

## **Appndix D**

### **Project-specific Mitigation Measures**

## Appendix D

### Williston to Tioga 230-kV Transmission Project Mitigation and Reclamation Measures

#### 1. Jurisdictions, Land Use, and Agricultural Practices

##### Land Use

- The movement of crews and equipment will be limited to the right-of-way (ROW) and other areas that have been surveyed for cultural, historical and biological resources. The construction contractor will limit movement on the ROW so as to minimize damage to rangeland, cropland, or property.
- The preferred transmission line route will be routed 500 feet or more away from inhabited structures.

##### Agricultural Practices

- The proposed transmission line will span fields to the extent feasible.
- The proposed transmission line will be routed along section and mid-section lines to avoid diagonal crossings of fields, when possible.
- Where practical, construction activities will be scheduled during periods when agricultural activities would be minimally affected or the landowner will be compensated accordingly.
- Fences, gates, and similar improvements that are removed or damaged will be promptly repaired or replaced. New gates may be installed, if deemed appropriate.
- ROW will be purchased through negotiations with each landowner affected by the proposed project and payment will be made of full value for crop damages or other property damage during construction or maintenance.
- When weather and ground conditions permit, all deep ruts that are hazardous to farming operations and to movement of equipment would be eliminated or compensation will be provided if the landowner desires. Such ruts will be leveled, filled, and graded, or otherwise eliminated in an approved manner. Ruts, scars, and compacted soils from construction activities in cropland or rangeland will be loosened and leveled by scarifying, harrowing, disking, or other appropriate method. Damage to ditches, terraces, roads, and other features of the land will be corrected. The land and other features will be restored as nearly as practicable to their original conditions.

#### 2. Physiography, Topography, Soils, Geology, and Minerals

##### Soils

- Excess soils will be hauled off-site to an approved landfill.
- Erosion and sediment controls will be established prior to construction, then maintained and controlled through application of storm water prevention plans.
- Sediment control measures (e.g., installation of silt fences) will be used, where appropriate, to prevent sediment from moving offsite and into water bodies.
- Maintenance operations will be scheduled during periods of minimum precipitation to minimize the potential of surface runoff and to reduce the risk of erosion, rutting, sedimentation, and soil compaction. However, emergency repairs to the proposed transmission line may occur during periods of inclement weather.

- Temporary laydown areas will be located in previously disturbed areas and areas previously surveyed for cultural and biological resources.

### 3. Geology

- Transmission line structures will not be sited on any potentially active faults.
- Transmission line structures will not be sited on lands known to have the potential landslides.

### 4. Hydrology and Drainage

- A 100-foot buffer will be established adjacent to wetlands and creeks, where practicable, to prevent or minimize impacts to those ecosystems. Construction vehicles and equipment will not traverse through wetlands and riparian areas, thereby avoiding direct impacts to these sensitive areas.
- Transmission line structures will be sited so that streams and drainages are spanned and remain undisturbed. Construction and maintenance access also will avoid these areas.
- Staging areas and refueling areas will not be located near surface water bodies.
- Areas that need to be cleared during construction will be revegetated with an approved native seed mix as soon as technically feasible to minimize soil erosion and sediment runoff.
- A Spill Prevention and Response Plan will be developed prior to the start of construction to prevent the potential for spills of hazardous substances into streams and drainages, and potential contamination of groundwater. The plan will include a procedure for storage of hazardous materials and refueling of construction equipment outside of riparian zones, spill containment and recovery plan, and notification and activation protocols.
- Refueling of construction vehicles will occur at commercial fueling facilities and at staging areas, if onsite fuel storage is needed for refueling.
- A Storm Water Pollution Prevention Plan (SWPPP) will be developed and implemented prior to initial construction activities. This plan will include an analysis of materials that will be utilized and site activities that could potentially impact storm water and the associated mitigation measures to minimize that potential. Plan implementation will include regular inspections of areas under construction, material storage and laydown areas, and structural devices for storm water management. All construction personnel will be trained on the plan and will be required to comply with its requirements and the maintenance of all mitigation measures. The SWPPP will be maintained until final stabilization of all disturbed areas is completed.

### 5. Vegetation Resources

- In areas where wooded areas cannot be avoided, the proposed transmission line will be placed in areas with the lowest density of trees, whenever feasible, thereby reducing the number of trees that will require removal within the construction ROW.
- Woody species (i.e., trees and shrubs) removed (i.e., cut or mowed) during construction will be replaced at a 2:1 ratio (i.e., 2 plants would be planted for every plant removed, as required by the North Dakota Public Service Commission [NDPSC]). If possible, the replacement trees would be planted in the same watershed where trees were removed. Suitable sites would be identified through cooperation with landowners and appropriate State or local agencies.
- Prior to construction, a woody (e.g., trees and shrubs) species inventory will be conducted in areas where vegetation will be removed (i.e., cut or mowed) to determine the numbers, sizes, and locations of woody species present in these areas. A Woody Species Inventory Report will be developed, which will summarize the information collected during the woody species inventory. In addition, a Woody Species Planting Plan will be developed that will provide detailed information regarding the numbers, sizes, and locations of species that will be planted and methods used to plant these species.

Numbers, sizes, locations, and species to be replanted will be determined through consultation with appropriate State, local agencies, and landowners

- All vegetative materials resulting from clearing operations will either be chipped on site, or removed and disposed in a permitted facility.
- Existing native vegetation within the construction ROW will be preserved whenever feasible.
- Surface disturbance areas will be reclaimed using native species and will be planted at the appropriate times, as recommended by agencies or landowners, to reestablish native vegetative cover and minimize the potential for invasion by non-native species.
- Wetland and riparian communities will be spanned by the proposed transmission line thereby avoiding impacts to these ecosystems.
- Erosion and sedimentation controls will be implemented to minimize indirect impacts to wetlands and riparian areas.
- The ROW would be maintained to remove woody species that could become established and become a hazard to the transmission line.

## 6. Wildlife and Fisheries

- Prior to surface disturbance activities during the migratory bird (not including raptors) breeding season (April 15 through July 15), a qualified biologist would survey within suitable habitat (i.e., non-cultivated land) for nesting activity and other evidence of nesting (e.g., mated pairs, territorial defense, birds carrying nest material, transporting food). If active nests are located, or other evidence of nesting is observed, appropriate protection measures, including establishment of buffer areas and constraint periods, would be implemented until the young have fledged and dispersed from the nest area. These measures will be implemented on a site-specific and species-specific basis, in coordination with Western.
- If construction is to occur during the breeding season for raptors (February 1 through August 15), prior to construction activities, raptor breeding surveys will be conducted by a qualified biologist through areas of suitable nesting habitat to identify any active nest sites within 0.5 mile (1.0 mile for bald eagles) from the project area. If applicable, appropriate protection measures, including seasonal constraints and establishment of buffer areas will be implemented at active nest sites until the young have fledged and have dispersed from the nest area. These measures will be implemented on a site-specific and species-specific basis, in coordination with Western.
- Standard measures to minimize avian collision risk with overhead transmission lines, as outlined in *Mitigating Bird Collisions with Power Lines* (Avian Power Line Interaction Committee [APLIC] 1994), will be examined and appropriate measures will be developed in coordination with the United States Fish and Wildlife Service (USFWS) and North Dakota Game and Fish Department (NDGFD).
- Adequate raptor proofing designs, as described in *Suggested Practices for Avian Protection on Power Lines: The State of the Art in 2006* (APLIC 2006), will be implemented on the structures in coordination with the NDGFD to minimize raptor use of these structures.
- Holes that are drilled or excavated for pole placement or foundation construction and left unattended overnight will be marked and secured with temporary fencing and plywood covers to reduce the potential for livestock and wildlife entering the holes and for public safety.

## 7. Special Status Species and Noxious Weeds

### Special Status Species

- BEPC will implement additional mitigation measures developed during section 7 consultations, as specified by the USFWS.

### Noxious Weeds

- Prior to the initiation of construction activities, construction vehicles and equipment would be thoroughly cleaned to prevent the possible spread of noxious weed seeds within the project area.
- Noxious weeds present within proposed disturbance areas will be controlled prior to the initiation of construction to prevent the potential spread of noxious weeds.
- If noxious weeds are observed in the surface disturbance areas, populations will be controlled with the application of herbicides, which will be applied by a certified herbicide applicator in accordance with label instructions and State and local County Weed Board regulations. Biological control methods (i.e., use of spurge beetles, etc.) may also be considered for weed control, in consultation with appropriate agencies.
- Herbicides will not be used near surface water.
- The construction ROW and other surface disturbance areas will be monitored for noxious weeds for a three-year period following construction and reclamation.
- Landowners will be consulted regarding all noxious weed control measures and issues.
- Herbicide applications will occur in late spring or early summer to eradicate or control noxious weeds before they mature.

## 8. Archaeological and Historic Resources

- All cultural resources will be evaluated using the criteria of eligibility for the National Register of Historic Places established at 36 Code of Federal Regulations Part 60.4. Consultation with the appropriate parties (i.e., North Dakota State Historic Preservation Officer [SHPO], interested Native American groups) will be initiated prior to making the determination. Western will then make a Determination of Eligibility, as required by Section 106 of the National Historic Preservation Act (NHPA) and consult with the appropriate parties to determine any mitigation efforts necessary to eliminate or reduce adverse effects.
- Cultural resource surveys will be conducted within proposed surface disturbance areas prior to construction. A Class III cultural resources report will be prepared and sent to Western and the North Dakota SHPO for review and consultation.
- If any previously unknown cultural resources or human remains are discovered during project construction, all work within 200 feet of the discovery that might adversely affect the cultural resource will cease until Western, in consultation with the appropriate parties, can evaluate the discovery. Western will be notified immediately (within 24 hours) and will have a cultural resource specialist or a tribal monitor with the proper expertise for the suspected resource type on-site as soon as possible. Construction will not proceed until authorized by Western.

## 9. Paleontological Resources

- If paleontological resources are observed during construction, construction activities in the area will cease and Western will be contacted to discuss the importance of the paleontological resources and develop appropriate mitigation.

#### 10. Transportation Network

- The transportation of materials and equipment will be conducted in accordance with North Dakota Department of Transportation regulations.
- All necessary provisions will be made to conform to safety requirements for maintaining the flow of public traffic. Construction operations will be conducted to offer the least possible obstruction and inconvenience to public traffic.
- Public roads, section lines and existing trails will be used, to the extent practicable, to access the proposed transmission line.

#### 11. Socioeconomic Values

- Potential impacts to populations and housing within the project area will be minimized.

#### 12. Hazardous Materials and Solid Waste

- The proposed project will likely be subject to the requirements associated with hazardous waste management as a small quantity generator as described in 40 CFR 262.

#### 13. Meteorology and Air Quality

- The contractors will apply standard environmental protection measures associated with construction.
- Fugitive dust emissions generated as a result of surface disturbance activities and vehicle use of access roads will be controlled by the periodic application of water, if necessary.
- Vehicles and equipment will be properly maintained to avoid excessive emission of exhaust gases due to poor engine adjustments.
- The speed of vehicles traveling on unpaved roads will be limited, to the extent practicable, to reduce the generation of fugitive dust.
- Burning or burying waste materials within the ROW will not be permitted and all waste materials will be disposed of at permitted waste disposal areas or landfills.