

### Appendix XX. Summary of Protection Measures

Resource	Environmental Protection Measures As Design Features
Air Quality	<ul style="list-style-type: none"><li>• Water or chemical soil binders and best management practices (BMPs) would be used to control dust along the ROW and access roads during construction in accordance with federal, state, and local requirements.</li></ul>
Soils	<ul style="list-style-type: none"><li>• Soil erosion would be minimized by implementing procedures described in BMPs, the Storm Water Pollution Prevention Plan (SWPPP), and the Construction Mitigation and Reclamation Plan (CMRP).</li><li>• If construction is planned during a storm event, vehicle traffic and equipment would be restricted to prevent excessive rutting in areas where topsoil is intact (excluding areas where topsoil has been removed/segregated).</li><li>• Use of temporary roads across agricultural lands may result in some compaction and seasonal loss of crops. When necessary, compacted soils would be disked following Project completion and landowners would be compensated for any crop loss.</li></ul>

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Water Resources and Wetlands	<ul style="list-style-type: none"> <li>• The SWPPP and BMPs would be implemented to minimize storm water transport of sediment from disturbed areas to streams and wetlands. All Project-related storm water and hydrostatic test water discharges would be in compliance with a NPDES permit.</li> <li>• No aboveground facilities or staging areas would be constructed within wetlands, riparian areas, or other waters of the U.S.</li> <li>• Additional temporary workspace would be located a minimum of 50 feet outside wetland boundaries. BMPs (including installation of erosion control devices) would be utilized at all wetland and waterbody crossings to minimize sedimentation. For areas where additional setbacks are deemed necessary to protect the resource, the applicability of the appropriate setback would be determined in consultation with agencies on a site-specific basis.</li> <li>• No refueling or lubricating would occur within 100 feet of wetlands and/or perennial/intermittent waterbodies. Hazardous materials, chemicals, fuels, etc. would not be stored within 100 feet of wetlands or perennial/intermittent waterbodies.</li> <li>• Application of herbicides or pesticides within the vicinity of wetlands and waterbodies would follow pesticide use protocol and restrictions outlined in the Noxious Weed Control Plan.</li> <li>• Topsoil within the trench line would be segregated from subsoil for the crossing of dry wetland or riparian areas as specified in the CMRP.</li> <li>• For standard wetland or riparian area crossings, topsoil stripping is impractical due to the saturated nature of the soil as specified in the CMRP.</li> <li>• Biologists familiar with wetland and riparian identification would post signs at the edges of the wetland/waterbody features prior to construction.</li> <li>• Where crossings of wetland or riparian areas cannot be reasonably avoided, the construction ROW width would be reduced to approximately 50 feet and measures would be taken to minimize impacts. This reduction to the construction ROW would apply to all wetland crossings.</li> <li>• To control Aquatic Invasive Species (AIS), equipment would be washed to remove all vegetative matter and AIS after constructing through stream crossings where water is evident within the channel.</li> <li>• BakkenLink would avoid impacts to perennial streams when possible. Construction would occur over a limited period of time with the minimum equipment required for safe and efficient operations. Direct access of vehicles and heavy machinery to waterbodies would be minimized.</li> <li>• The horizontal directional drill crossing method would be utilized where required to avoid in-stream impacts and reduce erosion along the banks of these waterbodies, with locations identified prior to construction.</li> <li>• Water used for hydrostatic testing, dust control during construction, etc. would be obtained from municipal or other permitted water supply wells. The installation or abandonment of any wells is not anticipated. Surface water or groundwater appropriation is not anticipated.</li> </ul>

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	<ul style="list-style-type: none"> <li>• Sensitive area will be marked and flagged as “environmental sensitive area.”</li> <li>• Pipeline crossings of any surface waterway would be schedule at times of minimal rainfall to minimize the risk of construction-related sediment sources being washed into waterbodies or wetlands.</li> </ul>
Vegetation	<ul style="list-style-type: none"> <li>• Revegetation seed mixes would be developed in coordination with the local NRCS office or agencies and private landowner. All seed would be either State of ND Certified or Registered seed. Post-construction revegetation monitoring would be implemented after the first growing season or as required by the local NRCS office or managing agency.</li> <li>• ROW monitoring of reclaimed areas would be conducted annually for five years following reclamation. Reclamation success would be based on the revegetation to 70 percent of the background cover as stipulated in the SWPPP (North Dakota Department of Health, Water Quality Division requirement) and the applicable permits obtained. If, after the first growing season, revegetation is successful, no additional monitoring would be conducted. Reclamation success criteria would be established in coordination with the USFS and USACE.</li> <li>• Trees and shrubs would be replaced in accordance with the PSC’s tree and shrub mitigation specifications. BakkenLink would coordinate with the appropriate agencies to identify efficient restoration and mitigation measures following construction.</li> <li>• Sensitive area will be marked and flagged as “environmental sensitive area.”</li> </ul>
Noxious Weeds	<ul style="list-style-type: none"> <li>• The Project’s Noxious Weed Control Plan would be implemented to minimize the spread of noxious weeds.</li> <li>• ROW monitoring for noxious weeds post-construction would be conducted in conjunction with ROW monitoring of reclamation success.</li> <li>• Continued noxious weed monitoring and control will continue for any ROW over which BakkenLink will retain control over the land surface use after construction.</li> </ul>
Wildlife and Fisheries	<ul style="list-style-type: none"> <li>• Appropriate wildlife and fisheries protection measures would be implemented during all phases of construction in coordination with jurisdictional agencies.</li> <li>• BMPs for protection of water resources that would reduce potential impacts to fish and their habitat would be implemented.</li> </ul>
Special Status Species	<ul style="list-style-type: none"> <li>• Prior to the initiation of construction, applicable biological surveys would be conducted through areas of suitable habitat for specific species during the appropriate season, as determined by the jurisdictional agencies (e.g., BLM and USFWS) and survey results reported in compliance with Section 7 of the ESA.</li> <li>• If threatened, endangered, candidate, or sensitive plant species are identified in proposed disturbance areas prior to construction, appropriate protection measures would be determined in consultation with agencies.</li> </ul>
Land Use	<ul style="list-style-type: none"> <li>• Any range improvements such as fences, gates, cattle guards, and developed water sources located within disturbance or access routes would be repaired to the satisfaction of the agency or private landowner.</li> <li>• If construction would disturb or destroy a natural barrier used for livestock</li> </ul>

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	<p>control, the opening would be temporarily closed during construction and permanently closed following construction, as required by the agency or private landowner.</p> <ul style="list-style-type: none"> <li>• BakkenLink would coordinate with landowners to minimize impacts to their lands. Lands would be restored to cropland and farming use following the construction phase of the Project.</li> <li>• In cultivated areas, the depth of cover may be increased to avoid interference with land use activities.</li> </ul>
Recreation and Visual Resources	<ul style="list-style-type: none"> <li>• Measures would be implemented to minimize the visual effects of construction on high value road, river, and trail crossings as identified by the BLM, USFS, or USACE.</li> <li>• To prevent unauthorized use of the ROW by off-road vehicles and subsequent potential impacts to soil, vegetation, and wildlife resources, access would be blocked at locations specified by agencies and /or private landowners.</li> </ul>
Transportation	<ul style="list-style-type: none"> <li>• All major highway crossings would be bored to limit traffic interruptions.</li> <li>• Un-paved roads would be open cut, subject to approval of local road authorities. Where roads are open cut, traffic would be temporarily directed around the site. Most road crossings would typically be completed within several days, which would limit any disturbance to the traffic flow.</li> <li>• Placement of temporary access would be designed to avoid sensitive features such as wetlands. Areas used for temporary roads or working areas during construction would be restored to their original condition to the extent practicable.</li> </ul>
Cultural and Paleontological Resources	<ul style="list-style-type: none"> <li>• Prior to the Project construction, cultural resource inventories would be conducted on all previously uninventoried lands in proposed disturbance areas. Any resources that have been determined as eligible or are included in the NRHP would be avoided to the extent practical. If avoidance is not possible, appropriate mitigation measures would be implemented.</li> <li>• A Memorandum of Understanding or Programmatic Agreement would be developed to outline procedures for handling archaeological discoveries. Constructing the Project to avoid cultural resources would negate any adverse effects. In the event that an adverse impact may occur, the nature of the impact would be determined and the North Dakota State Historic Preservation Office (SHPO) would be consulted to determine eligibility for listing on the NRHP. If the site is determined eligible, mitigation could include an effort to minimize Project impacts on the resource and/or collection of additional documentation.</li> <li>• To minimize indirect impacts to cultural and paleontological resources, Project-related personnel would be educated as to the sensitive nature of the resources; a strict policy of prohibiting collecting of these resources would be implemented.</li> <li>• Sensitive area will be marked and flagged as “environmental sensitive area.”</li> <li>• An “Unanticipated Discovery Plan” would be developed to guide procedures if unknown cultural resources are inadvertently encountered during construction.</li> </ul>
Noise	<ul style="list-style-type: none"> <li>• The proposed route would be at least 500 feet from occupied houses and</li> </ul>

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	structures. At this distance, noise created during construction would be below ambient background levels, especially near highways and railroad lines.
Health and Safety	<ul style="list-style-type: none"> <li>• The Project would be located a minimum distance of 500 feet from residences to minimize hazards to human health and safety. Also, isolation valves would be installed along the pipeline in accordance with federal regulations to isolate the pipeline during a leak to minimize the release.</li> <li>• A Spill Risk Assessment would be completed to identify HCAs and potential impacts as a result of an accidental release of crude oil during pipeline operation.</li> <li>• Any burning during the Project would comply with all federal, state, county, and local fire regulations pertaining to burning permits.</li> <li>• All hazardous and potentially hazardous materials would be transported, stored, and handled in accordance with applicable regulations.</li> <li>• If toxic or hazardous waste materials are encountered during construction, construction will stop immediately, and would not restart until clearance is granted by the appropriate agency.</li> </ul>

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