

Manitoba-Minnesota Transmission Project
Clean Environment Commission Hearing



Biophysical environment
Valued Components Assessed

Fish and Fish Habitat	Vegetation and Wetlands	Wildlife and Wildlife Habitat	Traditional Land and Resource Use
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2

Why vegetation and wetlands?

- Important for healthy natural ecosystems
- Sustains other elements of biodiversity
- Supports valued human activities
- Valued for indigenous use and collection
- Potential for project effects

3

Regulatory guidance


- *Species at Risk Act (SARA)*
- Manitoba's *The Endangered Species and Ecosystems Act (MESEA)*
- *Noxious Weed Act*

4

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

Vegetation and wetlands

- Prairie and boreal ecozones
- Agricultural land and native uplands/wetlands
- 3 species at risk
- 2 provincially listed rare plants
- No plant species at risk critical habitat



5

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

Vegetation and wetland concerns

- Herbicide use
- Conservation and protected areas
- Rare plants
- Landscape fragmentation
- Habitat loss and degradation
- Traditional use plants and collecting sites

6

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

Issues addressed through routing

- Areas of large intact vegetation, including areas of special interest largely avoided
- Private and publicly owned managed tall grass prairie avoided
- Project routed parallel to existing linear features

7

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

Vegetation and wetland assessment areas

- PDA – immediate area of project footprint
- LAA – 1 km buffer either side of PDA
- RAA – 15 km buffer either side of PDA

8

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

Vegetation and wetlands assessment

- Change in landscape diversity
- Change in community diversity
- Change in species diversity



9

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

Vegetation and wetlands assessment

- Landscape intactness
- Native upland vegetation and wetland cover
- Rare plant species
- Traditional use plant species
- Invasive plant species

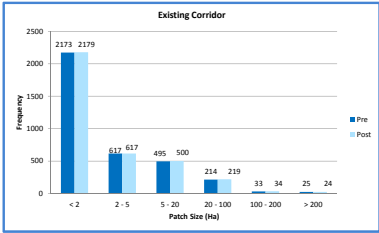


10

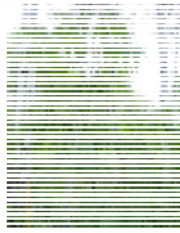
Overview | What We Heard | **What We Assessed** | Key Issue Review | Mitigation, Monitoring and Follow-up | Findings and Conclusions

Vegetation and wetlands assessment

Changes in abundance, distribution and structure



Patch Size (Ha)	Pre	Post
<2	2175	2175
2-5	617	617
5-20	495	500
20-100	214	219
100-200	33	34
>200	25	24



11

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Methods

- Desktop review
 - mapping/plant status/traditional use plants
- Key Person Interviews
 - Provincial biologists, stakeholders
- Public Engagement
- Traditional Knowledge
 - First Nation and Metis engagement process/self-directed study
- Field surveys
 - Wetlands / rare plants (traditional use plants/invasive plants)
- Effects assessment

12

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

Landscape intactness

- Large intact patches of native vegetation and wetlands
- Help support wildlife populations and maintain important functions such as fire

Right of way clearing

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Fragmentation on intact native areas

Change in landscape intactness

- Fewer large intact native patches
- Reduced number of species requiring large patches

13

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

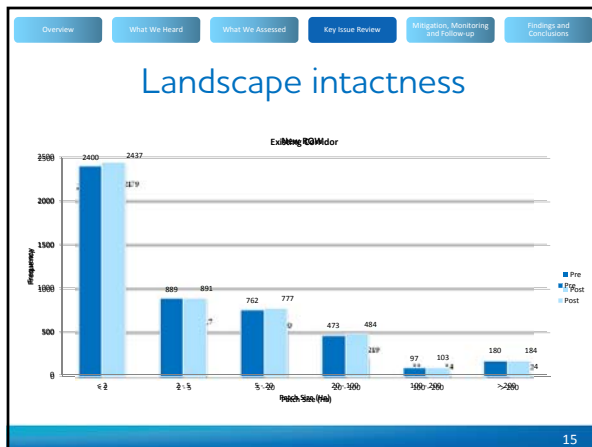
Landscape intactness

Key Findings:

- Net change is small and no patch size category is lost, including patches >200 ha (22 patches out of 202 larger than 200 ha affected)
- Effects mainly to upland native vegetation



14



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

Native vegetation cover

Upland – grassland, shrubland, deciduous/mixedwood/coniferous forest

- 33% of LAA and RAA

Wetlands – bogs, fens, swamps, marshes

- 4% LAA, 5% RAA

Right of way clearing → Vegetation removal

Tower construction → Non-native invasive/weed introduction/spread

Mobilizing/demobilizing → Non-native invasive/weed introduction/spread

Weed control → Native species loss

Change in Native Vegetation Cover

- Alter community distribution
- Reduced community abundance
- Reduced native species abundance

16

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

Native vegetation cover

Key Findings:

- Less than 10% grassland, shrubland and forest affected in LAA
- Less than 5% wetland affected in LAA
- Project is not routed through managed tall grass prairie parcels

17

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

Traditional use plant species

- More than 300 species identified through First Nation and Metis Engagement
 - Plant gathering (e.g. bur oak)
 - Medicines (e.g. sweet grass)
 - Berries (e.g. cranberry)
- Traditional collection areas in ROW, majority of areas east of ROW
- 39 species observed in PDA

18

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

Traditional use plant species

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graph LR; A[Right of way clearing] --> B[Vegetation removal]; C[Tower construction] --> B; D[Mobilizing/demobilizing] --> E[Non-native invasive/weed introduction/spread]; F[Weed control] --> G[Native species loss]; B --> H[Change in Availability of Traditional Use Plant Species]; E --> H; G --> H; H --- I[Loss of plant collection site]; H --- J[Reduced plant vigour]; H --- K[Reduced plant abundance];
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19

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

Traditional use plant species

Key Findings:

- Project avoids many known traditional use plant collection sites
- Vegetation cover classes supporting traditionally used plant species reduced
- Traditional use plant species and supporting cover classes expected to persist, including on ROW



20

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

Key mitigation measures

- Clearing and construction when ground is frozen or dry
- Vehicle and equipment restricted to established roads and trails
- Existing access routes used where possible
- Equipment clean and free of debris
- Disturbed areas rehabilitated where appropriate, and weed control conducted at access points

21

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

Cumulative effects

- RAA altered by agriculture conversion and development
 - 48% agricultural land, 13% developed
- Project contribution incremental, but small
 - Less than 1% native upland and wetland
- Limited interactions with future projects
- Project will not affect long-term persistence or viability of landscape, community or species diversity

22

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

Monitoring and follow-up

- Further surveys (incl. rare plants and invasive plant species) and consultation with Manitoba Wildlife and Fisheries Branch
- Further wetland intersect pre-construction surveys
- Post-construction monitoring to evaluate effectiveness of construction mitigation and identify areas requiring further action

23

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

Key findings and conclusions

- Number of patches will increase, but net change small, no patch size category lost
- Less than 10% upland and less than 5% wetland area affected (Areas of Special Interest areas largely avoided)
- No traditional use plant species lost from LAA or RAA due to project

Project residual effects are considered to be not significant

24
