APPENDIX F – STANDARD MITIGATION MEASURES

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Appendix F - Standard Mitigation Measures to be Used by Basin Electric for the Proposed Deer Creek Station Project

No.	Standard Mitigation Measure
General	
Gen-1	The requirements of all applicable Federal, State, and local environmental laws, executive orders, and regulations would be met during construction and operation of the proposed Project.
Gen-2	All permit conditions required by Federal, State, and local agencies would be adhered to for construction and operation of the proposed Project.
Gen-3	Prior to construction, all construction personnel and heavy equipment operators would be instructed on the protection of cultural, paleontological, and ecological resources, and all applicable permit requirements. Construction contracts would address: • Federal, State, and local laws regarding antiquities, fossils, plants, and wildlife, including collection/removal • The importance and necessity of protecting such resources • All applicable permit requirements
Air Quality	
Air-1	The emission of dust into the atmosphere during construction would be minimized to the extent practical during the manufacture, handling, and storage of concrete aggregate. Methods and equipment would be used as necessary to collect, dispose, or prevent dust during these operations. The methods of storing and handling cement and additives would also include means of minimizing atmospheric discharges of dust.
Air-2	All construction equipment and vehicles will be maintained in efficient operating condition. Vehicles and equipment that show excessive emissions or other inefficient conditions would not be operated until repairs or adjustments are made.
Air-3	All waste materials shall be disposed of at permitted waste disposal areas or landfills. Burning or burying waste materials on the right-of-way or plant construction area would not be permitted. Tree and grubbing residue may be buried on the plant site or in the right-of-way with landowner approval.
Air-4	Nuisance to persons, dwellings, or crops resulting from dust originating from construction would be minimized. Oil and other petroleum derivatives would not be used for dust control. Speed limits on local gravel roads would be

	enforced to reduce dust.
Water Resources	
Water-1	Construction activities would comply with the requirements of South Dakota permits for stormwater discharges for construction activities, which specify appropriate best management practices, erosion and sediment control measures, and disposal practices. Construction activities adjacent to or encroaching on streams or waterways, including work within rights-of-way, construction of access roads on hillsides, and dewatering work for structure foundations, or earthwork operations would be conducted to prevent disturbed soils, muddy water, and eroded materials from entering streams or waterways by construction of intercepting ditches, bypass channels, barriers, settling ponds, or by other approved means.
Water-2	Construction activities would be conducted to prevent the accidental spillage of solid matter contaminants, debris, hazardous liquids, or other pollutants into streams, waterways, lakes, land, and underground aquifers. Such pollutants and waste include, but are not restricted to, refuse, garbage, cement, concrete, sanitary waste, industrial waste, oil, and other petroleum products, aggregate processing tailing, mineral salts, and thermal pollution.
Water-3	Excavated material or construction materials would not be stockpiled or deposited near or on stream banks, lake shorelines, or other waterway perimeters unless protected from high water or storm runoff or encroachment upon the actual waterway itself.
Water-4	Wastewater discharge from any construction operations would not enter streams, waterways, or other surface waters without the appropriate permit(s).
Water-5	Equipment washing, storage of petroleum products, lubricants, solvents and hazardous materials, structure sites, and other disturbed areas would be located at least 100 feet, where practical, from rivers, streams (including ephemeral streams), ponds, lakes, and reservoirs. This includes construction vehicles and heavy equipment when parked overnight or longer.
Water-6	New access roads would be located at least 100 feet, where practical, from rivers, ponds, lakes, and reservoirs.
Water-7	All stream crossings considered jurisdictional by the USACE would be crossed by permit only. Where required, culverts of adequate size to accommodate the estimated peak flow of the stream would be installed. Disturbance of the stream banks and beds during construction would be minimized. Disturbed areas would be regarded and revegetated in accordance with mitigation measures listed for soil/vegetation resources.
Water-8	If the banks of ephemeral stream crossings are sufficiently high and steep that breaking them down for a crossing would cause excessive disturbance, culverts would be installed using the same measures as for culverts on perennial streams.

Water-9	Heavy equipment movement near streams and other surface waters would be minimized, to the extent practical.
Water-10	Narrow flood prone areas would be spanned.
Water-11	Proposed plant operation would comply with the SDDENR General Permit for Stormwater Discharges Associated with Industrial Activity and the associated stormwater pollution prevention plan, which requires use of appropriate BMPs, sediment control measures, and disposal practices. Proposed plant operations would be controlled and mitigated using BMPs. Operations would be conducted in a manner to prevent contamination of stormwater runoff that may leave the plant side and to prevent disturbed soils, muddy water, and eroded materials from entering the streams or waterways. BMPs would include intercepting ditches, bypass channels, barriers, settling ponds, or other approved measures.
Geology and Minerals, Paleontology, and Soils	
Geo-1	Removed topsoil would be used for landscaping and as engineered fill, as appropriate, or stockpiled and re-spread subsequent to construction.
Geo-2	During construction, if any paleontological resources are discovered, work would cease within a 50-foot radius of the discovery. Any artifacts or fossils discovered would not be disturbed and Western and RUS would be notified of the discovery immediately.
Geo-3	Access roads would generally follow the contour of the land to the greatest extent practical rather than a straight line along the right-of-way where steep features would result in a higher erosion potential.
Geo-4	To the extent practical, excavated areas would be re-contoured so that large volumes of water would not collect and stand therein. Before being abandoned, the sides of excavations would be brought to stable slopes, giving a natural appearance, and revegetated. Waste soil piles would be shaped to provide a natural appearance.
Biological Resources	
Bio-1	All wetland and riparian areas would be avoided to the extent practical. If wetland or riparian areas are unavoidable, impacts would be minimized or mitigated. Jurisdictional waters that are impacted as a result of implementing the proposed Project would be mitigated in accordance with USACE requirements.
Bio-2	Care would be used in preserving the natural landscape and vegetation. Construction operations would be conducted to prevent, to the extent practical, any unnecessary destruction, scarring, or defacing of the natural surroundings, vegetation, trees, and native shrubbery in the vicinity of the work. Vegetation would be replaced at landowner's request, providing mitigation complying with North American Electric Reliability Council (NERC) requirements.
Bio-3	Upon completion of work, all non-agricultural disturbed areas and construction staging areas not needed for

	maintenance access would be regraded so that all surfaces drain naturally, blend with the natural terrain, and are reseeded to blend with native vegetation with a seed mixture certified as free of noxious or invasive weeds. All destruction, scarring, damage, or defacing of the landscape resulting from construction would be repaired.
Bio-4	Construction staging areas would be located and arranged in a manner to preserve trees and vegetation to the maximum practicable extent. Unless otherwise agreed upon by the landowner, all storage and construction buildings and all construction materials and debris would be removed from the construction staging areas once construction is complete, and the areas returned to original use or regraded and seeded as for non-agricultural disturbed areas.
Bio-5	Removal of vegetation would be done according to NERC safety and reliability requirements. Clearing for access roads would be limited to only those trees necessary to permit the passage of equipment. All vegetative materials resulting from clearing operations would either be chipped on site or stacked in the right-of-way in accordance with the landowner's request.
Bio-6	Native shrubs that would not interfere with access or the safe operation of the transmission line would be allowed to reestablish in the right-of-way. Areas with native shrubs that would be disturbed would be replanted with regionally-native species following the disturbance.
Bio-7	An Avian Protection Plan (APP) to minimize impacts to nesting birds, as well as to minimize the electrocution and collision of migratory and resident bird species, would be developed and implemented. The APP would include provisions for adequate distance between conductors and distances between conductors and grounded surfaces. The APP would identify time frames for construction and routine maintenance to avoid the nesting period of breeding birds. It would also include methods for minimizing bird collisions during line routing as well as methods for minimizing collisions following construction. The APP would follow guidelines described at www.aplic.org . The APP would be provided to the USFWS and State wildlife agency for comment. A copy of the APP would be provided to Western, RUS, and the applicable USFWS and State wildlife agency offices.
Bio-8	Holes drilled or excavated for pole placement or foundation construction and left unattended overnight would be marked and secured with temporary fencing to reduce the potential for livestock and wildlife to enter the holes, and for public safety.
Land Use	
Land-1	The minimum area necessary would be used for access roads during project construction.
Land-2	When practical, transmission structures would be located and designed to conform to the terrain. Leveling and benching of the structure sites would be the minimum necessary to allow structure assembly and erection.

Land-3	Transmission structures would be located, where practical, to span sensitive land uses. Where practical, construction access roads would be located to avoid sensitive conditions.
Land-4	The precise location of all structure sites, right-of-way, and other disturbed areas would be determined with landowners' or land management agencies' input.
Land-5	The movement of crews and equipment would be limited to the right-of-way and areas surveyed for cultural, historical, and biological resources, including access routes. To the extent practicable, the contractor would limit movement on the right-of-way to minimize damage to grazing land, crops, or property and would avoid marring the land.
Land-6	Where practical, construction activities would be scheduled during periods when agricultural activities would be minimally affected or the landowner would be compensated accordingly.
Land-7	Fences, gates, and similar improvements that are removed or damaged would be promptly repaired or replaced.
Land-8	Transmission structure design and placement would be selected to reduce potential conflicts with agricultural practices and to reduce the amount of land required for transmission lines.
Land-9	Right-of-way would be purchased through negotiations with each landowner affected by the proposed Project. Payment would be made of full value for crop damages or other property damage during construction or maintenance.
Land-10	When weather and ground conditions permit, all deep ruts that are hazardous to farming operations and equipment movement would be eliminated or compensation would be provided as an alternative if the landowner desires. Such ruts would be leveled, filled, and graded, or otherwise eliminated in an approved manner. Ruts, scars, and compacted soils from construction activities in productive hay or crop lands would be loosened and leveled by scarifying, harrowing, disking, or other appropriate methods. Damage to ditches, tile drains, terraces, roads, and other land features would be corrected. Land contours and facilities would be restored as nearly as practical to their original conditions.
Land-11	Where practical, all well drilling and installation would be completed in agricultural areas or uncultivated pastureland at the edge of farm fields. During pump testing, precautions would be taken to prevent erosion due to discharges of groundwater.
Land-12	To the extent possible, pipeline routing would occur along the right-of-way of county and township roads and along section lines, and along access roads.
Public Health and Safety	
PH-1	When appropriate, pilot vehicles would accompany the movement of heavy equipment. Traffic control barriers and

	warning devices would be used when appropriate.
PH-2	All necessary provisions would be made to conform to safety requirements for maintaining the flow of public traffic and avoiding congestion at critical locations. Construction operations would be conducted to offer the least possible obstruction and inconvenience to public traffic, such as by the use of pilot cars to accompany trucks with oversized loads and slow-moving vehicles, scheduling heavy equipment transport to avoid high traffic periods, and where feasible, use of existing rail facilities.
PH-3	Design would include reasonable mitigation measures to reduce problems of induced currents into conductive objects within the right-of-way. Problems of induced currents during construction and operation would be resolved, to the mutual satisfaction of the parties involved.
PH-4	Complaints of radio or television interference generated by the facility and related transmission lines would be investigated and appropriate mitigation measures would be implemented.
PH-5	Audible noise and electric and magnetic fields during construction and operation of the proposed Project would be addressed as necessary on a case-by-case basis.
PH-6	Transmission line materials would be designed to minimize corona. Tension would be maintained on all insulator assemblies to assure positive contact between insulators, thereby avoiding sparking. Caution would be exercised during construction to avoid nicking the conductor surface, which may provide points for corona to occur.
PH-7	The construction contractor would establish a health and safety program that incorporates Occupational Safety and Health Administration (OSHA) standards such as requirements for hearing protection, personal protective equipment, site access, chemical exposure limits, safe work practices, training program, and emergency procedures. The program would be reviewed with plant officials, fire department personnel, and emergency services personnel to reduce risk of construction and operation activities interfering with emergency response or evacuation plans and procedures.
PH-8	At the end of every work day, contractors would secure all construction areas to protect equipment and materials and discourage public access. Fueling of vehicles would be conducted in compliance with established procedures designed to minimize fire risks and fuel spills.
PH-9	Construction contractors would provide adequate notice to the public for all high-risk operations such as blasting. Only trained personnel would be permitted to conduct such high-risk operations. All other personnel would be required to maintain a safe distance from such operations.
Visual Resources	
Vis-1	The proposed Project major components would be painted to blend into the surrounding environment. Lighting

	would be minimized, to the extent practical. Lights would be shielded to minimize output to the surrounding environment and impacts to the night sky.
Vis-2	Structure types (designs) would be uniform, to the extent practical.
Vis-3	Transmission line materials would be designed to minimize corona. To reduce potential visual impacts at highway and trail crossings, structures would be placed at the maximum feasible distance from the crossing, within limits of structure design.
Noise	
Noise-1	An adequate buffer would be maintained around the proposed plant site to minimize construction and operational noise impacts on area residents.
Noise-2	Power lines would be designed to minimize noise and other effects from energized conductors.
Noise-3	To avoid nuisance noise conditions, transmission line construction would be limited to daytime hours whenever practical.
Noise-4	To avoid nuisance conditions due to construction noise, all internal combustion engines used in connection with construction activity would be fitted with an approved muffler and spark arrester.

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