11.0 Environmental assessment summary

Based on the environmental assessment of this Project, there are no residual effects predicted to be significant, given the routing process, mitigation measures, and monitoring and follow up program. Table 11-1 provides a summary of the assessment conclusion for each VC. This is followed by a summary of the conclusions for each VC, and the further examination of climate change and cumulative effects.

Table 11-1: Summary of assessment conclusions

Valued Component	Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Resiliency
Aquatic habitat	Adverse	Small	LAA	Long term	Sporadic	Reversible	Moderate
Grassland habitat	Adverse	Small to moderate	LAA	Medium Term	Infrequent	Permanent	Moderate
Forest habitat	Adverse	Small to moderate	LAA	Medium term	Infrequent	Permanent	Moderate
Wetland habitat	Adverse	Small	PFA	Medium term	Infrequent	Permanent	High
Employment and economy	Positive	Small	RAA	Short term	Regular	Reversible	High
Infrastructure and services	Adverse	Small	RAA	Short to long term	Sporadic to intermittent	Reversible	High
Property and residential development	Adverse	Moderate	LAA	Long term	Regular to continuous	Reversible	High

Valued Component	Direction	Magnitude	Geographic Extent	Duration	Frequency	Reversibility	Resiliency
Agricultural land use	Adverse	Small to moderate	PFA to LAA	Short to long term	Sporadic to continuous	Reversible	High
Other commercial land use	Adverse	Small	LAA	Short to long term	Sporadic to continuous	Reversible	High
Recreation and tourism	Adverse	Small	PFA to LAA	Short term	Infrequent	Reversible	High
Traditional land and resource use	Adverse	Moderate	LAA	Short term	Continuous	Permanent	Low to High
Health	Adverse	Small	LAA	Short term	Infrequent	Reversible	High
Heritage resources	Adverse	Small to moderate	PFA	Permanent	Infrequent	Permanent	Low

Aquatic habitat

From an aquatic habitat perspective, most of the LAA is disturbed because in many areas it is dominated by agricultural development. However Project activities have the potential to increase suspended sediments into watercourses and there is the potential for priority fish species to be in the RAA. The small, sporadic and reversible effects were assessed as being not significant, primarily due to fact that the transmission line can span the water crossings and the implementation of well-established mitigation measures such as leaving vegetated buffer and limiting instream work to outside any sensitive spawning periods.

Grassland habitat

One of the key concerns in the final preferred route for the Project was the potential effects to grassland habitat in the Spy Hill-Ellice Community Pasture. There are few remaining large tracts of grassland in the province and they provide habitat to some rare and endangered grassland bird species. Through the routing process the Project crosses only 0.2 % of the grassland/rangeland areas in the RAA, including 25.2 ha (0.5%) of grassland/rangeland in the pasture. Bird and other animal species will experience temporary sensory disturbance and there will be permanent loss of grassland habitat at the tower foundations, but the remainder of the area is expected to remain as grassland habitat. During the Project operation phase other potential effects could be an increased in local predation as transmission towers could provide nesting habitat or perches for birds of prey, and perching deterrents will be used where required. Based on numerous mitigation measures and a monitoring and follow up program that includes coordination with provincial wildlife biologists, effects were assessed as being only small to moderate, localized, medium term and not significant.

Forest habitat

The proposed Birtle Transmission Project will result in the removal of approximately 29 ha of deciduous forest vegetation (including treed riparian) in the PFA due to clearing during construction (Table 5-2). While this represents less than 1% of the of forest habitat in the RAA, construction will result in fragmentation of treed vegetation communities and a reduction in vegetation diversity on the ROW. Effects to wildlife species using the habitat could include increased sensory disturbance and access for hunters and predators. However, based on the relatively low amount of habitat loss at the population level, and implementation of numerous mitigation measures and a monitoring and follow up program, effects were assessed as being only small to moderate, localized, medium term and not significant.

Wetland habitat

There are only 2.5 ha of wetlands in the PFA and no loss of wetland habitat is anticipated as the transmission line can span these areas. However, there could be indirect adverse effects to species living in these areas, from construction noise, the presence of workers and sedimentation, and some minor effects to birds using these areas in terms of increased access for hunting and potential collisions with the transmission line. Based on numerous mitigation measures that include the use of bird diverters, and a monitoring and follow up program that includes coordination with provincial wildlife biologists, effects were assessed as being only small, localized, medium term and not significant.

Employment and economy

Potential effects to employment and economy include Project employment opportunities and indirect benefits to communities in the vicinity of the Project through the provision of goods and services to the construction workforce. Although effects will occur at a regional scale, the small scale of the Project and short-term duration of construction will result in small positive effects that are not significant.

Infrastructure and services

Potential effects to infrastructure and services include effects from increased traffic on transportation and utility infrastructure (including damage or disruption), increased pressure on emergency services, and the potential for interference with communication and transmission signals. Although effects will occur at a regional scale, the small scale of the Project and short-term duration of construction should not impact transportation infrastructure or emergency services/utilities in the RAA with the implementation of the various mitigation measures proposed. Given this, effects were assessed as adverse, small, regional, of various frequencies and durations depending on issue, but reversible and not significant.

Property and residential development

Potential effects to property and residential development include effects on residential development potential, property values and aesthetics. Although effects will occur largely at a PFA/LAA scale over the long term, overall impairment to property and residential development should be small. Given the application of the various mitigation measures, including the implementation landowner compensation and the landowner liaison program, the effects were assessed as small, permanent and not significant.

Agriculture

Potential effects to agriculture were another key concern for the region, as agriculture is important to the regional economy and residents in the area. Predicted effects include, for example, moving agricultural buildings and structures in the ROW during construction, and those that are more permanent in nature (e.g., permanent loss of land underneath the tower footprint). Given the importance of this VC, a variety of mitigation measures are applied, including a landowner compensation program to address losses in land production, and landowner liaisons working with landowners to understand potential effects and address where possible through tower spotting. While effects were assessed as variable depending on the indicator topic, they were small, compensation is offered where effects are permanent (land loss under towers) and predicted to be not significant.

Other commercial resource use

Potential effects to other commercial resource use (i.e., mining and oil and gas development) largely relate to the potential disruption of the resource through area loss and disturbance/interference with resource extraction operations. Given the routing process and the application of various mitigation measures the effects of the Project were assessed as small, localized, and not significant.

Recreation and tourism

Potential effects to recreation and tourism largely relate to impairment of recreation enjoyment and reduced harvest success rate. Most potential effects were avoided through the routing process, including existing and proposed ecological reserves, legally protected WMAs, and parks. Transmission line routing also considered aspects such as proximity to campgrounds, picnic areas and recreational sites (e.g., golf courses, skiing areas), and recreation sites/trails. Mitigation measures to limit effects of the Project on recreation and tourism include measures to retain and protect wildlife features, and environmental protection measures related to clearing and construction. Project effects were assessed as being small, localized, infrequent, reversible and not significant.

Traditional land and resource use

Manitoba Hydro sought feedback from Indigenous communities and organizations to better understand values, interests and to develop relevant measures to mitigate concerns. Based on the exercise, Manitoba Hydro identified the main categories of responses as values that are important to participating communities and organizations. Table 11-2 identifies where those concerns are discussed in the assessment.

Table 11-2: Where values important to participating First Nations were discussed in the assessment.

Values important to participating communities	Birtle Transmission Project valued components
Canupawakpa Dakota Nation	
Community cohesiveness	Traditional land and resource use
Community well-being	Health
Cultural values	Traditional land and resource use
Employment	Employment and economy
Family	Traditional land and resource use
Governance	Traditional land and resource use
Harvesting	Traditional land and resource use
Identity	Traditional land and resource use
Local business, including services	Employment and economy
Traditions/customs	Traditional land and resource use
Water	Aquatic habitat

Values important to participating communities	Birtle Transmission Project valued components
Wildlife	Grassland habitat; Forest habitat; Wetland habitat
Values important to Gambler First Nation	
Aesthetics	Health
Community cohesion	Traditional land and resource use
Cultural values	Traditional land and resource use
Economic development / business opportunities	Employment and economy
Family	Traditional land and resource use
Farmland	Agricultural land use
Governance	Traditional land and resource use
Identity	Traditional land and resource use
Local business	Employment and economy
Location	Routing
Traditions / customs	Traditional land and resource use
Water	Aquatic habitat
Wildlife	Grassland, forest and wetland habitat
Values important to Waywayseecappo First Nation	
Community cohesion	Traditional land and resource use
Community health	Health
Cultural values	Traditional land and resource use
Economic development	Employment and economy
Education	Traditional land and resource use
Employment	Employment and economy
Family	Traditional land and resource use
Governance	Traditional land and resource use
Harvesting	Traditional land and resource use
Identity	Traditional land and resource use
Language	Traditional land and resource use
Local business	Employment and economy

The MMF shared concerns about how the Project will result in a change in traditional land and resource use as the availability or resources will be reduced and access to

lands used for traditional purposes will be reduced during construction. Authors of the MMF MLUOS asked for their report information to be fully integrated into the assessment and that the information in the report should inform VC selection and then should be used as baseline information in the assessment of those VCs. Manitoba Hydro used information provided in the report to inform this assessment, both in chapter 5 (Environmental and socio-economic setting - 'baseline') and in assessment of VCs. The importance of Ste. Madeleine was recognized during routing of the transmission line. Information provided in the MLOUS provided information to better understand changes to the harvesting experience, changes to the perception of the ability to conduct harvesting activities and access limitations within the assessment of TLRU.

As a result of proposed mitigation measures, the residual effects to Traditional land and resource use are assessed as being adverse, moderate in magnitude, local in size, and not significant. Following construction, access to traditional use sites will remain the same as conditions are today when accessing crown or private lands, except during brief periods of time during certain maintenance events. Manitoba Hydro intends to continue to be open to respond to questions and concerns regarding the Project with interested Indigenous communities and organizations. Project events and information will continue to be shared should it proceed through construction, operation and maintenance.

Health

Potential effects to health include changes in air and noise emissions and perceived effects related to Electric and Magnetic Fields (EMF). Noise effects and air quality effects were largely reduced to manageable levels though the timing and location of activities with respect to residences and associated mitigation measures. These Project and were assessed as small, local, short term, reversible, and not significant. With respect to EMF, while Manitoba Hydro is sensitive to public concerns regarding potential health effects from electric and magnetic fields, there is at present no scientific evidence to suggest that health effects could result from exposure to electric and magnetic fields from transmission lines (see p 7-138). Manitoba Hydro will design the transmission line to meet international standards and guidelines set forth by the (International Commission on Non-Ionizing Radiation Protection). These guidelines have been adopted by Health Canada and the World Health Organization.

Heritage

Location of known heritage sites was an important factor in the routing process and the main residual effect of the Project is the potential discovery of unknown heritage resources, particularly during the construction phase of the Project. However, with mitigation that includes prescribed/enforced protocols to address any sites uncovered,

residual environmental effects were assessed as small for previously recorded sites, moderate for undiscovered sites PFA, infrequent but permanent, and not significant.

Sensitivity to climate change and cumulative effects

As some VCs included rare and endangered species whose resiliency to further impacts may be an issue, the Project assessment conclusions were tested against potential additional effects from climate change or other projects in the region. A summary was developed of past, current and reasonably foreseeable projects to test additional effects on the VCs from activities such as agriculture, residential and commercial resource development. In addition, information was examined on climate change scenarios, predicting future increases in temperature and precipitation. While the examination did not involve an exhaustive, quantitative analysis and there is uncertainty in future scenarios, Project assessment conclusions for each VC were carefully considered, particularly for those that may not be resilient to further adverse effects, and none were found to exceed any thresholds of sustainability. A key issue in reaching this conclusion was the use of an adaptive management approach, in terms of follow up, monitoring, and ongoing liaison with regulators, the public and Indigenous communities.

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