

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: JIFFY CANADA
PROPOSAL NAME: JIFFY CANADA PEAT MINING
DEVELOPMENT (POPLAR CREEK,
HAUTE AND BOGGY RIVER BOGS)
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: MINING – PEAT HARVESTING &
PROCESSING OPERATIONS
CLIENT FILE NO.: 5461.00

OVERVIEW:

On May 8, 2010, Manitoba Conservation received a Proposal dated April 23, 2010, from Jiffy Canada to develop three peat lands in southeastern Manitoba to harvest peat and produce horticultural peat products. The targeted peat lands are Poplar Creek Bog, Haute Bog and Boggy River Bog located on Crown Land on all or parts of Sections 23, 24, 35, 26, 29 and 30, Township 4, Ranges 16E and 17E, and Sections 27, 28, 29, 32, 33 and 34, Township 7, Range 16E, and Sections 13, 14, 15, 22, 23 and 24, Township 7, Range 16E.

No public concern was received in response to the advertisement of this proposal in the Steinbach Carillon published on Thursday, May 27, 2010. The proposal was placed in the Public Registries at the Millennium Public Library, the Manitoba Eco-Network, Jake Epp Public Library (Steinbach) and the Conservation Library (Main). The proposal was distributed to TAC on May 25, 2010, with the closing date for TAC and Public comments on June 25, 2010.

COMMENTS FROM THE PUBLIC:

No public responses were received.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Canadian Environmental Assessment Agency

- Based on their staff survey, application of the *Canadian Environmental Assessment Act* with respect to this proposal is not required. Indian and Northern Affairs Canada has noted that the proponent has not contacted First

Nations which have lands in the area. The First Nations identified are Northwest Angle No. 37 and Shoal Lake No. 40.

Disposition: Comments regarding First Nations were forwarded to the proponent with a request for further information (see 'Request for Additional Information' section of this summary).

Manitoba Conservation, Aboriginal Relations Branch

This proposal incorporates three sites in the Southwest quadrant of Manitoba, and operations are in close proximity to four First Nations, two of which are within the 10 km study area established by SNC-Lavalin Environment (SNC). The project has an expected life span of fifty years – as such, careful consideration of both short term and long term impacts to the surrounding First Nation communities must be established.

The Government of Manitoba has a duty to consult in a meaningful way with First Nations, Métis communities and other aboriginal communities when any proposed provincial law, regulation, decision or action may infringe upon or adversely affect the exercise of a treaty or aboriginal right of the First Nation, Métis community or other aboriginal community.

As Manitoba Conservation is aware, if a thorough, adequate consultation process is not completed by the Government of Manitoba, the possibility of a successful legal challenge from First Nation and Aboriginal communities is significantly increased. The claim could be based on an unjustified infringement(s) of a Treaty or Aboriginal right.

We assume that we do not know all of the aboriginal rights that are beyond the assertions already made and therefore information gathering and consultation results in these issues being brought forward by the people who practice them and use the land. Issues are accommodated and building relationships in a process like this includes assessments on the following; Traditional Ecological Knowledge (TEK), capacity building and education, adequate information sharing and access, environmental impacts, heritage, cultural and significant sites, socio-economic impacts and public involvement in the process from the start.

The Poplar Creek Bog site proposal is not only in close proximity to the Buffalo Point First Nation's Traditional land, but part of the development will eventually cross over into those lands. This is one of the issues that must be discussed in full with the Buffalo Point First Nation prior to any decisions to accept this proposal can be made.

In addition, there is a potential issue with Traditional Land Use (TLU) of the Northwest Angle Indian Reserves 34C and 37C. Both of these reserves straddle Manitoba / Ontario boundaries, and are within the 10 km study area of SNC Lavalin Environment. The drainage from the bog runs towards the reserves, as shown from the topography of the area. Water quality issues, encroachment into areas where traditional plants are gathered,

and possible hunting territory are examples of some of the issues that need to be addressed with these First Nations.

The Haute Bog and Boggy River Bog sites raise similar concerns, with the added dimension of road construction to the sites. Both of these bogs are within six kilometers of the Shoal Lake Indian Reserve no. 40. This reserve currently has a Tripartite Agreement with the Province of Manitoba and the City of Winnipeg, dated 20 June 1989. This agreement specifically addresses land use in and around the reserve until 2049. Of particular interest are Sections 14, 15 and 20 that address commercial and industrial development in the area; Section 29 addresses road construction; and Section 30 addresses activities that have the potential to impact water quality.

Jiffy has stated that the quality and quantity of peat at these three sites would allow for continuous harvesting that could last up to 50 years. Activity of this duration will have a significant impact on the environment in the area, including, but not limited to, disrupting habit for large game; changing the soil moisture content, therefore effecting the types of flora able to grow in the area; and, ground water filtration for the Shoal Lake watershed.

With respect to the planning, designing and construction and subsequent maintenance of the proposed peat operations, the Aboriginal Relations Branch recommends that a communication process be established to provide two things; a) an opportunity for area residents to voice their concerns regarding impacts of the harvesting on their daily lives, and b) information packages such as the EIA documents and a resource person in each community that is easily accessible in order to be transparent and provide independent research opportunities for community members throughout the process. A communications process may identify problem areas, address conflict situations and resolve potential disputes.

The Branch recommends that traditional ecological knowledge be sought and applied where possible. The Branch recognizes that incorporating traditional ecological knowledge is essential to land and natural resource use planning.

The Branch recommends that all environmental licensing requirements be met and to develop partnerships with Aboriginal governments in the Environmental Assessment and have Aboriginal participation in any monitoring or technical committees.

Disposition: Comments regarding First Nations were forwarded to the proponent with a request for further information (see 'Request for Additional Information' section of this summary). On June 13th, 2011, Environmental Assessment and Licensing Branch was informed by Manitoba Department of Science, Technology, Energy and Mines, Mines Branch that Section 35 consultation was completed and no environmental concerns were identified with respect to Poplar Creek Bog

Manitoba Conservation, Climate Change and Environmental Protection Division

We would like to see a complete carbon analysis of the development. How much sequestered carbon is being removed? How much is being released and where? Carbon emissions resulting from the operation, etc?

Disposition: Comments can be accommodated as licence conditions.

Manitoba Conservation, Eastern Region Wildlife and Forestry

Section 3.1.2, Bog Roads and Service Areas: Please note that the onsite waste water management system must be registered with Manitoba Conservation prior to installation and must meet minimum requirements as outlined by the *Onsite Wastewater Management Systems Regulation 83/2003*.

Section 3.3.2, Final Decommissioning: States the following: “*At the time of decommissioning, Jiffy proposes to evaluate the possibility of leaving access roads intact for post-decommissioning monitoring and for use by other eventual land users, especially if doing so would result in potential economic use.*” The region does not support leaving access roads intact. All roads developed to access the site including roads within the site boundary should be decommissioned and removed once the operation is completed. Please note that there is no reference to how access to the private road will be controlled or restricted during the operation and suggest that a management plan be considered to address this issue.

Section 2.2.1, Poplar Creek Bog: “... parts of sections 23, 24, 25, 26, 29, and 30 of Township 4 Ranges 16E and 17E...” Which sections are in which range? The areas should be better defined – need to have text correspond with map locations.

Section 2.2.2, Haute Bog: Has there been any meaningful consultation with Shoal Lake #40 or #39? Has the Shoal Lake Watershed Advisory Group been consulted? Has the City of Winnipeg Water Authority been consulted? What are the results of those consultations and why are they not included in the report?

Section 2.2.3, Boggy River Bog: See Haute Bog comments

Section 3.1.1: Consider including consultation with the City of Winnipeg for crossing the aqueduct – not just MB Infrastructure and Transportation. The aqueduct is on private land and the C of W has specific requirements for allowing crossing and may not allow crossing if they so desire

Section 3.1.4 Tree Clearing: Merchantable timber needs to be assessed by MB Conservation and all applicable damage appraisal costs to be paid by the proponent

Section 3.3.1, Decommissioning: Tree planting of only site appropriate species from acceptable seed zones. One proposal is to turn the sites into cranberry farms – this is not appropriate/intended use of Provincial Forest Crown land?

Section 3.3.1.2, Tree Planting: 1,200 stems per ha is too low, natural pre-harvest conditions are typically higher and planting should be in the 2,000 to 2,500 stems per ha range. Will the plantations meet renewal standards as determined by Forestry Branch?

Section 4.3.1.2: Shoal Lake #40 members have extensive trapping and hunting networks through the area adjacent to their First Nation Reserve Lands that may be impacted by the development of the Boggy River and Haute Bogs. SL #40 Community is located in Ontario, but has significant MB interests therefore do not discount them because the community is located in Ontario. SL # 39 and 40 have significant unemployment challenges – has any consideration been given towards providing training and support for local first nations to secure employment

Section 4.3.1.7:

- Provincial Forests are more than trails and special plants, impacts to Annual Allowable Cut and loss of productive land has not been considered
- Forest Management has had, and continues to have, a significant presence in the area since the late 1800's
- Pocock Lake, not Popcock Lake

Section 5.2.4:

- Will the proponent be actively surveying for rare plant populations or relying on the Conservation Data Centre database?
- How effective is transplantation? Mycorrhizal associations between the plants and the soils in which they grow may not allow for successful transplantation.

Section 5.2.5:

- Some bird populations have critical nesting periods beginning in late February and early March – not just from May to August this needs to be refined
- Expand on the re-colonization program as outlined in this section
- Are birds the only wildlife species in the area? Have ungulates, other mammals, amphibians and reptiles been considered in the wildlife analysis? If these other groups have been considered why are they omitted from the report?
- Will the proponent be actively surveying for faunal populations or relying solely on the Conservation Data Centre database?

Section 5.2.7:

- Does the emergency protection plan include:
 - Environmental spill planning
 - Fire planning
 - Medical Evacuation
- Does the proponent plan to meet any third party certification or registration programs, such as CSA or ISO?

Section 6.1.4:

- "...significant economic..."
- In the event of a significant economic situation which finds the proponent unable to live up to its obligations to re-habilitate sites is there a plan to have funding put in trust to deal with the re-habilitation of the site?

What are the cumulative effects of the FPM, Premier, Jiffy, and other industrial developments on Crown Land in the Poplar Creek Bog area? Has this been examined and if so why isn't it included in the report?

Disposition: Some comments can be accommodated as licence conditions. Several comments were forwarded to the proponent for further information (see 'Request for Additional Information' section of this summary).

Manitoba Conservation, Environmental Operations

Section 3.1, Construction Phase:

- In addition to requiring submission of designs for construction phases, consideration should be given to requiring that provincial regulatory authorities be provided with 5 days notification prior to commencement of specific construction activities; including the construction of new drainage ditches with a combined length of greater than 200 m. The allowable discharge (volume flow rate) and water quality parameters may be specified by regulatory authorities based on environmental conditions at the time of the construction. During construction phases the risk of significant environmental impacts may be much higher than during operation phases. Notification will allow provincial regulatory agencies to establish specific parameters if required, in consideration of potential flood conditions and ecological parameters present at the time, and to inspect conduct inspection during construction.
- Construction of new drainage ditches should be scheduled to mitigate hydrograph and water quality impacts. During periods of new construction discharge from all sedimentation ponds (effluent) should be tested, on site, a minimum of once daily for turbidity, pH and electrical conductivity. A record should be kept of the results of the tests, and also the peak daily discharge the period should be recorded. Inspection during construction of new drainage ditches may be particularly important. There is substantial potential for hydrograph impacts and pollution of the receiving waterbody when new ditches are constructed. As indicated by Figure 5, page 19, of the Jiffy Environment Act Proposal during initial drainage of peatlands a large quantity of water is released rapidly. Also, loose peat accumulates in the ditches as they are cut. Much of this loose peat is transported with the drainage water. If the timing and sediment discharge to the receiving waterbody are not controlled significant impacts to the receiving waterbody could result.

Section 3.1.1, Access Roads:

- The proponent should be required to conduct annual inspections of roadways, and submit an annual inspection report on the observed environmental impacts to provincial regulator authorities. Substantial environmental impacts can be caused by access roads. Among these potential impacts are disruptions of natural drainage. It can be difficult to establish appropriate locations for culverts beneath access roads constructed on peatlands, because the patterns subsurface flow of water through peatlands may be difficult to identify. Also, roads crossing peatlands tend to sink, which reduces the effectiveness of culverts. Roadways can be sources of pollutants, particularly sediment pollution.

Section 3.1.2, Bog Roads and Service Areas:

- Stationary motors should have drip basins, and all facilities where potential contaminants or hazardous materials are stored should have secondary containment.
- All wastewater, including sewage and greywater, produced at the facility must be managed in a manner approved by provincial regulatory authorities.
- Periodic soils sampling and analyses for potential contaminants should be undertaken at service and infrastructure areas, and at locations in the peatland that received runoff from the drained peatland, including runoff from service and infrastructure areas. (Baseline plus every 4 years. To obtain significant results it is likely that replicate samples should be obtained. This is particularly important for baseline studies.)

Section 3.1.3.3, Sedimentation ponds:

- All drainage water should be routed through sedimentation ponds. Discharge from the sedimentation ponds (effluent) should be sampled on a cumulative volume basis. Every 600 m³ of water discharged from the drained peatland should be tested, on site, for turbidity, pH and electrical conductivity. All points of discharge to the environment should be tested. A record should be kept of the results of the tests, and also the peak discharge during the period should be recorded. The on-site testing of these parameters is a relatively easy task using electronic testing instruments. Based on flow estimates provided by the Jiffy Environment Act Proposal, cumulative discharge sampling of every 600 m³ will result in testing the discharge approximately once each day during construction of the drainage ditches, based on daily discharge shown by Figure 5, page 19, of the Jiffy Environment Act Proposal. Testing would be required for every cumulative precipitation of 10 mm, based on the discussion of the assumed runoff coefficient of 0.2 under section 3.2.7.2 of the Jiffy Environment Act Proposal. Therefore, there is assurance of testing during peak discharge events, and less frequently during dry weather flows.

Section 3.2.7.3, Peatland Drainage and Surface Runoff Water Quality:

- The proponent should monitor and sample the receiving water body in a manner that will detect non-point pollution.

- Replicate sampling may be necessary to obtain significant results for water quality samples of receiving waterbodies. This is particularly important for upstream control samples.
- During periods when the drained peatland discharges more than 600 m³/day the proponent should inspect areas of the receiving peatland for rill flow and erosion in areas where the discharge from the drained peatland flows at a depth of greater than 5 cm.
- The proposed design will discharge drainage water to an undisturbed peatland. Although this design may provide effective mitigation of hydrograph and water quality impacts, the design also raises some serious concerns for non-point pollution reaching the receiving surface waterbody (stream, river, lake).

The authors do not provide any site specific information to support the assumed type of flow and subsequent infiltration described in the last paragraph of section 3.2.7.3, which reads:

“Water discharged from the sedimentation ponds will spread out into area of the flat topography in the neighbouring peatland. Diffuse sheet flow will occur on the peat surface, and porous medium flow within the acrotelm. The flow is expected to dissipate in a radial pattern from the point of discharge, decrease in volume and intensity until no flow is observed at some distance from the outlet.”

Radial, diffuse sheet flow cannot be assumed without supporting site specific information. Ephemeral and permanent rills and watercourses are not uncommon on the surface of peatlands, even though the peatland may be described as level or uniformly sloped. These small channels in the peatland can convey surface runoff a considerable distance to a receiving surface waterbody. Moreover, the abundance of flowing rills and watercourses that may be present on a peatland may increase dramatically during precipitation events, during which period discharge from the drained peatland increases also. The result could be non-point pollution of the receiving water body. Sampling strategy for non-point pollution may entail establishing sampling stations along the length of the receiving water where the non-point discharges may occur.

Section 3.2.7.4, Surface Runoff Discharges from On-site Infrastructure:

- Runoff management should be required around all areas of the development, including service areas and infrastructure at the site. Runoff management may include perimeter ditches and berms, and detention ponds. The Jiffy Environment Act Proposal states:

“Surface runoff will be allowed to drain freely to the surrounding undisturbed vegetated lands, where it will infiltrate to the sub-surface or evaporate.”

The Jiffy Environment Act Proposal does not provide evidence that runoff from the on-site infrastructure will infiltrate or evaporate before reaching a receiving water body. Assumptions as to the behavior of surface runoff when released to

buffer zones and otherwise undisturbed lands should be supported by site specific observations and data. Moreover, it cannot be assumed that surface runoff from service and infrastructure areas will not contain pollutants that could contaminate the surrounding lands.

Section 3.3, Decommissioning Phase:

- Assessment of impacts to the natural peatland surrounding the site should be conducted, and appropriate remedial measures should be undertaken for erosion, contamination and other impacts that may be present. Overall, the decommissioning plan is not sufficiently detailed, and does not appear to be based on project specific potential impacts and site specific environmental features.

Cranberry and blueberry farming require alterations to the peatland which themselves would require environmental impact assessment / mitigation and decommissioning plans.

Disposition: These comments were forwarded to the proponent. Some comments can also be accommodated as licence conditions.

Manitoba Conservation, Pollution Prevention Branch

A discussion on GHG emissions from the proposed managed peat extraction may be required. With reference to The Environment Amendment Act (S.M. 2009, c. 25), potential GHG emissions will be taken into account during the evaluation of a proposal under the Act. A discussion and quantification of GHGs is essential not only in the assessment of the proposal but also in the inventory of Provincial GHG sources.

Disposition: Comments can be accommodated as licence conditions.

Manitoba Conservation, Parks and Natural Areas Branch

While it is not foreseen that any impacts will occur to Whiteshell Provincial Park which is just north of the Haute Bog and Boggy River Bog proposed developments the Branch has concerns with the way that the environmental impact assessment was conducted and reported in particular relation to alterations in drainage and impacts to vegetation and wildlife. These assessments were reported as being only site specific and confined to the boundaries of the peat lease.

There is evidence that the water regime in wetland and peat areas adjacent to peat mines are altered as a result of drainage during mining. This results in impacts to vegetation and local wildlife. It is not appropriate that impacts only be looked at in the specific development footprint (site specific), but they should be looked at on a broader scale. The 3km and 10km project study areas that were used to assess the human environment and physical environment should have also been used to the component specific environmental impact assessment.

Disposition: Comments regarding the impact of drainage on surrounding wetlands and peat lands were forwarded to the proponent for additional information (see ‘Request for Additional Information’ section of this summary).

Manitoba Conservation, Sustainable Resource and Policy Management Branch,

The Manitoba Government is undertaking the development of a provincial peatland strategy to assess the status of Manitoba peatlands, their importance in global climate processes in carbon sequestration and their value in relation to biodiversity. International research has indicated that peatlands are the most efficient terrestrial ecosystem in storing carbon and most important long term carbon store. The peatland strategy is a commitment from the Throne Speech (2009) and the strategy development process has just begun. Decisions on new peat mining development in the province should be postponed until the peatland strategy is further along in the process. This is especially warranted in areas of Southern Manitoba, as these areas are the southernmost peatland areas in Manitoba and are more accessible and easily targeted for development.

- Manitoba Water Stewardship is currently developing a provincial wetland policy. The Manitoba Water Council is also involved in publicly consulting on the policy. The policy will likely have implications for decisions that affect all provincial wetlands, including peatlands located on Crown land. The wetland policy should be finalized before peatland development approvals are formally approved.
- The Haute Bog and Boggy River Bog appear to be relatively pristine and untouched ecological areas (based on photographs included in the report), forming an intact, continuous peatland. Development of these bogs and associated access roads could open up the area to resource and recreational development in the area that would compromise the area’s ecological integrity. These areas may be worthy of consideration for special conservation and protected area status. More time is likely needed by the Department to determine the suitability of these areas for protection, especially given the development of a new peatlands strategy.
- The proponent has not included an adequate description of environmental effects of the development (as required in the provincial Environment Act Proposal Report Guidelines).
 - The report fails to include plant and wildlife surveys of the Haute Bog and Boggy River Bog, concluding that the areas are remote and not able to be accessed, but would be surveyed when access roads are built (p. 49). This does not appear to be an adequate reason for failing to undertake a vegetation analysis. Development of an access road would be permitted without knowing what vegetation is affected including rare and species of special concern.
 - The proponent has not included an assessment of the climate change implications of the proposed development. There is no discussion on the role of peatlands in climate change and associated carbon dioxide emissions resulting from peatland drainage.

- The report identified rare plants and special status plant species present in the Poplar Creek Bog, and likely in the Haute and Boggy Creek Bogs. The proponent is proposing a transplantation program and other mitigation measures. The Department's Wildlife and Ecosystem Protection Branch should be consulted for the appropriateness of these measures and impact on Manitoba's biodiversity and habitat conservation.
- Drainage of these bogs could have impacts on the watershed draining into Boggy Creek and the Lake Winnipeg watershed. Drainage changes could also affect drainage patterns around the Falcon Lake area, including flows from wastewater lagoons, which could impact Shoal Lake. Consultation with Water Stewardship on drainage and watershed issues is urged.
- The level of First Nations consultation is a concern (p. 56). Given the proximity of two of the bogs (Haute Bog and Boggy River Bog) to the Shoal Lake First Nation in Ontario (within 5 km), the First Nation should be consulted with regard to their traditional land use areas. The proponent did not contact the Shoal Lake First Nation. More engagement and consultation with the potentially affected First Nation is warranted. This could have consequences with respect to the Government's duty to consult. Consultation with other First Nations may also be warranted.
- The proposed development could potentially impact drainage and watersheds in Ontario and the State of Minnesota, given the proximity of two of the bogs to the borders (less than 10 km). It is recommended that both jurisdictions are informed of the proposed development and have an opportunity to comment.
- Based on the submitted proposal, it is not recommended that development proceed until further provincial government department discussions occur and progress is made on the provincial peatland strategy. If a decision is made to proceed with development, the Poplar Creek Bog would be preferred over the Haute and Boggy Creek Bogs. The Poplar Creek Bog is located close to PR# 308 and access would not be an issue. With the Haute and Boggy River Bogs access road construction would be necessary.
- The Protected Areas Initiative (PAI) is conducting a protected areas planning exercise in Natural Region 5c – the southeast corner of Manitoba, which is the same area as the proposed peat mining development. Protected area proposals covering over 165,000 hectares have been developed in Natural Region 5c and are ready for external consultation. Ten proposed ecological reserves and one proposed addition to an existing ecological reserve have also been identified. Two of Jiffy's peatland development proposals, Haute Bog and Boggy River Bog, occur near some of the proposed protected areas. PAI does not support the development of these bogs until the protected areas planning exercise is complete and then the peat mining proposals can be reevaluated by Conservation for potential impacts to the areas. The location of Poplar Bog proposed peat mine is

not near any proposed protected area or existing protected area and therefore PAI has no objections.

Disposition: Several comments can be accommodated as licence conditions. Department of Water Stewardship has solicited comments from the State of Minnesota regarding concerns related to watershed impacts. Manitoba Water Stewardship was advised by Minnesota Pollution Control Agency that they had no comments.

Manitoba Infrastructure and Transportation, Highway Planning and Design Branch

- For any new, modified or relocated access roads connecting onto PTH1 and PR 308 and for any water discharge to PTH1 and PR 308, permits will be required from Manitoba Infrastructure and Transportation (MIT).
- MIT also recommends that no construction is within 38.1 m (125ft) controlled area of PR 308. Road upgrade is being planned for PR 308 in the future and an additional right-of-way will be required.

Disposition: These comments were forwarded to the proponent.

Manitoba Local Government

The projects are located in the vicinity of a number of First Nations which are not identified on the map on page 57 of the report. Please ensure that all first nation communities are identified and those in the vicinity are included in the consultation process.

The Haute Bog project area is adjacent to the City of Winnipeg aqueduct. Please ensure that the City of Winnipeg is circulated as they may have comments regarding any potential impacts to the City's aqueduct.

Disposition: Comments regarding First Nations were forwarded to the proponent with a request for further information (see 'Request for Additional Information' section of this summary). Comments were also provided to Manitoba Department of Science, Technology, Energy and Mines, Mines Branch for consideration.

Manitoba Department of Science, Technology, Energy and Mines, Mines Branch

- The above noted development proponent has obtained the required quarry mineral leases under the authority of the Mines and Minerals Act. These mineral dispositions grant the holder the legal right to mine and remove peat.

- The development proponent requires an approved closure plan prior to the commencement of peat extraction.

Disposition: Comments were forwarded to the proponent. Comment regarding closure plan can be accommodated with licence conditions.

Manitoba Water Stewardship

- Manitoba Water Stewardship objects to the issuance of a Draft Environment Act Licence and /or Final Environment Act Licence until comments are received from the United States. Manitoba Water Stewardship requests confirmation from Manitoba Conservation's Environmental Assessment and Licensing Branch, pertaining to this objection.
 - Unfortunately, the proposed approach is not acceptable. Minnesota will have every reason to believe that Manitoba has not complied with its obligations under the Boundary Waters Treaty of 1909 if a draft licensing decision emerges in advance of it submitting comments.
- The proposed development is located in close proximity (within 1.5 miles) to the United States border, near the Northwest Angle. Water flow moves towards the border.
- In particular, in Article IV of the Boundary Waters Treaty of 1909, Manitoba has an obligation to not cause harm to the health or property of those on the adjacent side of the border. This is reciprocal and the United States has precisely the same obligations to Manitoba.
- Manitoba relies very heavily on the Boundary Waters Treaty and its mechanisms, including the role of the International Joint Commission, in this region, since most of the water flow moves from the United States into Manitoba. It would undermine Manitoba's credibility immensely and significantly threaten our ability to protect Manitoba's environment from actions in the United States if a licensing decision is made before Minnesota is allowed a reasonable period of time to review and provide input. Manitoba needs to accommodate any concerns raised to Minnesota's satisfaction, and a draft decision cannot be issued in advance of Minnesota submitting comments.

Disposition: Comments were provided to the proponent. Manitoba Water Stewardship was advised by Minnesota Pollution Control Agency that they had no comments.

ADDITIONAL INFORMATION REQUEST:

EAL Branch contacted the proponent with questions from TAC members and the public concerning the project on July 27, 2010. A submittal in response to comments was received on August 11, 2010 and included the following information:

- Meeting notes with First Nation and Metis representatives
- Detailed summary of quarry lease areas

Included in the submittal was a response to the following TAC and public questions:

- 1) Please provide an aerial photo demonstrating the quarry lease areas of Poplar Creek Bog along with sampling locations (final discharge points, municipal drains and receiving waters).**

In the Environmental Act Proposal (EAP), aerial photo with the quarry lease limits are shown on map 3 for Poplar Creek Bog and on map 4 for Boggy River Bog and Haute Bog. As for the sampling location, they will be done at each discharge point as shown on map 7. Those maps, without their titles, will be sent shortly for you to include in the license.

- 2) Please provide a list of all quarry leases for the Poplar Creek Bog and include corresponding size of area in hectares.**

This information is to be found in the EAP within Appendix A – Quarry Leases. However, Table 1 present a synthesis of those quarry leases for Poplar Creek Bog

Table 1. Quarry Leases Synthesis for the Poplar Creek Bog Area

State	Quarry leases # / Application #	L.S.	Sec.	Twp.	Rge.	Area (Ha)
Actual existing Quarry Leases	QL-2091	11, 14, 15 & 16	24	4	16E	217.8
		1, 2, 3, 7 & 8	25			
		13	19	4	17E	
		3, 4, 5	30			
	QL-2092	7, 8, 9, 10, 11, 12, 14, 15 & 16	23	4	16E	216.6
		5, 12 & 13	24			
		4	25			
	QL-2227	1, 2, 3, 4, 5 & 6	24	4	16E	113.3
QL-2228	9 & 10	24	4	16E	32.4	
QL-2229	6	24	4	16E	16.2	
Quarry Leases waiting for approval	1	10, 11, 12, 13, 14, 15 & 16	14	4	16E	135
		13	13			
	2	2	24	4	16E	16.9
	3	6	25	4	16E	16.9
	4	2, 6, 7, 11 & 12	30	4	17E	118
		14 & 15	19			
5	12	19	4	17E	16.9	

3) **The Poplar Creek Bog site proposal is not only in close proximity to the Buffalo Point First Nation’s Traditional land, but part of the development will eventually cross over into those lands. This is one of the issues that must be discussed in full with the Buffalo Point First Nation prior to any decisions to accept this proposal can be made. In addition, there is a potential issue with Traditional Land Use (TLU) of the Northwest Angle Indian Reserves 34C and 37C. Both of these reserves straddle Manitoba / Ontario boundaries, and are within the 10 km study area of SNC Lavalin Environment. The drainage from the bog runs towards the reserves, as shown from the topography of the area. Water quality issues, encroachment into areas where traditional plants are gathered, and possible hunting territory are examples of some of the issues that need to be addressed with these First Nations. Please identify all First Nation communities potentially impacted by the Poplar Creek Bog development and provide information on the potential impacts of the Poplar Creek Bog development on First Nation communities.**

Our consultant travelled to Manitoba during the last week of July to meet and discuss with the communities. We managed to meet with representatives of the Manitoba Métis Federation, Buffalo Point First Nation and Shoal Lake #40 First Nation. An electronic copy of the EAP was sent prior to the meetings. During the meeting, a Power Point presentation of the project was given to the representatives followed by a discussion. After questions were answered, no environmental concerns had been expressed and all three communities showed a lot of interest in the project, especially for the jobs opportunities. Please note that representatives of the Angle West #37 First Nation were contacted several times, but no meeting could be organized. However, an electronic copy of the EAP was sent to them and they were asked to send their comments or concerns. A summary of those meetings accompanied this document.

- 4) **Please note that there is no reference to how access to the private road will be controlled or restricted during the operation and suggest that a management plan be considered to address this issue. Please provide additional how access to the private road will be controlled or restricted.**

A gate will be installed at the beginning of the access road and this gate will be lock outside of operations hours and whenever no employee is on the site. An agreement will be reached with the local Wildlife and Forestry officers so they can access the site at all time in case of an emergency (i.e. in the event of a fire).

- 5) **“... parts of sections 23, 24, 25, 26, 29, and 30 of Township 4 Ranges 16E and 17E...” Which sections are in which range? The areas should be better defined – need to have text correspond with map locations. Please provide clarification on the location (legal description) of Polar Creek Bog and provide a map of with corresponding legal descriptions. This will be used as an appendix in the licence.**

Please refer to section 2 of this document for this information

- 6) **Section 4.3.1.7: Provincial Forests are more than trails and special plants, impacts to Annual Allowable Cut and loss of productive land has not been considered. Please provide additional information on the impact of the development of the Poplar Creek Bog to annual allowable cut and loss of productive land.**

Jiffy Canada intends to respect all laws and policies regarding wood cutting in that area. Also, in the EAP, section 3.1.4- Tree clearing, it is said that “Commercial and non-commercial timber will be cut and made accessible to private and public organizations for beneficial use”.

- 7) **Section 5.2.4: Will the proponent be actively surveying for rare plant populations or relying on the Conservation Data Centre database?**

Jiffy Canada, via its consultant, has been actively surveying for rare plant population and has not been relying entirely on the Conservation Data Centre database. The results of this survey, the methodology used and all other relevant information can be found in the EAP within the Appendix F – Poplar Creek Bog Development project; Vegetation survey.

8) Section 5.2.5: Will the proponent be actively surveying for faunal populations or relying solely on the Conservation Data Centre database?

Jiffy Canada, via its consultant, will conduct a wildlife survey in Poplar Creek Bog in 2010 to document the fauna inhabiting the project sites and to confirm the presence or absence of any rare species within the project sites. The results of this study will be forwarded to Manitoba Conservation for approval of the license. In the mean time, previous studies have been used to document the wildlife present in the area. The Appendix H – List of Fauna Recorded in the Area, in the EAP, synthesis all the birds, fishes, Mammals and Herpetofauna species recorded in the area.

Additional information was provided by the proponent on September 13, 2010 in response to drainage concerns of adjacent wetlands and bog areas:

“Impacts of the Poplar Creek mine on the drainage patterns of the area will be limited to a relatively narrow strip surrounding the bog. It will essentially consist in the localized drawdown of the water table present within the peat deposit, due to the construction of ditches in and around the peat fields. The magnitude of water table drawdown will be maximum at the perimeter ditches’ outer wall and will decrease away from the perimeter ditches. The lateral extent of water table drawdown in the undisturbed strip surrounding the bog is dependent upon various parameters such as the permeability of the peat deposit, the head difference between water flowing in the ditches and water levels naturally occurring in the undisturbed areas, as well as the magnitude and direction of natural water flow within the deposit.

Evaluation of the theoretical extension of water table drawdown around Poplar Creek bog during the extraction phase was carried out using a standard analytical solution for drainage, based on the Dupuit-Forcheimer hypothesis. Naturally-occurring water flow within peat upstream of the bog was estimated considering a hydraulic gradient equal to the local topographical gradient (0.0076). A conservative value equal to that retained for peat fields drainage calculations was utilized for the hydraulic conductivity of peat (2E-06 m/s). Thickness considered for the peat deposit corresponds to the figure measured by Bannatyne (1980) in the single peat sample collected at Poplar Creek (2.75 m). Head difference between the perimeter ditches and natural conditions was set at 1.45 m, which is deemed representative of future perimeter ditches depth and average water level. The difference between precipitations and evapotranspiration was applied as water table recharge (137 mm/y).

The theoretical extension of water table drawdown around Poplar Creek is estimated as being 31 m in a direction upgradient from the bog. This figure lies in the upper range of

the spectrum for the radius of influence of drained peatlands presented in the literature (Boelter, 1972; Price et al., 2003). One can thus conclude that no variation in water table height or soil hydric conditions is expected 30 meters or so away from the mined bog.

It is expected that little to no drawdown will be experienced in the peat deposit downgradient from the bog, as peat fields drainage water and surface runoff will discharge to peat at the downstream edge of the bog. Lateral extension of water table drawdown along Poplar Creek's northwestern and southeastern edges will likely represent an intermediate figure between conditions observed upgradient and downgradient from the bog.

It is worth highlighting the fact that water discharge to adjacent peat at the downstream end of the bog will only have a negligible impact on the runoff patterns of surrounding wetlands and peat areas, as incremental water input will correspond to about 1.8 mm/y at the watershed scale.

Given the limited spatial extent of expected water table drawdown around Poplar Creek and the low magnitude of incremental water input to the watershed as a consequence of peatland drainage, no significant environmental impact is expected with regard to this activity outside of the bog's immediate vicinity.”

DISCUSSION AND ANALYSIS:

This information is sufficient to allow several TAC concerns to be addressed through licence conditions. The Environment Act Proposal provides sufficient information to make a licensing decision on Poplar Creek Bog only.

PUBLIC HEARING:

No requests were received for a public hearing on the project. Technical issues surrounding the project are sufficiently understood. A public hearing is not recommended for the project.

RECOMMENDATION:

Following consideration of public and TAC comments on the project, it is recommended that a licensing decision be made on Poplar Creek bog once the outstanding information is submitted and reviewed by Environmental Assessment and Licensing Branch.

Due to the outstanding information requirements for Haute Bog and Boggy River Bog needed for a licence decision, the concerns raised by TAC members about these two locations in terms of protected areas, and the expected start date for operations at these site (2030 and 2055, respectively), it is the position of Environmental Assessment and Licensing Branch that Jiffy Canada shall submit a Notice of Alteration to this licence prior to future development of these locations.

A draft licence for Poplar Creek Bog is attached for TAC review and comment. Administration of the licence should be assigned to the Eastern Region, with technical assistance to be provided by Environmental Assessment and Licensing Branch upon request.

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