

Environmental Protection Program (EPP) overview

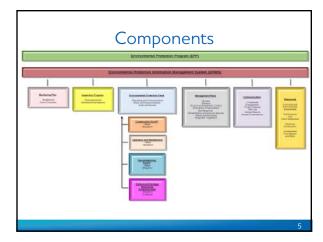
- Developed from a comprehensive review
- Implementation, management and monitoring of mitigation measures
- Components that interact and adapt from each other
- Who, what, where and how aspects of protecting the environment in all phases of the project

3

Lessons learned

- Include Environmental Protection Program documents in EIS for review.
- Development of clearing plan
- Mitigation measure improvements
- Language improvements for clarity
- Packaging and format of documents
- Experimentation with new mechanisms of community involvement

4



Senior transmission management team







Draft Construction Environmental Protection Plan (CEnvPP)



- Almost 100 specific mitigation measures
- Over 400 general mitigation measures
- Setbacks and buffers
- Reduced Risk Timing windows
- Biosecurity standard operating procedure
- Frameworks for contractor management plans

General mitigation measures

- Agricultural Areas
- Aircraft Use
- Blasting
- Borrow Pits Built Up Areas
- Burning
- Concrete wash water Demobilizing
- Draining
- Drilling
- Emergency Response Erosion Protection
- Fish Protection
- Grading Groundw

- Hazardous Materials
- Marshalling Yards
- Petroleum Products
- Rehabilitation and re-vegetation
- Rights of way Safety and Health
- Soil Contamination
- Staging Areas Stream Crossings
- Stripping
- Transmission Towers Treated Wood
- Vehicle and Equipment Maintenance Waste Management
- Wetlands Wildlife Protection

Draft CEnvPP map

The control of the first of the control of the cont) Dra	aft	CE	nvPP table
The contract of the contract o	The format is been provided by the format of						No. log II 515 III 515 Name Aniston Start May 1776 Zone Distance E commit A commit
The second control of the control of	Pulsatiol Effective Pulsation distributes in the high femomen						
The state of the s	mating all to used to protect the - Candact are recolliption with as > Majori decisioned featurals in his impactor.	man from calling manifest prior to man distarbance t	a mer copole o cometicació for her hospi	upo to removed y	e during seri co	- Contract	 As per making sandards, and discrime and he resolved in a name to resource crediting by alternating between influence and speed discrimes along the law dispation. model and discrime with specific proper transmission (see trough specifications for three spaces.
The state of the s	- United and mediago becomes to	nation rise ed	by tolkness	when a suspec	actions of the	Plage tennels is	Secring ID STA ID SEA Same Location New Play ATT Since Distance L Secritor L Secritor L Secritor L
The state of pages in	PRI Comp. State Street,						West and the first short in course and the second with the second with the second seco
Well to great a great great price of the control of	m have been	Section bear			200		Notice to if years of covariable covers for classing conduction, methodox and decreasioning activities
Compared to the control of the contr		position (sa	A2190 1	146		Hall .	Specific Militarians
modifying the first and the princed for the seas from finding and proposers to receive an efficing and controllers. In the controllers of the control of the development of the control o							 Let's and construction absolutes on frame or thy ground for revenues surhead demains, ruthing and amount. Constructions continue and to count for principle for one time relating, and copiones in relatine due the first good continues. Frankle let's organization device and furthermoral, faulter amount of the continues of
	matching will be used to protect the - Use setting traffs, roads or yet the - obsertly and that bother arrows place - rispanse, further shall be a morney those bullers shall any herbackers characters tongularaments.	area from righting is stated of seast of 30m and no ordinated products ordinated products ordinated products	off in more	are to moveral or no rivoles. In based on slop statued plung a	or during seel on of most empiring the from that the	profession before	

Cultural and heritage resource protection



- Training to all staff
- Procedures for Manitoba Hydro staff and construction workers for new discoveries
- Protocol for documentation of community contact information
- Community participation

14

Contractors role in CEnvPP

- Accountable for all regulatory and environmental mitigation measures
- Penalties for non-compliance with CEnvPP
- Dedicated Environmental Officer
 - Responsible for:
 - Contractor staff training
 - Mitigation measure implementation
 - Adherence to CEnvPP

15

Matthewson_MH_EPP

Management plans

- Access management
- Blasting
- Emergency preparedness and response
- Erosion protection and sediment control
- Rehabilitation and invasive species
- Waste/recycling
- Integrated vegetation
- Golden-winged warbler habitat
- Clearing

16

Golden-winged warbler Habitat Management Plan



- Developed in response to threatened species mitigation
- ROW selectively cleared and maintained through integrated vegetation management
- Safe operation and maintenance of project

17

Access Management Plan



- Communication protocols
- Utilize existing access
- Firearms restrictions
- Access rehabilitation

10

Matthewson_MH_EPP

Clearing Management Plan

- Under development
- Meeting with landowners
- Investigating secondary uses of wood products
- Mulching, chipping, firewood, salvage, biofuels, burning



19

Ongoing First Nations and Metis Engagement Process

- Community meetings
 - Share plans and EIS findings
 - Identify new ESS and/or refine existing info
 - Share info and address EPP related community concerns
 - Identification of new mitigation measures



20

Indigenous community monitoring working group

- Terms of Reference to be developed (1 field trip and meeting to date)
- Guiding objectives:
 - Awareness of the project and EPP;
 - Manitoba Hydro awareness of community concerns and communication back on how they are being addressed;
 - "Boots on the ground" field experiences;
 - Multiple First Nations, MMF and Indigenous organizations working together; and
 - A youth and Elder component.
- Environmental monitor

Environmental Protection Information Management System

- Modules
 - Inspection
 - Monitoring
 - Reporting
 - Communication
- Combination of document management, workflows, reporting, spatial awareness, and communication tools

22

Communication

- Environmental protection team meetings
- Ongoing liaison with local communities, landowners, First Nations and Metis
- Project website updates
- Annual/seasonal
 - Pre and post construction meetings
 - CEnvPP reviews
 - Annual reports and presentations

23

Adaptive management approach

- Structured and iterative learning tool that incorporates frequent review of decisions and feedback from monitoring
- Involves alternative planning to avoid reactive management
- Involves affected parties throughout project development
- Fosters a transparent decision making processes that provides good documentation
- Focuses on ongoing experimentation that will benefit the pursuit and development of "best practice"

9

Adaptive management approach Planning stage- Els development Doing stage- construction activities Evaluation and learning stage- during construction (compliance monitoring) and post-construction (compliance monitoring) and post-construction (environmental monitoring) Adjustment stage- at any point during the process Figure Source: The Adaptive Management. cycle for the Tasmanian Wilderness World Heritage Area (Jones, 2009, P.237)

Adaptive management enhancements

- Increased application and documentation of adaptive management
- Increased community, stakeholder and landowner involvement in decision making
- Enhancement of monitoring programs toward the "active" form of adaptive management
- Introspective approach to EPP improvements utilizing adaptive management
- Further development of user targeted EPP documents

26

MANITOBA-MINNESOTA TRANSMISSION PROJECT We have reached the end of our journey