

DATE: January 8, 2010

Memorandum

TO: Elise Dagdick
Environment Officer
Environmental Assessment and
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Manitoba Conservation
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FROM: William Weaver, M.Sc.
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CC: Laureen Janusz
Kevin Jacobs

**SUBJECT: ENVIRONMENT ACT PROPOSAL FILE: 4572.00
2010-2029 FOREST STEWARDSHIP PLAN AND
ENVIRONMENTAL IMPACT STATEMENT
TEMBEC ENTERPRISES INC**

Manitoba Water Stewardship has reviewed the referenced file, forwarded for comment on October 27, 2009. The Department has the following comments:

- *The Water Rights Act* indicates that no person shall control water or construct, establish or maintain any "water control works" unless he or she holds a valid licence to do so. "Water control works" are defined as any dyke, dam, surface or subsurface drain, drainage, improved natural waterway, canal, tunnel, bridge, culvert borehole or contrivance for carrying or conducting water, that temporarily or permanently alters or may alter the flow or level of water, including but not limited to water in a water body, by any means, including drainage, OR changes or may change the location or direction of flow of water, including but not limited to water in a water body, by any means, including drainage. If a proposal advocates any of the aforementioned activities, an application for a Water Rights Licence to Construct Water Control Works is required. Application forms are available from any office of Manitoba Water Stewardship.
 - A contact person is Mr. Geoff Reimer C.E.T., Senior Water Resource Officer, Water Control Works and Drainage Licensing, Manitoba Water Stewardship, Box 4558, Stonewall, Manitoba R0C 2Z0, telephone: (204) 467-4450, email: geoff.reimer@gov.mb.ca.
- The proponent needs to be informed that if the proposal in question advocates any construction activities, erosion and sediment control measures should be implemented until all of the sites have stabilized.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- The proponent should be reminded that pursuant to the *Nutrient Management Regulation* (MR 62/ 2008) under *The Water Protection Act*, the mechanical application of substances containing nitrogen or phosphorus is prohibited in Nutrient Management Zone N4 (Canada Land Inventory Agricultural Capability Class 6, Class 7, or unimproved organic soils) and in the Nutrient Buffer Zone.
- If fertilization is used when re-establishing vegetation on exposed and excavated areas due to road construction, only the basic recommended amount of nitrogen and phosphorus needed to establish a healthy growth should be used to reduce leaching of excess nutrients to surface waters. No more fertilizer than required for a single season should be applied in a given year. The use of slow release formulations are also alternatives that should be considered.
 - All exposed areas should be revegetated with native species during road construction.
- A policy should be considered of only using soaps, shampoos, detergents and other cleaning products that are phosphate-free or that have 0.5 % or less phosphorus content are used in camps or housing facilities within the Forest Management Licence Area.
- The use of chemical melting agents (for example road salts) for traction on access roads at water crossing should be avoided for preference of using clean crushed rock with a diameter of not less than ½" 1.3 cm.
- Forest Stewardship Plan Section 1:
 - Some of the documents listed on page 24 (1.6.6) are outdated and are not used.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- Forest Stewardship Plan Section 2:
 - It appears that the project described in 2.1.5.3, Walleye Spawning Habitat Enhancement and Monitoring, is not operating.
 - 2-30, Table 2.3
 - Concern expressed regarding the buffer zones
 - Change “Consolidated Buffer Management Guidelines” in the second column to “Forest Management Guidelines for Riparian Management.”
 - Amend the phrase, “plans are reviewed by all branches of Manitoba Conservation, including the Fisheries and Wildlife Branches” to the following:
 - “Plans are reviewed by all branches of Manitoba Conservation and Manitoba Water Stewardship.”
- Forest Stewardship Plan Section 3:
 - Section 3.2.5:

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- This section should be updated with current information, particularly the reference to Lake Sturgeon and the reference that is attributed to the regional fisheries manager. Lake Sturgeon are now listed by the Committee on the Status of Endangered Wildlife in Canada as “endangered” for areas within the Forest Management Licence Area. However, there is inaccurate information in Sec 5.7 which indicates that many of the species identified by the Committee on the Status of Endangered Wildlife in Canada or the International Union for Conservation of Nature were not assessed to be potentially affected by forestry operations.
 - The reference to Section 5.5.2 in the last sentence of this section is incorrect. It should likely be 5.7 (Species at Risk).
 - The reference to the Black River project is also outdated, indicating it is to commence in 2005.
 - Appendix 4.5 (referenced in this section) is incomplete. There are several species that occur within the Forest Management Licence Area that are not listed such as Brook Stickleback, Central Mudminnow and Spoonhead Sculpin, Chestnut and Silver Lampreys.
- Section 3.3.4:
- It is noted that the harvesting of “naturally occurring” wild rice is restricted to First Nation people. There is also commercially grown and harvested rice in the region.
- Section 3.3.5:

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- The Department does not prefer to use the term "sport" but rather "recreational" in describing fisheries. Both terms are used interchangeably in the section.
 - The slot limit area described also includes the Whiteshell Provincial Park.
 - Amend the section to include that only Manitoba Water Stewardship uses a quota entitlement system.
 - The section needs to include a discussion on the commercial bait fishery which exists within the Forest Management Licence Area and Integrated Wood Supply Area.
- Section 3-45:
- This section on Mining is incomplete and inaccurate. There are two mines operating in Forest Management Licence Area 01
 - 1) Rice Lake Gold Mine (mine and mill on NW shore of Rice Lake in the community of Bissett) and
 - 2) TANCO mine at Bernic Lake.
- Section 3.5.3:
- This section describes the lodge industry and references Figure 3.17. The lodge data on this map is incomplete and does not indicate a number of lodges within the Forest Management Licence Area or outcamps.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- Forest Stewardship Plan Section 5:
 - Section 5.2.1.1.3:
 - This section should describe the current status of Lake Sturgeon as identified by the Committee on the Status of Endangered Wildlife in Canada. Although they are not yet listed under the *Species At Risk Act* and a Recovery Strategy has not been implemented, this is likely to be a consideration for future planning. In addition, two lampreys species are also listed by the Committee on the Status of Endangered Wildlife in Canada and this should be noted in this section.
 - Amend the reference to “Manitoba Water Stewardship Fish and Fish Habitat Department” in the Carmine Shiner section to the following:
 - “Manitoba Water Stewardship, Fisheries Branch.”
 - Section 5.2.1.3.1
 - This section references “watershed” but does not describe at what basin level this references (i.e. major, minor, or sub basin). This is important in assessing the described targets of 30% disturbance over a 7 year period.
 - The reference for the “30% disturbance over a 7 year period” should be included. Where does this management approach come from (standard practice, research based, company policy etc)?
 - Section 5.7

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- Lake Sturgeon are now listed by the Committee on the Status of Endangered Wildlife in Canada as “endangered” for areas within the Forest Management Licence Area.
 - The statement that forestry is considered a low risk to sturgeon under current forestry operational guidelines is not correct.
 - The Department suggests including the statement, located in paragraph two of this section, in Section 3.2.5. This may explain early in the document why certain species identified by the Committee on the Status of Endangered Wildlife in Canada are not addressed in the plan.
- Forest Stewardship Plan Section 6:
 - In general, the Socioeconomic Study (Ecoregion 90) is somewhat dated. However, the information it contains was relevant at the time and it should only be used in this context.
- Environmental Impact Statement Section 3-47:
 - 3.3.3.3 Aquatic and Amphibian Wildlife Species Diversity
 - In watercourse road planning the document refers to Wildlife Guidelines for Forest Management but not the Forestry Road Management Guidelines. The Forestry Road Management Guidelines should be referenced.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- Also this section should reference the use of the Manitoba Stream Crossing Guidelines for the Protection of Fish and Fish Habitat, 1996, as a planning document for stream crossing design.
 - This section refers to “watershed” but there is no reference to an appropriate basin level.
- Environmental Impact Statement Section 3-49:
 - This section addressed the potential effect of increased fishing pressure due to “access.” This section does not address the potential to introduce and/or spread non-native species with increased access.
 - The document states “Fish population inventories, providing some direct measurement of the successful implementation of aquatic habitat management, in addition to measures such as fishing success, are the responsibility of Manitoba Conservation in their role as the managers of the fisheries and wildlife resources.” This is not correct. An *Environment Act* Licence can require the proponent to conduct “fish population inventories.” Additionally, Manitoba Water Stewardship should be replaced in the document as the manager of fisheries resources.
 - There are numerous incorrect references in the document that Manitoba Conservation is the management agency for fisheries rather than Manitoba Water Stewardship.
 - Environmental Impact Statement Section 3-51:
 - Under infrastructure, there is not a discussion on the effects of road maintenance, including bridge salting/sanding.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- Under decommissioning, the document incorrectly notes that work should be undertaken “during spawning and incubation periods.” The document should state that work shall not occur during spawning and incubation periods.

- Environmental Impact Statement Section 3-52:
 - It appears an incorrect reference is made for the “Manitoba Conservation Guidelines for Riparian Areas (2008).” The Department is not aware of the existence of this document. This document is also referred to on various other pages in this section.

- The Department recommends an *Environment Act* Licence to include the following requirements:
 - *The Environment Act* Licence shall be periodically reviewed to allow for new and emerging best practices of forest management to be incorporated throughout the Forest Stewardship Plan’s next 20 years.

 - *The Environment Act* Licence shall include provisions to protect species listed under the *Species At Risk Act* (Canada) and *The Endangered Species Act* (Manitoba).

 - The proponent shall ensure training and competency of staff and contractors is sufficient, particularly when operating in sensitive areas such as near water crossings, on steep slopes, or near riparian areas.
 - Note: Many of the mitigation techniques identified would be dependent on the individual training and competency of the operators carrying out forestry operations, including road building,

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

harvesting, mechanical site preparation, and chemical stand tending.

- The proponent shall routinely inspect all erosion and sediment control measures and immediately complete maintenance or repair.
 - Note: Mechanical site preparation for forest renewal research indicates that soil scarification should be limited to less than 15 percent of a sub watershed to prevent adverse impacts to water quality (Rask et al. 1998). Direct planting should be considered as an alternative to mechanical site preparation on steeply sloping land.
- The proponent shall develop and implement an Emergency Response Plan.
- Fuel and oil storage areas should be located a minimum of 100 metres from any water body.
- The proponent shall prevent oil, hydraulic fluids, coolant, paint, uncured concrete or concrete wash from entering any drainage course or waterbody.
- The proponent shall locate timber storage areas greater than 100 metres from watercourses and greater than 30 metres from drainage areas, to mitigate wood leachate from entering watercourses.
- The proponent shall participate in any plan, study, monitoring, and/or research approved by the Director, Water Science and Management Branch, Manitoba Water Stewardship, for the Forest Management Licence Area or any associated waterway or watershed.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- The proponent shall conduct pre-harvest water quality monitoring and post-harvest water quality monitoring of streams and small lakes.
 - Note: Research conducted on the Forest Management Licence Area suggests that forest harvesting may affect water quality over a longer period than seven years. Some flexibility should be allowed whether the proponent or a third party, for example the Manitoba Model Forest conducts monitoring.
- The proponent shall ensure that rock used for riprap is clean, inert, free of silt and clay and does not have potential for acid generation.
- Construction dewatering and the taking of water for road grade compaction, dust management, and/or rock drilling purposes may require an authorization under *The Water Rights Act*. The proponent's contractor would have to contact Manitoba Water Stewardship's Water Use Licensing Section at least 2 weeks in advance of the anticipated usage date.
 - A contact person is Mr. Rob Matthews, Manager, Water Use Licensing Section, Manitoba Water Stewardship, telephone: 945-6118.
- Wastewater (sewage and grey water) from work camps and other infrastructure shall be collected in holding tanks and disposed at a licensed wastewater treatment facility.
- The proponent shall obtain a Provincial Scientific Collection Permit, prior to commencing work for an in-stream fish and/or fish habitat assessment work.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- A contact person is Ms. Laureen Janusz, telephone number: (204) 945-7789.
 - Note: Section 3 of the Forest Stewardship Plan indicates that recently Tembec has initiated fish surveys on streams prior to water crossing installations, without applying for a permit. In Appendix 4.5, it is noted that AEC Ltd has conducted recent surveys on major rivers of an Integrated Wood Supply Area, without applying for a permit.

- The proponent shall obtain a Live Fish Handling Permit, prior to commencing work to collect and transport fish, including all fish salvage operations conducted in conjunction with in-stream crossing construction work.
 - A contact person is Ms. Laureen Janusz, telephone number: (204) 945-7789.
 - Note: Section 3 of the Forest Stewardship Plan indicates that recently Tembec has initiated fish surveys on streams prior to water crossing installations, without applying for a permit. In Appendix 4.5, it is noted that AEC Ltd has conducted recent surveys on major rivers of an Integrated Wood Supply Area, without applying for a permit.

- The Environmental Impact Statement notes that the proponent has voluntarily restricted forest harvest such that no more than 30 percent of a watershed area is in a recently disturbed state including natural (fire) or harvest disturbance within the last seven years. While research conducted by the Manitoba Model Forest (Kotak et al. 2005) suggests a 30 percent watershed disturbance restriction may be a good general rule. On nutrient rich sites and sites subject to erosion, a lower proportion of watershed harvesting may be appropriate. For example, in the comparatively phosphorus rich Boreal Plain of Alberta, Prepas et al. (2001) found that significant changes to total Phosphorus, dissolved

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

organic carbon, and chlorophyll *a* occurred when an average of only 15 percent of the watershed area of eleven lakes was harvested.

- If there are, particular watersheds considered sensitive the proponent shall be required, via an *Environment Act* Licence, to reduce harvesting below 30 percent in these areas.
- It is not known if the non-disturbance timeframe of seven years has scientific basis related to the recovery of evapotranspiration and the subsequent reduction in export rates of nutrients from a watershed.
 - An *Environment Act* Licence should require the proponent to conduct a study of recovery of evapotranspiration and nutrient export would help determine whether a seven-year period is appropriate.
 - The size of the watersheds used for this determination should be restricted because using a large watershed in this assessment would potentially allow for large areas of an individual stream or lake watershed to be impacted while still indicating a low overall disturbance level. For the protection of water quality, watershed management units should be no larger, in area then 10,000 hectares (Rothwell 1997, Kotak et al 2005).
 - *The Environment Act* Licence shall include a geographic delineation map of the watersheds used for this assessment.
- The proponent shall conduct operation according to the Forest Management Guidelines for Riparian Management Areas (2008), ensuring that effects to the aquatic ecosystem are minimized.

Date: January 8, 2010
Subject: *Environment Act* Proposal File 4572.00
2010-2029 Forest Stewardship Plan and Environmental Impact Statement
Tembec Enterprises Inc

- Note: The retention of a functioning riparian ecosystem is critical to aquatic ecosystems. The modeling removed a number of riparian buffers which were not considered as part of the available wood supply.

- References:

- Kotak, B.G., A. Selinger and B. Johnston. 2005. Influence of watershed features and disturbance history on water quality in Boreal Shield streams and rivers of eastern Manitoba. Manitoba Model Forest Report 04-2-63. 161 pp.
- Prepas, E.E., B. Pinel-Alloul, D. Planas, G. Méthot, S. Paquet, and S. Reedyk. 2001. Forest harvest impacts on water quality and aquatic biota on the Boreal Plain: introduction to the TROLS lake program. *Can. J. Fish. Aquat. Sci.* 58: 421–436.
- Rask, M., Kari, Nyberg., Sirkka-Lissa, Markkanen., and Anne Ojala. 1998. Forestry in catchments: effects on water quality, plankton, zoobenthos and fish in small lakes. *Bor. Env. Res.* 3: 75-86.
- Rothwell, R.L. 1997. Saskfor MacMillan Limited Partnership twenty-year forest management plan and environmental impact statement for the Pasquia-Porcupine Forest Management Area.

William Weaver, M.Sc.