MANITOBA-MINNESOTA TRANSMISSION PROJECT

Clean Environment Commission Hearing

Manitoba Hydro

Why wildlife?

- Critical component and indicator of healthy ecosystems
- Wildlife are important to First Nations and Metis culture and sustenance
- Potential for project effects on wildlife

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Regulatory guidance

- *Species at Risk Act* (SARA)
- *Migratory Birds Convention Act* (MBCA)
- Manitoba's *The Endangered Species and Ecosystems Act* (MESEA)
- Manitoba *Wildlife Act*

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Overview | What We Heard | What We Assessed | Key Findings | Mitigation, Monitoring and Follow-up | Conclusions

Key wildlife issues

- Change in habitat availability
- Disturbance
- Potential for mortality

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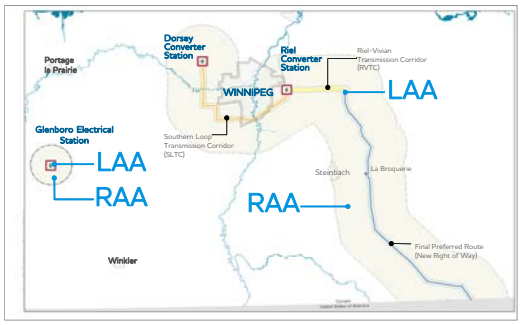
Wildlife assessment areas



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Wildlife concerns

- Fragmentation of protected areas, or other large tracts of forest and wetland
- Disturbance of the Vita elk herd
- Routing through critical habitat of Golden-winged warbler
- Changes in access in relation to predation/hunting
- Potential for bird mortality through collisions

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Issues addressed through routing

- Routing outside of Wildlife Management Areas and other protected lands
- Fragmentation limited
- Known grouse leks >500 m from ROW
- Away from core range of Vita elk herd

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Wildlife assessment

- Change in habitat, including fragmentation
- Mortality risk, including construction, collision risk, and change in predation/hunting
- Ecosystem approach, focal species/groups
  - Mammals (elk, moose, deer, bear, furbearers, bats)
  - Birds (interior forest, open forest, grassland, wetland)
  - Amphibians and reptiles

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Methods

- Desktop review
  - Status / distribution / habitat availability
- Key person interviews
  - Provincial biologists, academia, stakeholders, etc.
- First Nations and Metis Engagement Process
- Field surveys
  - Mammals / birds / reptiles / amphibians
- Effects assessment

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Mammals – elk

- Generalist herbivore using forests, edges, grasslands
- Vita herd 100-150 individuals
- No elk or sign observed in LAA
  - Supported by telemetry data
- Negligible project interaction

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Mammals – moose

- Wetland/forest edge herbivore traditionally hunted by First Nations and Metis
- Sharp decline in population since 1990s; observations at three locations during 2014 field studies
- Negligible project interaction

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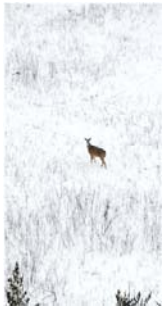
Mammals – deer

- Generalist herbivore using forest mosaics, including edges
- Widespread and abundant within RAA
- Potential for disturbance during construction, but habitat availability during operation largely unchanged



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Mammals – bear

- Generalist omnivore favouring forests and edges, and hibernating over winter
- Widespread in eastern part of RAA; regional population stable or increasing
- Potential for disturbance during construction but habitat availability unlikely to change

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Mammals – furbearers

- Various species including wolf, coyote, fisher, and marten
- Some species widespread; marten in mature forests within eastern part of RAA
- 2% of marten habitat in LAA to be cleared; most other furbearers affected less

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Mammals – bats

- Summer / maternal roost habitat widespread in forested parts of RAA
- Winter / hibernation habitat not documented within RAA
- No adverse effects expected

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Birds – interior forest species

- Numerous species, including ovenbird
- Route avoids preferred ovenbird habitat (deciduous forest patches greater than 90 ha)
- Primarily larger forests north of Richer, east of Marchand, and near Sandilands and Piney


Ovenbird

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Birds – open forest species

- Numerous species, including golden-winged warbler
  - Project traverses critical habitat near Ste-Geneviève and Richer
  - Suitability of habitat along ROW can be enhanced through vegetation management
- Higher abundance of edge-tolerant species along M602F
  - Potential for construction disturbance but habitat suitable during operation


Golden-winged warbler

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Birds – grassland species

- Numerous species, including bobolink and barn swallow
- Limited remaining native grassland
- Temporary disturbance during construction; little effect during operation


Short-eared owl

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Birds – wetland species

- Ducks, geese, cranes, gulls, and others
- Concentrated at river crossings, large lakes, and Deacon Reservoir
- Concern primarily related to potential for collision with overhead wires

Sandhill cranes

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Amphibians and reptiles

- Amphibians and turtles primarily around major wetlands and river crossings
- Wetlands and rivers largely avoided or spanned
- Primary risk is mortality during construction

Northern leopard frog

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Key mitigation measures

- Vegetation management for Golden-winged warbler
- Installation of bird flight diverters
- Access management plan

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Key mitigation measures

- Environmental Protection Plan measures, including:
  - Mapping of environmentally sensitive sites
  - Land clearing outside breeding bird season
  - Seasonal avoidance of sensitive wildlife periods
  - Buffers around nests, dens, etc.
  - Buffers around wetland and riparian zones
  - Waste and contamination control procedures
  - Prohibition of hunting/harvesting by project staff

Cumulative effects

- Region already substantially altered by agriculture (48%) and development (13%)
- Other existing or future activities with direct or indirect effects on wildlife habitat availability and/or mortality:
  - Resource use (forestry, quarries, mining, hunting, trapping)
  - ATV and snowmobile trails
  - Linear projects (roads, pipelines, transmission lines)

Cumulative effects – habitat

- Past changes in distribution and abundance of wildlife due to cumulative loss of habitat
- Future activities overlap in time and space with project residual effects:
  - ROW clearing on other transmission lines
  - St. Norbert highway bypass
  - Additional residential development
- Adverse cumulative effect; project contributions are incremental and minor

Cumulative effects – mortality

- Future activities include:
  - Transmission lines
  - Pipelines
  - Southend Water Pollution Control Centre Upgrade
  - Roads
  - Piney-Pinecreek Border Airport Expansion
  - Additional residential development
- Bird flight diverters are key mitigation
- Adverse cumulative effect; Project contributions are incremental and minor

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Monitoring & follow-up

- Biophysical Monitoring Plan as part of Environmental Protection Program, including:
  - Track surveys
  - Remote cameras
  - Carcass searches
  - Point counts
  - Lek surveys
  - Snake hibernacula surveys
  - Amphibian surveys

Remote camera

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Wildlife effects – change in habitat

- Direct change in habitat
  - 4.8% reduction in forest cover within LAA
  - Creation of new edge habitat
- Indirect loss of habitat
  - Sensory disturbance during construction (noise, light), mitigated through seasonal avoidance
- Fragmentation of habitat
  - Small loss of core forest habitat

Project residual effects are considered to be not significant and contributions to cumulative effects are minor

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Wildlife effects – change in mortality

- Construction
  - Potential for collisions or destruction of dens and nests, mitigated through seasonal avoidance and awareness
- Change in access
  - Potential for increased hunting pressure, mitigated through use of existing access, and access management during construction
- Collision with overhead wires
  - Primarily of concern for wetland birds, mitigated through routing and installation of bird flight diverters

Project residual effects are considered to be not significant and contributions to cumulative effects are minor