of the stream to allow unrestricted fish passage. Any plan for dewatering the stream at the culvert site must be approved by the appropriate federal and state agencies. Culvert size and type would be selected to facilitate the continued and long term connectivity and movement of target aquatic species. If the culvert is proposed to be in place during project operation, approval must be obtained from the federal or state agency management authority. An alternative crossing method may be required.	Ensure protection of fish species during construction.
AB-2	If spawning areas for game fish species are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance will be scheduled to avoid the spawning period. The exact dates for avoidance will be determined by the Forest Service. All disturbed areas will be restored to pre-construction conditions prior to the next spawning season.	(Avoid Game Fish Spawning Periods): If spawning areas for game fish species are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance would be scheduled to avoid the spawning period. The exact dates for avoidance would be determined through discussions with WGFD, CPW, UDWR, or USFS. All disturbed areas would be restored to pre-construction conditions prior to the next spawning season.	Ensure protection of fish species during construction.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
AB-3	It is assumed that any waterbody could contain aquatic invasive species and invasive weed species. If work occurs in or near a waterbody, all equipment will be decontaminated. Decontamination will occur before arrival at a Project site to avoid the transfer of aquatic invasive species from a previous work site in or near water. Decontamination will consist of either of these actions: 1) Drain all water from equipment and compartments; clean equipment of all mud, plants, debris, and aquatic organisms; and dry equipment for specified time by season (5 days in June through August, 18 days in March through May, and 3 days in December through February when temperatures are at or below freezing); or 2) Use a high pressure (2,500 psi) hot water (140°F) pressure washer to thoroughly clean equipment and flush all compartments that may hold water. A field monitor will be present to ensure that the cleaning is completed prior to vehicle and equipment moving to other streams and drainages.	(Invasive Aquatic Species Protection): It is assumed that any waterbody could contain aquatic invasive species and invasive weed species. If work occurs in or near a waterbody, all equipment would be decontaminated. Decontamination would occur before arrival at a Project site to avoid the transfer of aquatic invasive species from a previous work site in or near water. Decontamination would consist of either of these actions: 1) Drain all water from equipment and compartments; clean equipment of all mud, plants, debris, and aquatic organisms; and dry equipment for specified time by season (5 days in June through August, 18 days in March through May, and 3 days in December through February when temperatures are at or below freezing); or 2) Use a high pressure (2,500 psi) hot water (140°F) pressure washer to thoroughly clean equipment and flush all compartments that may hold water. A field monitor would be present to ensure that the cleaning was completed prior to vehicle and equipment moving to other streams and drainages.	Ensure protection of aquatic species and habitat; ensure protection of wildlife species and habitat.
AB-4	TransWest will prepare an Herbicide Use Plan that will identify a list of approved herbicides that may be used as well as locations of areas that may be treated. Licensed herbicide applicators will be used in the treatment process. All herbicides will be used in accordance with label instructions for the chemical. The Plan also will discuss compliance with Forest Service Standards and Guidelines.	(Herbicide Use Plan): As part of vegetation management, the applicant would prepare an Herbicide Use Plan. The Plan would identify a list of approved herbicides that may be used as well as locations of areas that may be treated. Licensed herbicide applicators would be used in the treatment process. All herbicides would be used in accordance with label instructions for the chemical. The Plan also would discuss compliance with applicable federal, state, and local agencies.	Ensure protection of aquatic species and habitat; ensure protection of wildlife species and habitat.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SSS-1	Mitigation measure WR-3 will be applied to perennial streams providing habitat for federally listed fish species or fish species requiring special management as mandated by existing Land and Resource Management Plans for the Uinta Planning Area and the Manti-La Sal National Forest. The measure will require coordination with the Forest Service. This coordination will include the location and design of access roads and temporary work areas within 300 feet of streams providing habitat for these species to minimize erosion and sedimentation effects. The Forest Service will provide input to TransWest for potential modification of locations and designs within TransWest's final engineering schedule.	(Sediment Protection for Streams with Federally listed and Special Management Fish Species): Mitigation measure WR-3 (Section 3.4.6.3) would be applied to perennial streams providing habitat for federally listed fish species or fish species requiring special management as mandated by existing federal land use plans. The measure would require coordination with the federal agencies having land jurisdiction. This coordination would include location and design of access roads and temporary work areas within 300 feet of streams providing habitat for these species to minimize erosion and sedimentation effects. The agencies would coordinate and provide input to TransWest for potential modification of locations and designs within TransWest's final engineering schedule.	Ensure protection of special status aquatic species and habitat.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SSS-2	Please refer to the TWE Project BA and BO for the measures that have been adopted in the ROD to avoid, minimize, and mitigate impacts to Colorado River federally listed fish species.	(Avoidance of Water Withdrawal and Entrainment/Impingement Effects for Federally Listed Fish Species): Where critical habitat for the Colorado River federally endangered fish species cannot be avoided as water sources for construction purposes, TransWest would be required to obtain approval from the USFWS and state or federal agencies responsible for managing the land and critical habitat areas. Agency approval would ensure that water withdrawal methods would avoid or minimize entrainment or impingement effects to early life stages of endangered fish species. Requirements for water pumping in critical habitat areas would include: 1) avoidance of pumping between approximately April 1 through August 31, with specific dates dependent upon the water year; 2) intake hoses would be screened with 3/32-inch mesh size; 3) intake velocity would not exceed 0.33 feet/second in an area where larval stages of the federally endangered fish may be present; and (4) pumping from off-channel locations (i.e., no connection to the river during high spring flows) would use an infiltration gallery constructed in a USFWS-approved location. Additional guidance on pumping methodology is provided in the National Marine Fisheries Service's (1997) document entitled Fish Screening Criteria for Anadromous Salmonids.	Ensure protection of special status aquatic species and habitat.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SSS-3	Where waterbodies containing conservation agreement fish species (bluehead sucker, Bonneville cutthroat trout, Colorado River cutthroat trout, flannelmouth sucker, least chub, southern leatherside chub, and Virgin River spinedace) and other special status fish species cannot be avoided as construction water sources, approval will be obtained from the Forest Service regarding water withdrawal sites and methods. A site specific withdrawal plan will be prepared by TransWest for review/approval by the Forest Service. Requirements for water pumping for hose screening and intake velocities will be the same as identified in mitigation measure SSS-2. Additional requirements include the use of private, off-stream water sources if possible; withdrawal sites will be reviewed/approved by the Forest Service; and approval will include provisions to maintain adequate instream flows to protect aquatic species and their habitat.	(Avoidance of Water Withdrawal and Entrainment/Impingement Effects for Conservation Agreement Fish Species): Where waterbodies containing conservation agreement fish species (bluehead sucker, Bonneville cutthroat trout, Colorado River cutthroat trout, flannelmouth sucker, least chub, southern leatherside chub, and Virgin River spinedace) and other special status fish species cannot be avoided as construction water sources, approval must be obtained from federal, state, and/or land management agencies regarding water withdrawal sites and methods. A site specific withdrawal plan will be prepared by TransWest for review/approval by the agencies. Requirements for water pumping for hose screening and intake velocities would be the same as identified in mitigation measure SSS-2. Additional requirements include the use of private, off-stream water sources if possible; withdrawal sites must reviewed/approved by applicable agencies; and approval should include provisions to maintain adequate instream flows to protect aquatic species and their habitat.	Ensure protection of special status aquatic species and habitat.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SSS-5	If spawning areas for special status trout species (Colorado River and Bonneville cutthroat trout) are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance will be scheduled to avoid the spawning period from April through May. The exact dates for avoidance will be determined through discussions with the Forest Service. All disturbed areas will be restored to pre-construction conditions prior to the next spawning season. The Utah Division of Wildlife (UDWR) also will determine if a habitat survey will be required prior to any Project disturbance, which will assist in defining habitat conditions for restoration. A stream crossing plan will be prepared by TransWest, with approval required by UDWR aquatic biologists.	(Avoid Spawning Habitat Disturbance for Special Status Trout Species): If spawning areas for special status trout species (Colorado River and Bonneville cutthroat trout) are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance would be scheduled to avoid the spawning period from April through May. The exact dates for avoidance would be determined through discussions with WGFD, CPW, UDWR, or USFS. All disturbed areas would be restored to pre-construction conditions prior to the next spawning season. The state agencies also would determine if a habitat survey would be required prior to any Project disturbance, which would assist in defining habitat conditions for restoration. A stream crossing plan would be prepared by TransWest, with approval required by the state agencies' aquatic biologists.	Ensure protection of special status aquatic species and habitat.
SSS-6	Please refer to the TWE Project BA and BO for the measures that have been adopted in the ROD to avoid, minimize, and mitigate impacts to June sucker.	(Approval of Water Use from June Sucker Habitat Areas): Any potential water use from Utah Lake, Provo River and the Spanish Fork River that would represent a new depletion must be approved by UDWR and the Utah State Engineer, Utah Division of Water Rights.	Ensure protection of special status aquatic species and habitat.
SSS-7	If spawning areas for southern leatherside chub are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance will be scheduled to avoid the spawning period from April through June. The exact dates for avoidance will be determined through discussions with UDWR. All disturbed areas will be restored to pre-construction conditions prior to the next spawning season.	(Avoid Spawning Habitat Disturbance for Southern Leatherside Chub): If spawning areas for southern leatherside chub are known to occur at streams proposed for vehicle crossing or culvert construction, instream disturbance would be scheduled to avoid the spawning period from April through June. The exact dates for avoidance would be determined through discussions with UDWR. All disturbed areas would be restored to pre-construction conditions prior to the next spawning season.	Ensure protection of southern leatherside chub and its habitat.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
CUL-4	On-site and off-site mitigation will be required to compensate for direct and indirect adverse effects to historic properties in Utah. Mitigation for historic properties will occur as outlined in the Historic Properties Treatment Plan, which is part of the PA.	On-site and off-site mitigation to compensate for direct and indirect adverse effects to historic properties in Wyoming, Colorado, Utah and Nevada. Future discussion with consulting parties as part of the Historic Properties Treatment Plan will provide further mitigation guidance.	Ensure protection of historic properties and applicable mitigation.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
VR-1	TransWest will utilize site-specific application of vegetation management levels at the discretion of the Forest Service. Pinyon-juniper woodlands will be removed only as necessary for construction and maintenance of transmission towers and access routes (TWE Level 3 Selective Vegetation Management) for foreground, middleground, and background views from linear or stationary KOPs, foreground, middleground, and background views in ROS Pristine, Semi-primitive Non-motorized, Semi-primitive Motorized, and Roaded Natural on National Forest System lands. Site-specific application of vegetation management levels will apply to foreground and middleground (up to 1 mile away) from scenic routes and will be considered in these areas, but not outside them. *This information is shown in detail by segment in Appendix I, of the Final EIS Figure I-12 (Level 3 Mitigation by Segment).* TransWest will feather the edges of any clearings along the 250-foot-wide transmission line ROW. While feathering is in progress TransWest will leave in place as many as possible of the pinyon-juniper woodlands in the ROW that are outside of the tower and access route construction zone. TransWest will leave other trees in the ROW that will not present a safety or engineering hazard or otherwise interfere with operations. Where feasible, TransWest will remove only the treetops rather than entire trees that exceed the allowable height. Openings in pinyon-juniper woodlands for facilities, structures, and roads will mimic, to the extent possible, the size, shape, and characteristics of naturally occurring openings.	Remove pinyon-juniper woodlands only as necessary for construction and maintenance of transmission towers and access roads (TWE Level 3 Selective Vegetation Management) for foreground, middleground, and background views from linear or stationary KOPs on BLM lands, foreground, middleground, and background views in ROS Pristine, Semi-primitive Non-motorized, Semi-primitive Motorized, and Roaded Natural on USFS lands, and Class A Scenic Quality on BLM lands (Figures 3.12-17, 3.12-18, 3.12-19, and 3.12-20 and Tables 3.12-9, 3.12-10, 3.12-11, and 3.12-12). This information is shown in detail by segment in Appendix I, Figure I-12 (Level 3 Mitigation by Segment). Feather the edges of any clearings along the 250-foot-wide transmission line ROW. The USFS allows for clearing of hazardous materials and edge-feathering outside of the 250-foot-wide transmission line ROW, based on a cooperative agreement between the USFS and Applicant. Any clearing beyond the areas analyzed in this EIS would be subject to site-specific NEPA on a case-by-case basis. While feathering, leave in place as many as possible of the pinyon-juniper woodlands in the ROW that are outside of the tower and road construction zone. Leave other trees in the ROW that would not present a safety or engineering hazard or otherwise interfere with operations. Where feasible, top rather than remove trees that exceed the allowable height. Openings in pinyon-juniper woodlands for facilities, structures, and roads should mimic, to the extent possible, the size, shape, and characteristics of naturally occurring openings.	Maintain landscape in the most natural state possible. Minimize visual impacts to forested areas. Minimize habitat fragmentation.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
VR-2	TransWest will use BLM environmental colors (Standard Environmental Colors, Color Chart CC-001, 2008) for surface coatings of permanent buildings and gates. Color selection is based on a site-specific assessment. Grouped structures will be painted the same color to reduce visual complexity and color contrast.	Use BLM environmental colors (Standard Environmental Colors, Color Chart CC-001, 2008) for surface coatings of permanent buildings, gates, and tanks at terminal sites. Color selection is based on a site-specific assessment. Paint grouped structures the same color to reduce visual complexity and color contrast.	Minimize visual impacts of Project components.
VR-3	Structures, roads, and other Project elements will be located as far from road, trail, and river crossings (linear KOPs) as possible and where feasible will employ terrain and vegetation to screen views from road, trail, and river crossings. This measure will be employed only in locations that do not conflict with implementation of measure SSWS-5.	Locate structures, roads, and other project elements as far back from road, trail, and river crossings (linear KOPs) as possible, and, where feasible, employ terrain and vegetation to screen views from crossings.	Minimize visual impacts of Project components.
VR-4	In areas with no existing transmission lines, TransWest will site the transmission line (alignment) away from the immediate foreground of stationary (non-linear) KOPs to a distance of 0.5 mile or more. Where feasible, the alignment will approach and cross at right angles to linear KOPs such as roads, trails, and rivers. This measure will be employed only in locations that do not conflict with implementation of measure SSWS-5.	In areas with no existing transmission lines, move the transmission line (alignment) away from the immediate foreground of stationary (non-linear) KOPs to a distance of 0.5 mile or more. Where feasible, approach and cross at right angles to linear KOPs such as roads, trails, and rivers.	Minimize visual impacts of Project components.
VR-5	Exposed rock will be stained and will repeat and/or blend with the existing form, line, color, and texture of the landscape and have little or no reflectivity (non-specular). This will apply to all areas with contrasting disturbance.	Materials and surface treatments of structures and land disturbances (e.g., Permeon) should repeat and/or blend with the existing form, line, color, and texture of the landscape and have little or no reflectivity (non-specular).	Minimize visual impacts of Project components.
VR-6	Where possible, TransWest will site structures that parallel an existing transmission line in the same locations of existing structures.	Where paralleling an existing transmission line, where possible, place the structures to match the locations of structures in the existing line.	Minimize visual impacts of Project components. Minimize impacts to recreation opportunities. Minimize habitat fragmentation. Minimize avian collision potential. Minimize impacts to wildlife habitat by concentrating disturbance into a smaller area.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
VR-7	Where possible, TransWest will position roads at the toe of a slope, at the edge of vegetation openings, and perpendicular with the line of sight. This measure will be employed only in locations that do not conflict with implementation of measures WR-3, SSS-1, or SSWS-5.	Where possible, position roads at the toe of a slope, at the edge of vegetation openings, and perpendicular with the line of sight.	Minimize visual impacts of Project components. Minimize impacts to recreation opportunities. Minimize habitat fragmentation.
VR-8	TransWest will minimize lighting at Project facilities to the extent permitted by Occupational Safety and Health Administration (OSHA) and down-shield lights to reduce night glare and light pollution.	Minimize lighting at terminal and construction facilities to the extent permitted by Occupational Safety and Health Administration (OSHA) and down-shield lights to reduce night glare and light pollution.	Minimize light pollution. Minimize collision potential for migrating birds.
REC-1	During Project operation, vegetation maintenance activities within dispersed RAs or key hunting locales will not be conducted during big game hunting seasons, where practicable.	Where practicable, operation phase vegetation maintenance activities within dispersed RAs or key hunting locales would not occur during big game hunting seasons.	Minimize impacts to hunters.
REC-2	Within designated recreation management areas, Project access routes will be limited to existing roads whenever practicable. If new or improved access cannot be avoided within these areas, temporary access routes will be closed or rehabilitated through methods and monitoring developed through consultation with the Forest Service. Methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour or vegetation.	Within designated recreation management areas, access shall be limited to existing roads whenever practicable. If new and improved access cannot be avoided within these areas, access roads shall be closed or rehabilitated through methods and monitoring developed through consultation with the landowner or land management agency. Methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour or vegetation.	Prevent unauthorized public access in designated recreation management areas through a variety of methods.
REC-6	Construction zones will be sited such that access to high use recreational areas and trails is not impeded. If public safety concerns are such that current access or use cannot be maintained, TransWest will work with the Forest Service to develop alternative access points or redirect users to alternative existing points of access.	Construction zones will be sited such that access to high use recreational areas and trails is not impeded. If public safety concerns are such that current access or use cannot be maintained, the applicant will work with the appropriate land manager to develop alternative access points or redirect users to alternative existing points of access.	Prevent disruption of recreation access to authorized roads.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
REC-7	Ancillary construction areas will not be located within 1 mile of developed RAs (trails, trailheads, campgrounds, etc.). Ancillary areas include staging areas/fly yards, material storage yards, and batch plant sites that are off the ROW.	Ancillary construction areas would not be located within 1 mile of developed RAs (trails, trailheads, campgrounds, etc.)	Prevent disruption of recreation areas.
LU-1	TransWest will develop an approved POD and coordinate with the Forest Service on final structure placement, including all aboveground components, access routes, and permanent disturbance areas, to ensure optimal compatible land use with valid existing land uses and rights. If this coordination results in alternative routing or impacts outside of the scope of the EIS analysis, additional analysis and/or NEPA disclosure may be required.	The Applicant would develop an approved POD and coordinate with land owners, land managers, and agencies with jurisdictional authority on final structure placement, including all aboveground components, access roads, and permanent disturbance areas, to ensure optimal compatible land use with valid existing land uses and rights. If this coordination results in alternative routing or impacts outside of the scope of this EIS analysis, additional analysis and/or NEPA disclosure may be required.	Ensure optimal compatible land use and valid existing land uses and rights.
RANGE-1	Prior to construction of each segment, temporary access route, or ancillary facility crossing a Forest Service grazing allotment, TransWest will coordinate with the Forest Service concerning planned development and operations activities that will occur and identify potential livestock management issues. Coordination will include: -The identification of site-specific routing options and surface disturbance locations; -Site specific mitigation for individual grazing allotments, such as micro-siting around areas of concern, and additional reclamation activities; -Proposed application of vegetation management activities on individual grazing allotments; -Identification of areas of low reclamation potential that may require additional restoration activities; and -Identification of areas where trespassing and increased public access could require additional mitigation.	Prior to construction of each segment, access road, or ancillary facility crossing a BLM or USFS grazing allotments, TransWest shall coordinate with the associated BLM FO and USFS national forest concerning planned development and operations activities that will occur and identify potential livestock management issues. Coordination will include identification of: - Site-specific routing options and surface disturbance locations. - Site-specific mitigation for individual grazing allotments, such as micro-siting around areas of concern, and additional reclamation activities. - Proposed application of vegetation management activities on individual grazing allotments. - Identification of areas of low reclamation potential that may require additional restoration activities. Identification of areas where trespassing and increased access could require additional mitigation.	Ensure compatibility with existing grazing operations. Prevent unauthorized public access.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
RANGE-2	Prior to construction of transmission line segments, temporary access routes, or ancillary facilities, active range improvement locations will be inventoried. Based on the results of these inventories, no roads or ancillary facilities will be placed within 200 meters of range improvements such as livestock water sources/systems in order to avoid disturbance to livestock and wildlife. If avoidance is not feasible, range improvements may be relocated with concurrence from the permittee and the Forest Service.	Prior to construction of transmission line segments, access road, or ancillary facilities, active range improvement locations shall be inventoried. Based on the results of these inventories, no roads, or ancillary facilities would be placed within 200 meters of range improvements, including livestock and wildlife water sources/systems. If avoidance is not feasible, features would be relocated to an alternate location in coordination with the permittee and applicable land management agency.	Ensure compatibility with existing grazing operations and wildlife habitat.
RANGE-3	TransWest will report damage to livestock and livestock facilities as quickly as possible to the Forest Service and affected livestock operators. If damage is caused by the construction, operation, or maintenance of the Project, TransWest will be financially responsible for the replacement of the livestock and/or livestock facilities.	Damage to livestock and livestock facilities shall be reported as quickly as possible to BLM, USFS, and affected livestock operators. If damage is caused by the construction, operation, or maintenance of this project, TransWest will be financially responsible for the replacement of the livestock and/or livestock facilities.	Minimize potential impacts to livestock and ensure financial responsibility if damage occurs.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
RANGE-4	The Flagging, Fencing, and Signage Plan will include: -Prevention measures to avoid damage to fences, gates, and cattle guards during construction and operation activities; -Mitigation to prevent livestock from passing through breaks in fences as a result of construction and operation activities. Measures will include the installation of temporary gates or cattleguards and coordination with the Forest Service and grazing permittees; -Avoiding the placement of guy wires near livestock water sources or where livestock would fall in stock driveways where practical. Shield guards will be used as appropriate; -Upgrading cattleguard gate widths as appropriate and load-bearing requirements on access routes as appropriate for construction and operation vehicles; -Mandatory use of bypass gates around cattleguards by heavy equipment to avoid damage to cattleguards. If a bypass gate is not already in place, TransWest will install them adjacent to existing cattleguards to prevent damage by heavy equipment; -Cleaning and maintenance of existing cattleguards as determined necessary by the Forest Service post construction activities; -Following construction activities, any range improvement projects that were damaged from construction and maintenance activities will be repaired at a minimum to pre-construction conditions; -Mitigation for loss of livestock due to damaged fences and gates as a result of construction and operation activities; and -Mitigation for loss of livestock as a result of collisions with construction and operation vehicles.	The Flagging, Fencing, and Signage Plan would include: - Prevention measures to avoid damaging fences, gates, and cattleguards during construction and operation activities. - Mitigation to prevent livestock from passing through breaks in fences as a result of construction and operation activities. Measures would include the installation of temporary gates, or cattleguards, and coordination with landowners and grazing permittees. - Limit the placement of guy wires where livestock water or where they would fall in stock driveways. Shield guards would be used as appropriate. - Upgrading cattleguard gate widths and load-bearing requirements as appropriate for construction and operation vehicles on access roads. - Upgrading cattleguard gate widths and load-bearing requirements as appropriate for construction and operation vehicles on access roads. - Require heavy equipment to use by-pass gates to avoid damage to cattleguards. - If a by-pass gate is not already in place, install a by-pass gate adjacent to existing cattleguards to prevent damage by heavy equipment. - Existing cattle guards would be cleaned as determined necessary by the appropriate land management agency post-construction activities. - Following construction activities any Range Improvement Projects that are damaged from construction and maintenance activities would be repaired at a minimum to pre-construction conditions. - Mitigation for loss of livestock due to damaged fences and gates that were result of construction and operation activities. - Mitigation for loss of livestock as a result of construction and operation vehicle collisions.	Minimize potential impacts to livestock and ensure financial responsibility if damage occurs.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
RANGE-5	If construction or operation activities disrupt the transport of water to water locations for livestock or wildlife, an alternative water source will be provided until the transport of water is resumed. Alternative water sources could include the hauling of water to watering locations, an alternate pipeline, or the establishment of a temporary watering facility for livestock and wildlife.	If construction or operation activities disrupt the transport of water to water locations for livestock or wildlife, an alternative water source will be provided until the transport of water is resumed. Alternative water sources could include the hauling of water to watering locations, an alternate pipeline, or the establishment of a temporary watering facility for the livestock and wildlife.	Minimize potential impacts to livestock and wildlife as a result of disruption of water delivery.
RANGE-6	Prior to construction of Project facilities and temporary access routes, TransWest will coordinate with the Forest Service to identify areas which could impact livestock grazing allotments. If the placement of tower structures, facilities, and access routes will prevent access to either a portion or all of a grazing allotment, the result could be the allotment becoming unusable or a need for the grazing permit to be modified due to decreased available AUMs. In these areas, corrective actions will then be identified. Options include rearranging grazing allotment fences, construction of additional access roads to the grazing allotment, and relocation of Project facilities and access roads, as feasible.	Prior to construction and placement of permanent facilities and access roads, TransWest shall coordinate with the associated BLM FO and USFS national forest to identify areas where the placement of tower structures, facilities, and access roads would prevent access to either a portion or all of a livestock grazing allotment resulting in the livestock grazing allotment becoming unusable or decreasing the AUMs available to a point that requires the grazing permit to be modified. In these areas, corrective actions would then be identified including rearranging of grazing allotment fences, additional access roads to the grazing allotment, re-arrangement of project facilities and access roads as feasible, etc.	Minimize potential impacts to existing grazing operations.
RANGE-7	Speed limits will be followed and signs will be erected in lambing/calving areas, shipping pastures, and adjacent to working corrals to warn vehicle operators of the agricultural operations.	Speed limits would be followed and signs would be erected in lambing/calving areas, shipping pastures, or adjacent to working corrals to warn vehicle operators of the agricultural operations.	Minimize potential impacts to existing grazing operations and wildlife habitat.
SDA-8	Construction schedules for work within IRAs will be developed as part of the construction POD and in coordination with the Forest Service to minimize resource impacts.	Construction schedules for work within IRAs would be developed as part of the construction POD and in coordination with USFS officials to minimize resource impacts.	Minimize impacts within IRAs.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
SDA-9	If unauthorized routes or closed routes are used for access into IRAs, TransWest will work with the Forest Service to ensure that Project use does not further inhibit management of the IRA. Temporary access route reclamation activities will be coordinated with the Forest Service to return the area to its pre-Project condition, at a minimum.	If unauthorized roads or closed roads are used for access into IRAs, the Applicant will work with USFS to ensure that Project use does not further inhibit management of the IRA and that road reclamation activities are coordinated with USFS to return the area to, at a minimum, its pre-Project condition.	Minimize impacts within IRAs.
SDA-10	At least one pre-construction coordination meeting will be conducted with the Forest Service responsible official, Forest Service implementation Project lead, and construction contractor to review IRA site-specific construction plans. One post-construction meeting will be conducted with these parties to review results.	There would be at least one preconstruction coordination meeting with USFS responsible official, USFS implementation project lead, and construction contractor to review IRA site-specific construction plans, and one post-construction meeting to review results.	Minimize impacts within IRAs.
SDA-11	Within IRAs, herbicide use will be limited to noxious weed control only and not for general ROW vegetation maintenance.	Herbicides use within IRAs would be limited to noxious weed control only and will not be used for general ROW vegetation maintenance.	Minimize impacts within IRAs.
SOCIO-3	During the construction period, TransWest will conduct annual coordination meetings with local emergency management officials (law enforcement, fire response, emergency medical and health care, etc.) to review and update emergency coordination and situation management.	TransWest should conduct annual coordination meetings with local emergency management officials (law enforcement, fire, health care, state prison, etc.) to review and update emergency coordination and situation management.	Ensure public safety services are prepared and informed in case of an emergency.
SOCIO-4	TransWest will develop and implement a plan for on-going communication with the Forest Service to inform officials of construction schedules and progress. Specifically, the plan will address the anticipated timing of activity across each spread and other aspects of the Project that could affect management of National Forest System lands.	If not required by existing regulations or included in the various operations plans to be developed (see Section 2.4), TransWest should develop and implement a plan for on-going communications with local county and municipal governments to inform them of construction schedules and progress, specifically as they relate to the anticipated timing of activity across each spread, or other about other aspects of the Project that could affect local communities and service providers.	Ensure adequate public communication regarding Project construction and maintenance activities and schedules.

FR-1	A Fire Protection Plan will be developed in conjunction with the affected forest and included into the Construction, Operation, and Maintenance (COM) Plan. Specific details will include at a minimum; roles and responsibilities for the reporting and response to wildland fire, fire restrictions, and permitted activities.	The fire protection plan to be developed as part of the Construction, Operation and Maintenance (COM) Plan in addition to the items outlined in TWE-64 would include the following: - TransWest would implement line patrols to inspect the ROW for hazard trees, damage to any component of the Project, and other potentially unsafe conditions that could increase wildland fire ignition risk. - TransWest would develop a wildland fire traffic control plan which would stipulate mechanisms through which narrow roads shall be kept passable for emergency service providers in a wildland fire emergency situation; designate the point of contact to administer the wildland fire traffic control plan and facilitate emergency service providers access; identify vehicle parking for construction and maintenance vehicles during wildland fire emergencies; and identify alternative routes for large equipment and vehicle evacuation during wildland fire emergencies. - TransWest would outline communication methods to ensure that immediate reporting of fires during construction activities and maintenance activities is feasible. Each crew member would carry a laminated card listing pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. The cards would be updated as needed, and redistributed to crew members. - In consultation with land management agencies, TransWest would identify when and where construction and maintenance work would cease in response to Red Flag Warning events as issued daily by the National Weather Service. Overland drive-and-crush travel would be prohibited or limited (at land management agencies' discretion) during times of high fire risk. - TransWest would develop a fire protection plan in consultation with the appropriate land management agencies.	Prevent wildland fires. If a wildland fire begins, ensure all appropriate access, public communication, and predetermined safety and response procedures are followed.
FR-2	No open trash burning will occur, unless specifically permitted by the Forest Service.	No open trash burning would occur, unless specifically permitted by the appropriate authorities.	Prevent wildland fires.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
WLF-1	To minimize disturbance to migratory birds during the breeding and nesting season, no vegetation clearing or trimming, blasting, or other new surface-disturbing activities will occur during the avian breeding season according to Final EIS Figure 3.22-8. If avoidance of vegetation clearing during the nesting season is not possible, then a qualified wildlife biologist will conduct nest searches no more than 7 days prior to clearing and trimming activities. Active nests will be identified and protected in accordance with the following procedure. Spatial avoidance buffers and seasonal restrictions will be applied as required by the Forest Service Resource Management Plan stipulations. If there are no stipulations applicable to non-raptorial migratory birds for the Uinta Management Area or the Manti-La Sal National Forest, the habitat- or species-specific nest buffers recommended by the BLM Ely District (BLM 2012) will apply. Seasonal and spatial nest buffers that are more restrictive than the applicable required Forest Service plan stipulations or BLM Ely District recommendations will be applied at the discretion of the USFWS and UDWR biologists.	To minimize disturbance to migratory birds during the breeding and nesting season, no vegetation clearing or trimming, blasting, or other new surface-disturbing activities would occur during the avian breeding season as defined by Project Region and illustrated in Figures 3.22-5, 3.22-8, and 3.22-13. If avoidance of vegetation clearing during the nesting season is not possible, then a qualified biologist would conduct nest searches no more than 7 days prior to clearing and trimming activities. Active nests would be identified and protected in accordance with the following procedure. On lands administered by the BLM and USFS, spatial avoidance buffers and seasonal restrictions would be applied as required by applicable land and resource management plan stipulations (Appendix C). On federal lands for which there are no stipulations applicable to non-raptorial migratory birds, the habitat- or species-specific nest buffers recommended by the BLM Ely District (BLM 2012) would apply. Seasonal and spatial nest buffers that are more restrictive than the applicable required BLM and USFS plan stipulations and BLM Ely District recommendations would be applied at the discretion of local federal and state wildlife management agency biologists. Additionally, the BLM Ely District-recommended nest buffers would be applied to all other land jurisdictions in coordination with TransWest and respective landowners whose lands would be crossed by the Project.	Minimize disturbance to migratory birds during the breeding and nesting season.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
WLF-2	To minimize disturbance to raptors during the breeding and nesting season, no vegetation clearing or trimming, blasting, or other new surface-disturbing activities will occur within the appropriate spatial buffer for an occupied nest during the breeding season of the species using it. Raptor breeding seasons vary widely based on species, weather conditions, prey availability, latitude, elevation, and other factors. If surface-disturbing activities within the appropriate spatial buffer cannot be avoided during the associated raptor nesting season, pre-construction raptor nest surveys and monitoring using protocols approved by the Forest Service will be conducted to identify and protect occupied nests. Spatial avoidance buffers and seasonal restrictions will be applied as required by the Uinta Planning Unit and Manti La-Sal land and resource management plan stipulations. Seasonal and spatial raptor nest buffers recommended by the USFWS and UDWR that are more restrictive than the applicable required USFS plan stipulations would be applied at the discretion of the Forest Service.	To minimize disturbance to nesting raptors, no vegetation clearing or trimming, blasting, or other new surface-disturbing activities would occur within the appropriate spatial buffer for an occupied nest during the breeding season of the species using it. Raptor breeding seasons vary widely based on species, weather conditions, prey availability, latitude, elevation, and other factors. Figures 3.22-5, 3.22-8, and 3.22-13 present approximate raptor breeding seasons by species and Project region. If surface-disturbing activities within the appropriate spatial buffer cannot be avoided during the associated raptor nesting season, preconstruction raptor nest surveys and monitoring using agency-approved protocols would be performed to identify and protect occupied nests. Spatial avoidance buffers and seasonal restrictions would be applied as required by applicable BLM and USFS land and resource management plan stipulations (Appendix C) on lands administered by these agencies. Seasonal and spatial raptor nest buffers recommended by the USFWS and the appropriate state wildlife agency that are more restrictive than the applicable, required BLM and USFS plan stipulations would be applied at the discretion of these land management agencies (Table 3.22-4). Additionally, raptor seasonal and spatial buffers recommended by USFWS and the appropriate state wildlife agency would be applied to all other land jurisdictions in coordination with TransWest and respective landowners whose lands would be crossed by the Project.	Minimize disturbance to migratory birds during the breeding and nesting season.

Table F-1 Mitigation Measures Comparison and Desired Outcome for the TWE Project on National Forest System Lands

Number	Required Mitigation Measures	Final EIS Mitigation Measures	Desired Outcome
WLF-5	In the Upper Strawberry Watershed Important Bird Area, TransWest will employ line marking as recommended in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012). In addition, vegetation management Level 3, as described in the Project Vegetation Management Plan, will be employed in this area.	In Audubon Important Bird Areas crossed by the 250-foot-wide transmission line ROW, TransWest would employ line marking as recommended in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012). In addition, vegetation management Level 3, as described in the Project Vegetation Management Plan, would be employed in IBAs crossed by the 250 foot-wide transmission line ROW.	Minimize impacts to migratory bird habitat within Audubon IBAs. Minimize collision risk for migratory birds. Minimize habitat fragmentation in Audubon IBAs.
WLF-7	In the Nebo Creek and Upper Strawberry/Avintaquin BHCAs, TransWest will employ line marking as recommended in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012). In addition, vegetation management Level 3, as described in the Project Vegetation Management Plan, will be employed in these areas.	In BHCAs, TransWest would employ line marking as recommended in Reducing Avian Collisions with Power Lines: The State of the Art in 2012 (APLIC 2012). In addition, vegetation management Level 3, as described in the Project Vegetation Management Plan, would be employed in BHCAs crossed by the 250 foot-wide transmission line ROW on public lands.	Minimize impacts to migratory bird habitat within BHCAs. Minimize collision risk for migratory birds. Minimize habitat fragmentation in BHCAs.
WLF-10	To avoid or minimize long-term disturbance to wildlife associated with public use of the ROW and temporary access routes during Project operation, these access routes will be closed or rehabilitated using methods and monitoring developed through consultation with the Forest Service. Depending on facility and ROW maintenance requirements, methods for closure could include gates, obstructions such as berms or boulders, and partial or full restoration to natural contour and vegetation.	To avoid or minimize long-term disturbance to wildlife associated with public use of the ROW and new access roads during Project operation, these roads would be closed or rehabilitated using methods and monitoring developed through consultation with the landowner or land management agency. Depending on facility and ROW maintenance needs, methods for closure could include gates, obstructions such as berms or boulders, or partial or full restoration to natural contour and vegetation.	Prevent impacts to wildlife and migratory birds and their habitat as a result of unauthorized public access through implementation of a variety of methods.