DATE: March 20, 2012

TO: Elise Dagdick
Land Use Approvals
MB Conservation & Water Stewardship
123 Main Street
Winnipeg, MB R3C 1A3

FROM: John Dojack
Forestry Branch
MB Conservation & Water Stewardship
200 Saulteaux Crescent
Winnipeg, MB R3J 3W3

PHONE: 1-204-945-3578

Forestry Branch Comments on Bipole III EIS

Manitoba Conservation and Water Stewardship's Forestry Branch has reviewed the proposed BiPole III route submitted by Manitoba Hydro. The clearing of the BiPole Right-of-Way (ROW) will remove significant productive area from Manitoba's Crown Land Forests. Although the Branch does not generally object to the route chosen, MB Hydro must be aware of the impacts and costs associated with the ROW clearing.

Forestry Branch has calculated that the preferred route of the BiPole III ROW will remove 6,705 hectares of productive Crown forest land.

Forest Cover types within the Biopole III Preferred Route

	FML-2	FML-3	Not in FML	Grand Total
Productive	**2,638.35**	**1,603.76**	**2,463.17**	**6,705.29**
Hardwood	117.70	1,309.69	496.35	1,923.75
Mixedwood (M)	194.50	55.51	47.73	297.75
Mixedwood (N)	199.44	5.38	15.73	220.55
Softwood	2,126.71	233.17	1,903.36	4,263.24
Non-Productive	**3,351.12**	**1,774.82**	**6,381.48**	**11,507.42**
NonFor	705.59	1,660.02	4,708.24	7,073.85
NonPro	2,645.53	114.79	1,673.24	4,433.57
Grand Total	**5,989.47**	**3,378.58**	**8,844.66**	**18,212.71**

There are three issues that Manitoba Hydro must recognize regarding the clearing of these forested areas:

- Timber Damage Assessment
- FML Compensation
- PSP damage

Timber Damage Assessment

As per Forestry Branch Policy Circular D-1 (Forest Damage Appraisal and Valuation) the Timber Dues, charges and other forest value costs must be paid to the Province of Manitoba for all Crown timber whether it is harvested, removed, damaged or destroyed. Prior to the start of construction, Manitoba Hydro must work closely with the Forestry Branch, local contractors and wood using facilities to maximize the utilization of the timber removed from the BiPole ROW. However prior to receiving the Manitoba Conservation permits required to harvest Crown timber, the Timber Damage Assessment cost must be paid to the Province of Manitoba. The charges will be calculated to ensure that the value of the Timber, investment costs and ecological value are recovered.

Forest Branch understands that Manitoba Hydro has completed a preliminary Timber Damage Assessment of the BiPole ROW clearing. **In order to efficiently determine the Timber Damage Appraisal we request that Hydro submit their assessment for review.**

FML Compensation

Manitoba has entered into Forest Management Licence Agreements with Tolko Industries (FML# 2) and LP Canada (FML #3). Within these long-term area-based agreements are clauses that protect the forest management companies from area "withdrawals" to their land base that affect the timber supply to their mills. The BiPole III ROW clearing is considered a withdrawal from the FML areas.

If enough area is removed from either FML, a threshold trigger will be reached and Manitoba will be required to provide compensation for the loss. Although our calculation shows that the BiPole III ROW on its own will not trigger this compensation clause, it may be triggered when combined with other withdrawals on the land base already or withdrawals in the future that fall within the agreed time period (10 years). **Manitoba Hydro must be aware that they may be responsible for a portion of FML compensation costs because of land removed by the BiPole III ROW.**

Permanent Sample Plots

Forestry Branch has identified seven Permanent Sample Plots (PSP) that may be impacted by the BiPole III development. These long-term research plots are critical to the Manitoba Conservation to monitor tree and plant growth as well as ecosystem changes over time.

The cost to re-establish each of these plots is approximately $5,000 depending on access. However the Branch is most concerned with the incalculable cost from the loss of long term data and its link to all the plots previous measurements.

Some plots may be physically damaged from the clearing while the data from the other PSPs will be affected because of the significant change to the forest cover.

The only option to mitigate the effects of the ROW on established PSPs is to ensure that it is located away from the Forestry Branch's PSPs by at least 200 metres. If this buffer cannot be achieved then the PSP must be re-established. Manitoba Hydro should re-establish two new PSPs for each PSP physically damaged or damaged by the ROW being closer than 200 meters.

Road Development Plan

A Road Development Plan accompanying the Bipole III EIS would be a useful mechanism to answer many questions and assist Manitoba in permitting the project. In the Road Development Plan the location and type of the roads (summer, winter, gravell) required for construction and maintenance would be shown

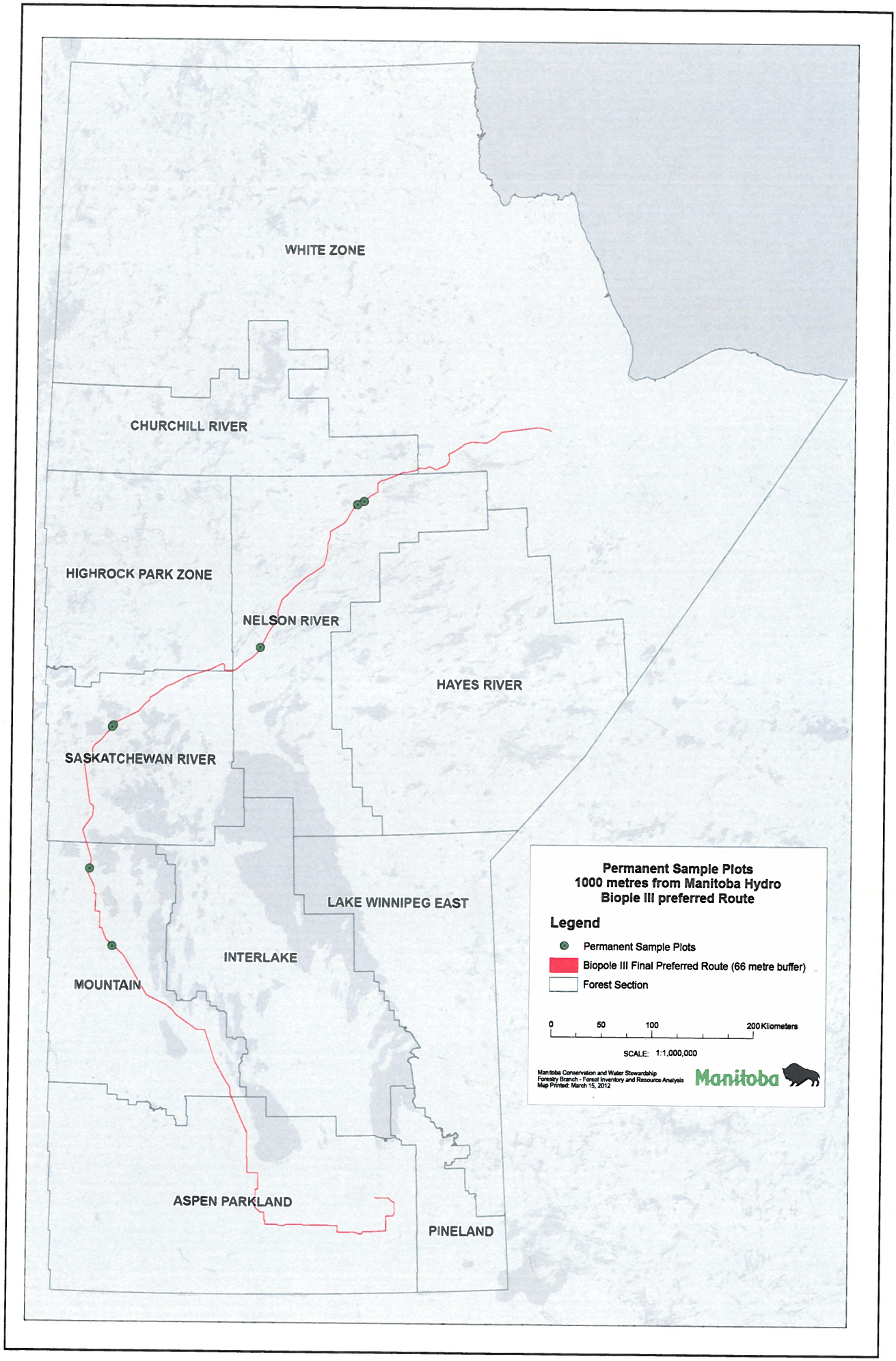
spatially. The water crossings along these roads would also be shown including the type of structure (bridge, culvert, frozen winter) and general installation practice.

Tending Plan

A tending plan accompanying the Bipole III EIS would be a useful mechanism to answer many questions and assist Manitoba in permitting the project. A general discussion on the tending options, application mechanisms and selection criteria is required. Specific prescriptions are not required in the tending plan. The chemical tending portion should include the chemical types, application mechanisms and the application rates. A separate discussion is required on the tending options and selection criteria for areas within sixty metres of water. Annual permits will be issued as per the tending plan and changes from the tending plan will require amendments to the Bipole III EIS. The annual tending plan that shows the actual prescriptions should be developed prior to late December and shared with Manitoba so plans can be made to Consult on it this with 1st Nation communities prior to operations the following year (April to March).

Harvesting Trees Close to Water

In Manitoba the harvesting trees close to water is usually subject to the Forest Management Guidelines for Riparian Management Areas. I would encourage Manitoba Hydro to include a statement that they will follow this guideline by vetting their operational harvest plans through the Integrated Resource Management Team in each of the Regions where their activities take them.


WHITE ZONE
CHURCHILL RIVER
HIGHROCK PARK ZONE
NELSON RIVER
HAYES RIVER
SASKATCHEWAN RIVER
LAKE WINNIPEG EAST
INTERLAKE
MOUNTAIN
ASPEN PARKLAND
PINELAND
Permanent Sample Plots
1000 metres from Manitoba Hydro
Biopole III preferred Route
Legend
Permanent Sample Plots
Biopole III Final Preferred Route (66 metre buffer)
Forest Section
0
50
100
200 Kilometers
SCALE: 1:1,000,000
Manitoba Conservation and Water Stewardship
Forestry Branch - Forest Inventory and Resource Analysis
Map Printed: March 15, 2012
Manitoba

Dagdick, Elise (CON)

From: Bezak, Dave (CON)
Sent: March-09-12 11:08 AM
To: Dagdick, Elise (CON)
Cc: Molod, Rommel (CON)
Subject: FW: Manitoba Hydro - Bipole III Transmission Project (5433.00)

Elise, air-quality related comments from the Air Quality Section on the above development proposal are noted below. Thanks for the opportunity to review. DB.

From: Molod, Rommel (CON)
Sent: March-09-12 9:00 AM
To: Bezak, Dave (CON)
Subject: Manitoba Hydro - Bipole III Transmission Project (5433.00)

Hi Dave. These are my comments on the proposal:

- Potential air quality concerns that may be associated with the project such as dust, noise and air emissions (ex. vehicle, power generators, etc.) are adequately addressed in the submission specifically in the submitted Environmental Protection Plan.

- The potential ozone generation along the HVDC transmission line (corona effects on the surface of the high voltage transmission line) is very low when compared with the typical ambient concentration.

Rommel

Rommel Molod
Air Quality Specialist
Climate Change and Environmental Protection Division
Manitoba Conservation and Water Stewardship
Suite 160 123 Main Street
Winnipeg MB R3C 1A5
T (204) 945-7047
F (204) 945-1211

Manitoba

Infrastructure and Transportation
Highway Planning and Design Branch
Environment Section
14th Floor – 215 Garry St., Winnipeg, Manitoba R3C 3P3
T (204) 945-5225 F (204) 945-0593

March 16, 2012

Tracey Braun, M. Sc.
Director, Environmental Assessment & Licensing Branch
Manitoba Conservation
123 Main St., Suite 160,
Winnipeg, MB R3C 1A5

RE: Manitoba Hydro Bipole III Transmission Project: A Major Reliability Initiative
Client File No 5433.00

Dear Director Braun:

MIT has reviewed The Environment Act Proposal noted above and would like to raise the following concerns:

- Any new, modified or relocated access, including change in use of access, to a Provincial Trunk Highway (PTH) or Provincial Road (PR) will require a permit from the Highway Traffic Board (for PTHs) or MIT Access Management Section (for PRs). Contact for Access Management is:
    - Kevin Nimchuk
      Senior Access Management Analyst
      Access Management Section
      MIT Highway Planning and Design Branch
      (204) 945-5658

- Any change in use of the land or the buildings, or to place, construct or alter any structures, above or below ground, including signs, within 125 ft (for PTHs and PRs) or 250 ft (for Limited Access Highways) from the edge of the right of way of any departmental road, also will also require permit from MIT (for PRs) or Highway Traffic Board (for PTHs).

- A permit will be required from MIT for any planting placed within 50 ft from the edge of the right of way of any PTH or PR.

- Any changes into drainage patterns and/or discharging into a departmental road's ditch will require a permit from MIT and/or a Provincial Drainage License from Manitoba Conservation.

- Any temporary construction access will be removed once the project is completed. Rehabilitation of all disturbed areas within the MIT's right-of-way and controlled area is required after the project completion.

- The proposed transmission route crosses and parallels several PRs and PTHs all throughout the Province. Agreements with MIT must be obtained prior to any tendering of lines within the PR's and PTH's right-of-way. The following are the contact information for MIT Regional Offices:

    - Region 1 – Eastern Region
      316-323 Main Street
      Steinbach, MB R5G 1Z2
      (204) 346-6266
    - Region 2 – South Central Region
      25 Tupper Street N
      Portage la Prairie, MB R1N 3K1
      (204) 239-3292
    - Region 4 – West Central Region
      257 Industrial Road
      Dauphin, MB R7N 3B3
      (204) 622-2061
    - Region 5 – Northern Region
      11 Nelson Road
      Thompson, MB R8N 0B3
      (204) 677-6540

- Also, please coordinate with the MIT Regional Offices (for PRs and PTHs), Rural Municipalities (for Municipal and Main Market Roads) and MIT Water Control and Structure Branch (for bridges) regarding weight loads during construction.

- MIT Region 1 – Eastern Region raised the following specific concerns:

    - What is the impact to the other utilities at highway crossings?
    - PTH 59 will be upgraded to a 4-lane at some point. The towers/structures may be affected and may need relocating. This would be in the vicinity north of Tourond.
    - Is there room to span PTH 75 at the Red River? The river is very close to PTH 75 and the river bank is unstable.
    - For these particular concerns, please contact Murray Chornoboy, Regional Planning Technologist, at (204) 346-6287.

- MIT Region 4 – West Central Region raised the following specific concern:

    - The aerial photo shows a portion of PTH 10 close to the eroded banks of the Red Deer River, just south of the Red Deer River Provincial Park (see Attachment A). This portion of PTH 10 may have to be relocated in the future due to further river

bank erosions. The location of the tower structure near this area may need to be set back to accommodate future highway right-of-way relocation to the west.

  - For this particular concern, please contact Forouzandeh Kasrai, Regional Planning Technologist, at (204) 622-2307.

- As identified by MIT Materials Engineering Branch, quarry mineral withdrawal in the following areas will be affected by the project (see Attachment B). The resources in these townships are required for future construction and maintenance projects in Region 4 and will be sterilized by the proposed Hydro lines, as mining is not permitted under the lines. Backhoe surveys will be performed on these resources this summer.

  - Twp 22-11W
  - Twp 22-12W
  - Twp 23-12W
  - Twp 25-13W
  - Twp 26-13W
  - Twp 30-18W
  - Twp 32-20W
  - Twp 49-25W
  - Twp 30-17W
  - Twp 30-18W
  - Twp 31-19W
  - Twp 32-20W
  - Twp 33-21W
  - Twp 33-25W
  - Twp 44-25W
  - Twp 45-25W

  Contact person at the MIT Material Engineering Branch is:

  - Craig Drimes
    Manager of Aggregate Resources
    MIT Materials Engineering Branch
    (204) 945-1933

Thank you very much for providing us the opportunity to review the proposal.

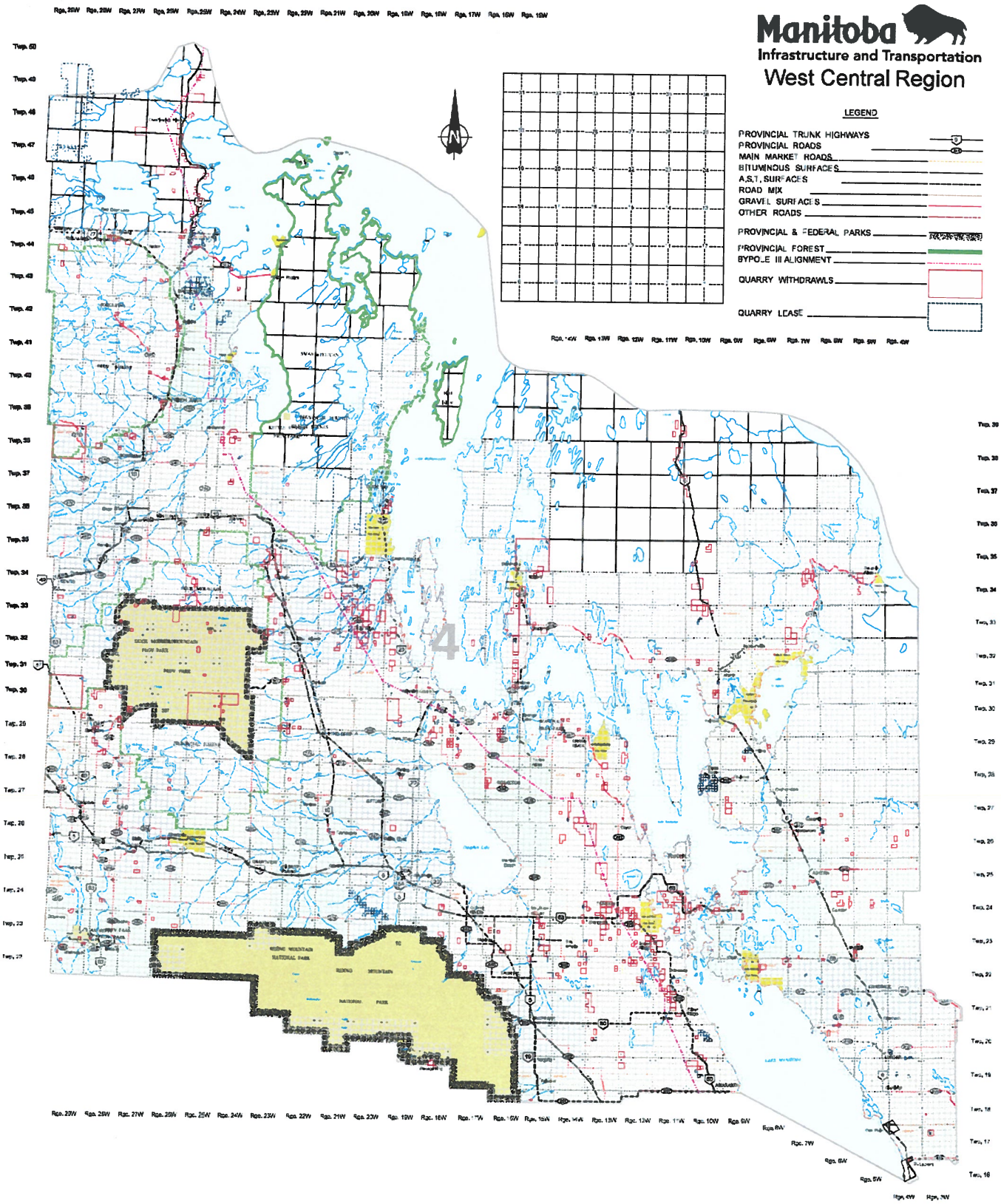
Sincerely,

Christopher Clary-Lemon, P.(Eng., P. E.
A/Manager of Environmental Services

CC: Murray Chornoboy, MIT Region 1
Wes Turk, MIT Region 2
Forouzandeh Kasrai, MIT Region 4
Vanessa Nedd, MIT Region 5
Kevin Nimchuk, Access Management Section
Craig Drimes, Materials Engineering Branch

Attachment A
Aerial Photo showing PTH 10 adjacent Red Deer River

Attachment B
Quarry Withdrawal Areas in Region 4



Dagdick, Elise (CON)

From: Schindler, Dennis (MAFRI)
Sent: March-26-12 11:08 AM
To: Dagdick, Elise (CON)
Subject: RE: Bipole III TAC Review

MAFRI has reviewed the EIS as well as the attached relevant Technical Reports and has no concerns.

Dennis T. Schindler, P. Ag.
Land Use Specialist
Land Use Planning Knowledge Centre
Manitoba Agriculture Food and Rural Initiatives
Address: 712 Dugald Rd. Box 160 Dugald, MB R0E 0K0
Electronic Mail: dennis.schindler@gov.mb.ca
Phone: 204.391.3079
Fax: 204.853.5177

From: Dagdick, Elise (CON)
Sent: March-20-12 1:07 PM
To: Schindler, Dennis (MAFRI)
Subject: RE: Bipole III TAC Review

Hi Dennis,

An extension till the end of the week is not a problem.

Elise Dagdick
Environmental Assessment and Licensing Branch
Manitoba Conservation and Water Stewardship
Suite 160, 123 Main St., Winnipeg, MB
R3C 1A5
Ph: 204-945-8173
Fax: 204-945-5229

From: Schindler, Dennis (MAFRI)
Sent: March-20-12 10:14 AM
To: Dagdick, Elise (CON)
Subject: FW: Bipole III TAC Review

Sent this to Tracey in error. Please advise if extension is possible. I have just returned from holidays.

Dennis T. Schindler, P. Ag.
Land Use Specialist
Land Use Planning Knowledge Centre
Manitoba Agriculture Food and Rural Initiatives
Address: 712 Dugald Rd. Box 160 Dugald, MB R0E 0K0
Electronic Mail: dennis.schindler@gov.mb.ca
Phone: 204.391.3079
Fax: 204.853.5177

Canadian Environmental Assessment Agency
101 – 167 Lombard Avenue
Winnipeg, Manitoba R3B 0T6

Agence canadienne d'évaluation environnementale
167, avenue Lombard, bureau 101
Winnipeg (Manitoba) R3B 0T6

March 16, 2012

CEAA File No.: MP2008-021
MC File No.: 5433.00

Ms. Elise Dagdick
Manitoba Conservation
Environmental Stewardship Division
123 Main Street, Suite 160
Winnipeg, MB R3C 1A5

Dear Ms. Dagdick:

Subject: Bipole III Transmission Project

I have completed a survey of federal departments with respect to determining interest in the project noted above. I can confirm that the project information that was provided has been reviewed by all federal departments with a potential interest. I am enclosing copies of the relevant responses for your file. Based on the responses to the survey the application of the *Canadian Environmental Assessment Act* (the Act) by a federal authority will not be required for this project.

Environment Canada provided a letter, dated March 14, 2012, containing advice regarding migratory birds, species at risk, wetlands, native prairie, reclamation and invasive species (see copy attached). They also provided electronic copies of several useful documents (see attached).

Transport Canada determined that the transmission line component of the project is unlikely to require approvals under subsection 5(2) of the *Navigable Waters Protection Act.* Providing that any crossings associated with access routing meet the Minor Works and Waters (NWPA) Order, or follow the parameters of section 50 of the *Exclusions List Regulations* under the Act, access routing will not trigger the Act.

A list of the appropriate federal contacts is attached. Please note that the project information was also reviewed by Fisheries and Oceans Canada, Aboriginal Affairs and Northern Development Canada, Agriculture and Agri-Food Canada, Natural Resources Canada and Health Canada as part of the federal coordination process.

Thank you for your effort to ensure coordination and close communication between provincial and federal levels of government. If I can be of further assistance, please feel free to contact me at (204) 984-3233 or by e-mail at: heather.flynn@ceaa-acee.gc.ca.

Sincerely,

Peter Boothroyd
Project Manager

Encl.

c.c.: Mr. Pat McGarry – Manitoba Hydro
Ms. Krista Flood – EC
Mr. Rick Grabowecky – HC
Mr. Regent Dickey – MPMO
Mr. Jeff Moyer – DFO
Mr. Dan Benoit – AANDC
Ms. Crystal Dyson – AAFC

Federal Contacts List

Project: Bipole III Transmission Project
Proponent: Manitoba Hydro
CEAA File No.: MP2008–021
MC File No.: 5433.00

Transport Canada
Holly Poklitar
3rd Floor, 344 Edmonton Street
Winnipeg, Manitoba R3C 0P6
Telephone: 204-983-8807
Fax: 204-983-5048
E-mail: holly.poklitar@tc.gc.ca

Environment Canada
Krista Flood
200-4999 98th Avenue NW
Edmonton, AB T6B 2X3
Telephone: 204-984-8318
Fax: 204-983-5692
E-mail: rick.grabowecky@hc-sc.gc.ca

Canadian Environmental Assessment Agency
Peter Boothroyd
101-167 Lombard Avenue
Winnipeg, Manitoba R3B 0T6
Telephone: 204-984-8020
Fax: 204-983-7174
Email: peter.boothroyd@ceaa-acee.gc.ca

Proposal also reviewed by:
Fisheries and Oceans Canada, Aboriginal Affairs and Northern Development Canada, Health Canada, Agriculture and Agri-Food Canada and Natural Resources Canada.

Environment Canada Environnement Canada

ENVIRONMENTAL PROTECTION
PRAIRIE & NORTHERN REGION
Room 200, 4999-98 Ave. NW
Edmonton, Alberta
T6B 2X3

Our File No.: 4194-10-5/3081
Your File No.: MP2008-021

March 14, 2012

Peter Boothroyd
Project Manager
Prairie Region
Canadian Environmental Assessment Agency
Suite 101, 167 Lombard Ave
Winnipeg, MB R3B 0T6

Dear Mr. Boothroyd:

RE: BIPOLE III TRANSMISSION PROJECT – MANITOBA HYDRO

Environment Canada (EC) has reviewed the Bipole III Transmission Project Environmental Impact Statement (EIS) prepared by Manitoba Hydro (December 2011). EC would like to take this opportunity to provide specialist advice and/or expert information or knowledge on the proposal, with a focus on federal statutes, regulations, policy and associated program concerns as defined by EC's mandate.

EC appreciates the opportunity to provide feedback on this matter. In general, 6 areas of concern/comment were identified:

(1) Migratory Birds
(2) Species at Risk
(3) Wetlands
(4) Native Prairie
(5) Reclamation
(6) Invasive Species

(1) Migratory Birds

EC's mandate includes the protection of migratory birds and their habitat.

Appendix 1A, Applicable Legislation, page 1A-1, EC notes that the proponent is aware of the *Migratory Birds Convention Act* (MBCA) and has included a summary of Section 5(a) and Section 5.1: "Except as authorized by Regulation, no person shall without lawful excuse be in possession of a migratory bird or nest. No person shall deposit a substance or permit a substance to be deposited in any place frequented by migratory birds if the substance is harmful to migratory birds."

EC reminds the proponent of the Regulations pursuant to the *MBCA*, which provide for the conservation of migratory birds and the protection of their nests and eggs. Section 5 of the regulations prohibits the hunting of a migratory bird except under authority of a permit, where "hunt" means chase, pursue, worry, follow after or on the trail of, lie in wait for, or attempt in any manner to capture, kill, injure or harass a migratory bird, whether or not the migratory bird is captured, killed or injured. Section 6 of the Regulations prohibits the disturbance, destruction, or taking of a nest, egg or nest shelter of a migratory bird.

EC notes in section 8.2.7.2, Habitat Alternation, page 8-136, that the proponent plans to restrict northern clearing and construction activities to the winter months (with the exception of year-round construction disturbances at the converter station, borrow areas, and excavated material disposal areas) and that clearing will be limited to the winter months on the southern portion of the route (page 8-165). The EIS indicates throughout section 8.2.7.4, Environmental Effects Assessment and Mitigation that project activities and vegetation management will be restricted (but not avoided) from April 1 to July 31, but also that construction and vegetation management on the southern portion of the route may occur year-round, including during the spring and summer nesting season. Further to this, EC notes on page 8-133 that the EIS lists "mortality or nest loss due to construction or maintenance during the spring nesting season" as a project related effect on migratory birds. This inadvertent, though reasonably predictable, disturbance or destruction of migratory bird nests and eggs is known as *incidental take* and is illegal.

EC provides the following recommendations as general guidelines for industry to protect the great majority of migratory birds while realizing the practicalities of development activities on the landscape. However the onus remains with the proponent to comply with the legislation.

1. To minimize disturbance to breeding migratory birds in the northern Parkland and Boreal ecozones of Manitoba, in areas where migratory birds may be nesting, EC recommends that habitat destruction activities (e.g. vegetation clearing and management, construction, reclamation, etc.) for areas greater than 50 hectares (such as this project) should avoid at minimum the period between April 1 and August 31, to minimize population level effects to breeding birds.

2. To minimize disturbance to breeding migratory birds in the Prairie and southern Parkland ecozones of Manitoba, in areas where migratory birds may be nesting, EC recommends that habitat destruction activities (e.g. vegetation clearing and management, construction, reclamation, etc.) avoid at minimum the period between April 15 and July 31.

3. If an individual has a priori knowledge of an active nest, at any time during the year, it must be protected with a suitable species-appropriate buffer until the young have fledged.

4. Where a migratory bird shows site fidelity and returns to the same nest in subsequent years, the nest is considered active, and should be protected, throughout the year.

5. Wetlands attractive to breeding migratory birds (e.g. those containing water) should not be cleared/destroyed at minimum between April 1 and August 31. Canada geese and Mallards may nest early and broods of waterfowl and waterbird species are dependent upon wetlands throughout August and beyond.

(2) Species at Risk

The federal *Species at Risk Act* (SARA) is directed towards preventing wildlife species from becoming extinct or lost from the wild, helping in the recovery of species that are at risk as a result of human activities, and promoting stewardship. The Act prohibits the killing, harming or harassing of listed species; the damage and destruction of their residences; and the destruction of critical habitat.

EC reminds the responsible authority of their obligations under section 79(1) and 79(2) of the SARA.

> "Every person who is required by or under an Act of Parliament to ensure that an assessment of the environmental effects of a project is conducted must, without delay,

notify the competent minister or ministers in writing of the project if it is likely to affect a listed wildlife species or its critical habitat."

"The person must identify the adverse effects of the project on the listed wildlife species and its critical habitat and, if the project is carried out, must ensure that measures are taken to avoid or lessen those effects and to monitor them. The measures must be taken in a way that is consistent with any applicable recovery strategy and actions plans."

a) Birds

Section 6.2.7.6, Existing Environment at Project Components – HVdc Transmission Line, page 6-109, mentions that during the 2009 and 2010 surveys the Canada Warbler, Common Nighthawk, Ferruginous Hawk, Golden-winged Warbler, Least Bittern, Olive-sided Flycatcher, Red-headed Woodpecker, Rusty Blackbird, Short-eared Owl, Whip-poor-will, and Yellow Rail were found within the local study area. All of these species, with the exception of Whip-poor-will and Ferruginous Hawk, were identified specifically in close proximity to the HVdc transmission line. Olive-sided Flycatcher and Rusty Blackbird were also identified near the Keewatinoow converter station, AC collector lines and construction powerlines, Keewatinoow construction camp, borrow sites and excavated material disposal areas (pages 6-110 to 6-111). Section 6.2.7.4, Species at Risk, page 6-99, mentions there is potential for Burrowing Owl, Loggerhead Shrike and Sprague's Pipit, to also occur in the project area. Whooping Crane, Piping Plover, Red Knot, Ross's Gull, Peregrine Falcon, and Chimney Swift may occur in the project area, though the EIS indicates that they are unlikely nesters, rare transients, or have breeding locations that would not be affected by the project. In addition to these species, EC notes that the Bobolink, Barn Swallow and Horned Grebe may also be present in the project area.

The proponent has referenced EC's setback guideline document "*Petroleum Industry Activity Guidelines for Wildlife Species at Risk in the Prairie and Northern Region*" and has described setbacks in the EIS, though has not indicated the dates for setbacks in the EIS.

EC reminds the proponent that recommended setbacks for Ferruginous hawk nests and Burrowing Owl nests and roosts are in effect year round. Furthermore, setbacks for Burrowing Owls apply to nests and roosts for 2 full years following the last known month of occupation.

In addition to the setbacks described in the *Petroleum Industry Activity Guidelines for Wildlife Species at Risk in the Prairie and Northern Region* document, EC recommends the following minimum setback distances from nests (unless otherwise indicated) for high intensity activities:

Barn Swallow	**May 1 to August 31**	**100 m**
Bobolink	**May 1 to August 31**	**200m**
Canada warbler	**May 1 to July 31**	**300 m**
Chimney swift	**April 1 to August 31**	**100 m**
Common nighthawk	**May 1 to August 31**	**200 m**
Golden-winged warbler	**May 1 to July 31**	**300 m**
Horned grebe	**April 1 to August 31**	**100 m from the high water mark of the wetland or waterbody containing the nest**

Olive-sided flycatcher	**May 1 to August 31**	**300 m**
Whip-poor-will	**May 1 to August 31**	**100 m**

In addition, EC's recommended setback for the Rusty Blackbird has been updated. EC currently recommends a minimum 300m setback from active nests from May 1 to July 31.

As several species at risk in the project area have sensitive periods that extend beyond July 31st, EC recommends that habitat destruction activities, (including, any vegetation clearing or maintenance, construction, etc.) avoid the period from April 1 - August 31, to reduce the impacts on both species at risk and migratory birds.

b) Amphibians and Reptiles

Section 6.2.8.6, Existing Environment at Project Components, page 6-122, notes that Northern Leopard Frogs were observed along the transmission line route and suitable breeding habitat is found throughout the project study area (page 6-123). Section 8.2.8.4, Environmental Effects Assessment and Mitigation, page 8-200, notes that Northern Prairie Skink were not observed, but potential tracks were observed both within the ROW and near the ROW and on page 6-122 it mentions suitable habitat exists within the St.Claude/Assiniboine River area. Appendix 6A, Table 6A-7, page 6A-81, also notes that Snapping Turtle also has the potential to occur in the project area.

EC notes that the construction and ROW maintenance at wetland habitats are planned to occur in fall or winter, outside of peak breeding periods for Northern Leopard Frog, and that where possible, a vegetation buffer of 30 m will be retained around any identified breeding/wetland areas that occur along the Project right-of-way (p. 8-203). **For Northern Leopard Frog, EC recommends a year-round 400 m setback from both breeding ponds and wintering sites**.

EC notes on page 8-201, that a 100 m buffer will be maintained around sandy-soil habitat polygons (suitable habitat for Northern Prairie Skink) where intercepted by the Project right-of-way, and that towers will be located 200 m from any observed or located skink nests. This follows our recommended setback of 200 m from burrows year-round.

No setbacks were described for Snapping Turtle in the EIS. **EC recommends a year-round 400 m setback from potential nesting and wintering sites.**

c) Invertebrates

Section 6.2.9.4, Species at Risk – Table 6.2-15, page 6-128, lists the Pale Yellow Dune Moth, Dusky Dune Moth, Monarch, Dakota Skipper, Ottoe Skipper, Gold-edged Gem, White Flower Moth and Verna's Flower Moth as having distribution ranges in close proximity but not within the Project Study Area. Although known populations do not overlap the local study area, and none were observed during project surveys, suitable habitat exists in the project area.

Page 8-215 of the EIS indicates that "as sandy-soil prairie habitat consists predominantly of low-growth vegetation, complete clearing is not required at these sites during the construction of the transmission line right-of-way", and on page 8-214 that "as prairie habitat consists predominantly of low-growth vegetation, maintenance of overhead vegetation during the operations phase is not extensively required at such areas". To this effect, this section of the EIS also indicates that sandy-soil prairies (that support many of the above listed invertebrates), and any native prairie remnants within known Dakota Skipper modeled habitat, will likely remain relatively unaffected along the transmission line right-of-way during the construction or operation phase of the Project, respectfully. The proponent also plans to avoid suitable habitat patches, where feasible, and to maintain a 30 m vegetation buffer around sandy-soil prairie habitat where intercepted by the Project right-of-way (pages 8-215 and 8-216).

For the above listed invertebrate Species at Risk, with the exception of Monarch, EC recommends a year-round 100 m setback from suitable habitat and occupied host plants. For Monarch, EC recommends a 30 m setback from occupied host plants from June 1 to Sept 30.

d) Plants and Lichen

Section 6.2.5.4, Species on Conservation Concern, pages 6-59 to 6-62, lists the Rough Purple False-foxglove, Small White Lady's slipper, Smooth goosefoot, Hairy Prairie Clover, Riddell's Goldenrod and Flooded Jellyskin (a lichen) as species known to occur within the Project Study Area, although none of these species were found along the transmission line route mentioned on page 6-68. This page of the EIS also indicates that Hairy Prairie-Clover was however, observed at one location in the Local Study Area of the transmission line route, where 12 individuals were counted in a prairie habitat, but does not indicate the distance of these individuals from the right of way.

For the construction of transmission lines or communication towers requiring soil disturbance, vehicle traffic and/or reclamation, EC recommends a 300 m buffer from all detectable individuals of SARA and COSEWIC – listed plant species. For above ground transmission lines, EC recommends a 30 m buffer (see EC's *Activity Setback Distance Guidelines for Prairie Plant Species at Risk).*

e) Mammals

i. *Wolverine and Grey Fox*

A wolverine was observed and wolverine tracks were observed in a number of locations in the project area. Section 6.2.6.6, Existing Environment at Project Components, pages 6-89 and 6-90, states it is anticipated that the HVdc transmission line, AC collector lines and construction power line components, converter station, construction camp and borrow sites may overlap with wolverine home ranges. Table 6A-4, page 6A-42, also lists the Grey Fox as having the potential to be present in the project area.

EC recommends a year-round 500 m setback from Wolverine dens, and a 200 m setback from Grey Fox dens.

ii. Boreal Woodland Caribou

EC recently released a draft Recovery Strategy for the Woodland Caribou Boreal Population in Canada. The Bipole III HVdc transmission line final preferred route overlaps with three herds identified as a "Self-Sustaining Local Populations" in this recovery strategy (Reed, Wabowden and Wapisu herds) and one herd identified as, "As likely as not Self-Sustaining" and "Remaining Local Populations" (The Bog herd). Respectively, these herds have 74%, 72%, 76% and 84% of their range remaining as undisturbed habitat (Appendix F-1 and Appendix F-3b Draft Recovery Strategy)

The draft recovery strategy indicates that jurisdictions will need to show how, over time, they will manage the land to ensure that caribou range is not disturbed beyond a level that jeopardizes the recovery of boreal caribou. The draft strategy states that for Self-Sustaining Local Population herds, critical habitat is identified as 65% undisturbed habitat within the range of the local population. The draft strategy also states that for Remaining Local Populations where the amount of undisturbed habitat is 65% or more, the amount of critical habitat is 65% undisturbed habitat within the range of the Boreal population.

Section 8.2.6.3, Valued Environmental Components - Caribou, pages 8-87 to 8-89, mentions that Manitoba Hydro has collaborated with Manitoba Conservation on a number of strategic monitoring and research initiatives to acquire current Boreal Woodland Caribou data and as a result of this monitoring "significant new information allowing for a more accurate characterization of local

populations in the Project Study Area" is available. The proponent has characterized Boreal Woodland Caribou use of the project area by three herds (Reed, Wabowden and the Bog), and has identified core winter use and known and potential calving areas for each.

EC acknowledges on page 8-90 that the "Preliminary Preferred Route selection was considered to be the optimal route from a caribou perspective", and on page 8-89 that the transmission line route was selected to minimize "intersection with local populations, their calving and calf-rearing areas, core winter use areas, and/or other potential critical habitat," and to follow, "where possible, the existing linear development and disturbed areas" (page 8-90).

EC also notes however, that in the Wabowden range area, in order to "accommodate competing resource interests" the Final Preferred Route is "not a preferred alternative from the caribou SSEA [Site Selection Environmental Assessment] perspective" (page 8-90). In this area, the Final Preferred Route bisects a presently unfragmented core winter use area and known calving areas in an otherwise highly fragmented region (page 8-97). The EIS indicates that "caribou in the Project Study Area show considerable fidelity to previously used calving areas in this area (Bipole III Caribou Technical Report)" (page 8-83) and that "the expected residual effects [of the project on Boreal Woodland Caribou] relate primarily to potential increase in predation rates, especially in areas where the HVdc line bisects or intersects known core winter use areas and known calving areas" (page 8-129).

EC concurs with the concerns noted by the proponent with respect to bisecting or intersecting known core winter use areas and known calving areas. EC encourages the proponent to consult with Manitoba Conservation in order to investigate other options that would avoid bisecting these key caribou areas.

EC notes on pages 8-99 and 8-100 that the proponent plans to implement mitigation measures including: winter construction; maintenance of natural low tree cover and development of natural vegetation corridors in core winter use areas and known and potential calving areas in Wabowden and The Bog ranges; access control where the transmission line bisects core use areas in the Wabowden range; limited development of snowpack trails in core winter areas; limiting recreational use and travel along the right-of-way in the core winter use areas and known and potential calving areas; rehabilitation of project staging areas; and long term monitoring of boreal caribou populations and wolves, with adaptive management plans.

In addition to these measures, EC recommends reduction of sight lines along the ROW, avoidance of late winter construction in core winter use and calving areas, and restoration of cleared areas (with natural low tree cover) along the ROW throughout caribou ranges. EC also recommends that, in addition to managing access within caribou habitats, that access management measures be applied within the Project area wherever possible in order to minimize access (and thus opportunities for movement of predators) into caribou habitat.

Monitoring of Species at Risk

EC notes that the proponent plans to also monitor threatened and endangered bird species occurrences at locations where species at risk were observed, or where they may be found during construction. Section 8.2.7.6, Follow-up, page 8-184, mentions the proponents monitoring plans which include assessments of the effectiveness of setback distances, and the occurrences of bird-wire collisions, vehicle collisions and bird electrocutions. Adaptive management is also planned. **EC recommends that monitoring and adaptive management plans include all species at risk observed or found during construction (not just birds and boreal woodland caribou).** EC is interested in receiving any reports that are produced from these monitoring programs.

(3) Wetlands

EC notes that while the HVdc transmission line route was selected to avoid wetlands and waterbodies where possible, page 8-69 states "bog, fen and marsh wetlands were identified along the transmission line right-of-way and cover approximately 1,456 ha", and page 6-66 classifies those into 272 ha of bog, 1046 ha of fen, and 138 ha of marsh wetlands. Bog and fen wetlands were also identified for other project components, with several open bog areas in the area of the Keewatinoow Converter Station (page 6-70), 54 ha of bog and 37 ha of fen along the Long Spruce to Henday transmission line, 544 ha of bog in the northern collector line ROW and 6 ha of bog along the construction power line ROW (page 6-71); and 137 ha of bog within the northern ground electrode project footprint (page 6-72). Additional wetland areas were identified at the borrow sites (41 ha) and excavated material placement sites (29 ha).

EC notes on page 8-70 that 535 ha of patterned fen wetlands within the transmission line ROW will be avoided and/or buffered to prevent any project disturbance to these sensitive plant communities.

With respect to the other wetlands listed above, however, EC reminds the proponent of The *Federal Policy on Wetland Conservation (FPWC),* which promotes the wise use of wetlands and protection through adequate consideration of wetland concerns in environmental assessments of development projects. The objective of the Policy is to promote the conservation of Canada's wetlands to sustain their ecological and socio-economic functions, now and into the future. The Policy goals promote the maintenance of the functions and values derived from wetlands throughout Canada, recognition of wetland functions in resource planning and economic decisions, enhancement and rehabilitation of wetlands in areas where continuing loss or degradation of wetlands or their functions have reached critical levels, and utilization of wetlands in a manner that enhances prospects for their sustained and productive use by future generations. Wetlands do not operate in isolation and adjacent upland habitats play an integral part in the maintenance of the functions of wetlands.

EC recommends that wetlands be avoided irrespective of whether they are wet or dry and that buffers or setbacks originate from the one in one hundred year high water mark. Minimum 100 m setbacks should be utilized from the edge of the ROW. For those wetlands where avoidance is not possible, the proponent should be consistent with the objectives of the *FPWC.*

EC recommends the proponent demonstrate how it will comply with the provisions of the *FPWC* and ensure that no net loss of wetland function occurs.

(4) Native Prairie

As noted in the EIS, native grasslands are among the most threatened ecosystems in North America and are known to support many species of conservation concern. An increase in the linear fragmentation of native prairie habitat can have multiple impacts on native species, including the greater spread of invasive species, and limiting habitat use for some native species.

Section 8.2.5.4, Environmental Effects Assessment and Mitigation – Native Grasslands/Prairies Areas, page 8-74 and 8-75 of the EIS indicates that "approximately 755 ha of the grassland cover type (considered agricultural pastureland) have the potential to be affected by construction [of the transmission line] and site decommissioning" while less than 10 ha of dry upland prairie, which have been identified as environmentally sensitive sites, and are known to support plant species at risk such as Hairy Prairie Clover, may also be affected.

Section 8.2.9.4, pages 8-214 and 8-215 of the EIS indicates that "as sandy-soil prairie habitat consists predominantly of low-growth vegetation, complete clearing is not required at these sites during the construction of the transmission line right-of-way" and that "as prairie habitat consists

predominantly of low-growth vegetation, maintenance of overhead vegetation during the operations phase is not extensively require at such areas". It also states that "native prairie remnants within known Dakota Skipper modeled habitat will likely remain relatively unaffected along the transmission line right-of-way during the operation phase of the Project".

EC requests clarification: As all native grassland/prairie habitat consists predominantly of low-growth vegetation, with the exception of tower locations and trees within the prairie, is vegetation clearing planned prior to or during project construction? With the exception of tall shrubs or trees within the prairie habitat, is vegetation maintenance/management planned during the operations phase of the project?

EC acknowledges the mitigation measures mentioned on page 8-75 that the proponent plans to use existing access roads and trails to the extent possible, and that where disturbance has occurred in areas prone to increased erosion, vegetation will be re-established using native species appropriate for the site. The EIS also indicates on page 8-80 that revegetation is planned in areas where vegetation has been completely removed.

EC recommends that the proponent limit disturbance to native prairie areas to the greatest extent possible, and restore all disturbed areas.

Finally, EC notes that while Native Grassland and Prairie Areas were identified as VECs in the EIS, the effects of the project on agriculture were minimized by routing the transmission line through pastures (grasslands) and less productive land (page iv of Executive Summary). EC reminds the proponent that grasslands are valuable habitat for many species at risk, and recommends that in the future native grasslands be avoided wherever possible.

(5) Reclamation

EC acknowledges in section 8.2.5.2, Potential Effects and Key Topics – Vegetation Diversity, page 8-66, the proponents plans to use native plant species for revegetation of disturbed areas with increased erosion potential or in areas where vegetation has been completely removed, and that revegetation will focus on the development of stable plant communities rather than the establishment of a few species.

EC recommends that all disturbed areas are reclaimed, and that reclamation seed mixes and materials mimic the dominant native vegetation in the surrounding area, be of local provenance, and be certified and inspected to be free of invasive and noxious weed materials.

(6) Invasive Species

Invasive species spread readily along disturbance corridors and once established are virtually impossible to eradicate. During the field assessments in 2010, 27 non-native species were observed throughout the Project Study Area; five of which were invasive plants (page 8-66). Given the proposed development of new disturbance corridors, and the potential future intrusion of several invasive species into sensitive areas, including native prairie and wetland areas or along watercourses, aggressive weed and invasive species management is required from cradle to grave.

EC acknowledges the proponent's commitment on page 8-66 to 1) wash and inspect all equipment prior to working in new sites; 2) take construction materials (i.e., gravel) from clean sources; 3) ensure ground cover materials are weed free prior to use; 4) carry out construction, maintenance and decommissioning activities during the winter months; and 5) develop an access management plan which considers means to limit the introduction of non-native plants during clearing and construction of the proposed transmission lines.

EC recommends that the proponent's plans to wash equipment are extended to all vehicles working in the project area, and that all vehicles are inspected and cleaned prior to any work on the project. In addition to this, EC recommends that all areas containing noxious weeds be clearly marked, so that equipment operators can easily recognize when passing through weed infested areas, and so that the spread of species from these areas can be monitored. EC recommends that equipment and vehicles are thoroughly cleaned after passing through these areas in order to avoid transporting seed to other areas.

In section 8.2.5.6, Follow-up, page 8-79, EC notes that the proponent plans to monitor non-native species. **EC recommends long-term monitoring and adaptive management of invasive species along the entire HVdc transmission line route and each of the project areas.**

EC also notes that while milkweed is one of the species listed as noxious in Manitoba, it provides habitat and food for the SARA-listed Monarch butterfly.

EC looks forward to continued dialogue and co-operation with respect to this Project. EC may also have additional questions and recommendations upon receipt of the above requested information. If you have any questions, please contact me at (780) 951 8946.

Sincerely,

(Original signed by)

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