

## 5.0 Summary of Impacts

Three transmission line Route Options (**figures 1-5, 1-6, and 1-7**) were identified by BEPC as a result of comments received during project scoping, consideration of resources to be avoided or excluded, and availability of linear features that could be paralleled. BEPC engineers and lands specialists met with landowners during the routing process to make the final route selection and adjustments in compliance with landowner preferences. Adjustments made in the final alignment (Route Option C) included minor changes to route the line around specific parcels and land use features at the request of landowners, which resulted in a slightly longer alignment than would be the case if route adjustments had not been made. Additional route lengths resulted in corresponding increased acreages of effects for some resources, although these are offset by accommodating landowners and lessening the perceived impacts to them. Construction and operations impacts identified for the Route Options are summarized in the following text.

### Jurisdictions, Land Use, and Agricultural Practices

Temporary construction impacts were determined based on the need for access trails, pulling and tensioning sites, splicing sites, and structure work sites. Construction of Route Options A and B would temporarily impact 254 and 243 acres, respectively. Construction of Route Option C (Preferred Route) would temporarily affect 273 acres. A total of 0.2 acre would be permanently impacted by structure bases, regardless of route.

Impacts to agricultural practices would be similar among the three Route Options. Use of single-pole structures would minimize impacts to agricultural activities and allow cultivation to take place immediately adjacent to each structure footprint. The final alignment would avoid sensitive resources.

Although croplands and planted herbaceous perennials were avoided to the extent practicable, more would be temporarily affected by construction of Route Option C (175 acres) than by construction of Route Options A or B (147 or 132 acres). Higher acreages of temporary disturbance along Route Option C (than along the other Route Options) is largely due to longer line length (55 to 57 miles long versus 61 miles long). Higher acreages of Route Option C temporary disturbance to cropland and planted herbaceous perennials is largely because Route Options A and B were routed diagonally through pasture/rangeland, rather than along fencelines and roads paralleling croplands and planted herbaceous resources. Construction of Route Option C also would affect more scrubland and barren land than would be affected by construction of either Route Option A or B. Although calculations indicate wetlands and riverine land uses to be within the three Route Options, they would be spanned or otherwise avoided.

### Physiology, Geology, Soils, and Minerals

Potential impacts to physiographic, geologic, and soil resources are similar among the three Route Options. All three routes cross an area north of Williston that was used for underground coal mining. Previous mining activities have created localized subsidence that could affect structure placement. The potential for soil compaction and erosion is slightly greater along Route Options A and B than along Route Option C. Impacts to soils would be reduced by scheduling construction activities to avoid wet conditions. Temporary impacts to prime and unique farmlands are expected to range from 3.0 acres (Route Option C) to 4.8 acres (Route Option A). The Project is not expected to impact area mineral resources, including active oil and/or natural gas wells.

### Hydrology and Drainage

Impacts to flood-prone areas and drainages are not anticipated because they would be avoided or spanned.

### Vegetation and Wetland Resources

Construction of Route Option C would temporarily affect 153 acres of cropland. Construction of Route Options A or B would affect 132 and 115 acres, respectively. Wetlands would not be impacted because they would be avoided or spanned.

### Wildlife and Fisheries

Construction of BEPC's Proposed Project would result in the temporary displacement of highly mobile game and non-game species. Direct impacts to low-mobility species could result in some loss of individuals, primarily due to crushing. Pre-construction surveys would be carried out to identify the presence of migratory bird species; active nests would be avoided during construction. Structure design, conductor-to-conductor spacing, and conductor-to-ground spacing exceed the wingspan of avian species and would be sufficient to preclude electrocution of raptors that could use the area for nesting and/or foraging.

Fisheries resources within the Project area are minimal and adverse impacts are not anticipated. Fisheries habitat crossed by the proposed Project is negligible and that which is present would be spanned during construction.

### Special Status Species

The whooping crane and piping plover are the only federally listed species that could be impacted by the Proposed Project. The Project site is located within the extreme western edge of the whooping crane flyway, and available habitat that would support the species in the Project area is considered marginal. BEPC will comply with mitigation measures described in the biological assessment to minimize risk to the whooping crane. The proposed Project crosses a small amount of marginally suitable foraging habitat for the piping plover. Nesting habitat is not available in proximity to the Preferred Route.

### Archaeological Resources

A total of 55 archaeological and historic sites and nine isolated finds were recorded during Class III pedestrian surveys of Route Option C. All nine isolated finds were recommended as not eligible for the NRHP and no further work is recommended for the sites. The NRHP eligibility of the 55 archaeological and historic sites is currently unknown; however, the sites would be either spanned or otherwise avoided during line construction. Therefore, there is no requirement to assess eligibility, and no adverse effects to archaeological or historic resources are expected to occur as a result of constructing BEPC's Proposed Project.

### Native American Setting

Western initiated Native American consultation with letters to 10 tribes on August 1, 2008. The Rosebud Sioux Tribe, the only tribe to respond to the letters, indicated that they had no objection to BEPC's Proposed Project.

### Paleontological Resources

Although paleontological resources may be present within the area, the preferred transmission line route is predominantly located on surface glacial deposits where there is very low potential for finding important fossils.

### Transportation

The Preferred Route is located near two public airports and a private landing strip. Analyses of proposed alignments indicate that the Preferred Route would not penetrate airspace of any of the three airports. The proposed transmission line would parallel and cross area highways and the Burlington Northern – Santa Fe Railroad. Conductor height at road, highway, and railroad crossings would comply with Federal, State, and industry clearance standards. BEPC would utilize temporary H-frame structures at highway and road crossings to elevate the conductor during construction. The temporary H-frame structures would be removed following construction and each site would be returned to preconstruction conditions.

### Socioeconomics

Potential socioeconomic impacts would be minimal, primarily due to the use of single-pole structures to minimize interference with farming operations, avoidance of cultivated fields to the extent possible, and scheduling construction activities to avoid periods of relatively high precipitation. The Proposed Project would provide short-term beneficial impacts to the local economy. Direct impacts to individuals would be limited to approximately 96 landowners.

### Environmental Justice, Visual Impacts, and Noise

Impacts to a disproportionate number of minority or low-income individuals would not occur; therefore, there would be no environmental justice issues. Visual impacts would be limited to rural areas with relatively low population numbers. Potential visual and noise impacts are expected to be minimal and only present in scattered locations.

### Global Warming

The proposed Project would not contribute to global warming. Combustion of fossil fuel would only take place during construction and during periodic maintenance.

### Intentional Acts of Destruction

Opportunities for intentional acts of destruction would be slightly increased within the region as a result of a new transmission line.