

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Rural Municipality of Alexander:
Applicant
PROPOSAL NAME: Traverse Bay Wastewater Treatment
Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4247.00

OVERVIEW:

On March 27, 1997, the Department received a Proposal indicating that the Rural Municipality of Alexander wanted to construct a wastewater treatment lagoon to service a portion of the Rural Municipality of Alexander and the Rural Municipality of Victoria Beach. The wastewater treatment lagoon would be located on the southwest quarter of Section 17-19-8 EPM. Two existing liquid waste disposal cells at the waste disposal ground, which is located at the same site, will be converted into cell of the wastewater treatment lagoon. The treated wastewater would be discharged between June 15 and November 1 of each year into Jackfish Creek which flows into Traverse Bay which is part of Lake Winnipeg.

The Department, on August 24, 1997, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station) Main Floor, the Centennial Public Library and Bibliotheque Allard (Library) in St. George and provided copies of the Proposal to the Interdepartmental Planning Board and TAC members. As well, the Department place public notification of the Proposal in the Pine Falls Voice on Wednesday, April 30, 1997. The newspaper and TAC notification invited responses until May 23, 1997.

On November 20, 1997, the Proponent filed an alteration to the Proposal. The location of the proposed primary cell was changed thereby avoiding the need to reroute Jackfish Creek. This was done to address the concerns raised by the Department of Natural Resources.

COMMENTS FROM THE PUBLIC:

No public responses were received.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Highways

- *No concerns.*

Natural Resources

- *Information from DNR regional staff indicates that Jackfish Creek flows all year round and supports pike, suckers and carp. This would indicate that the area is used for spawning by at least several species of fish. As carp spawn later, discharges from the lagoon, even after June 15, may subject this species to possible lethal concentrations of unionized ammonia resulting in die-off of fish. If it is a late spring, the unionized ammonia may also result in mortality of young pike that may not have developed enough to leave the downstream marshes.*
- *Jackfish Creek has been identified as providing significant aquatic and riparian habitat. It is not clear why the proposed expansion, which involves rerouting of the creek, has been selected when other suitable sites may be available. This rerouting may be sufficient to cause a significant destruction or disruption of habitat. No details have been provided on the extent and nature of the rerouting of Jackfish Creek and possible mitigative actions that may be undertaken.*
- *If chlorine is to be used, it may impact negatively on fish use of Jackfish Creek. Unless there is an over-riding concern for human health, chlorine should not be used for disinfection.*

Disposition:

- The Rural Municipality has indicated that Jackfish Creek normally dries out in the summer, in the area of the lagoon discharge. It is also reported to be frozen to the bottom in winter. There are no flow measurements of Jackfish Creek.
- The Proposal has been modified to avoid the need to reroute Jackfish Creek.
- The Proposal indicates that wastewater will be treated in a standard wastewater treatment lagoon which does not use chlorine.
- The level of unionized ammonia will be significantly reduced due to the increased holding and treatment period. Some impact on aquatic life may occur however the impact should be minimized due to the late discharge in the spring.

Historic Resources

- *No concerns.*

Health

- *No concerns.*

Rural Development

- *No concerns.*

Environment-Operations Division

- *Effluent should be directed towards Jackfish Creek by way of the wetland located approximately 200 metres north of the proposed cell. Such a routing would reduce*

even further any residual toxicity that might negatively affect resident aquatic biota that may be present in the stream during the proposed periods of discharge.

- *The loading calculations appear to be fairly conservative. There are several typographical errors in the calculations that should be corrected for the record.*
- *The large primary cell may not fill quickly enough to protect the clay lining from drying/cracking. It would be prudent to require construction of the new cell and filling with existing wastewater immediately and supplementing with water from Jackfish Creek. This would help to ensure access to the existing cells for soil testing and remedial work if required.*
- *Soil sampling will be required on the proposed site.*
- *The proposed opening in the common berm of the primary cells may be too narrow and prevent the waste load being spread out over the entire cell. The entire common berm between the primary cells should be removed.*
- *The report does not address any remedial work that may be required on the existing dikes. Since this was not a previously licenced facility, the quality assurance cannot be verified. If remedial work is not necessary, there should be some reason given why not.*

Disposition:

- The draft Licence does not require the discharge of the effluent into a wetland, which may be located 200 metres north of the proposed site because the wastewater treatment lagoon will have a gravity discharge and it would not be feasible to cross Jackfish Creek which is immediately north of the proposed site.
- The draft Licence requires that the primary cell be filled with liquid to prevent drying and cracking of the clay liner.
- Soil sampling has been completed on the proposed site.
- The draft Licence requires the removal of the common berm between the existing primary cell and the new primary cell.
- The draft Licence requires testing of the existing cells to confirm whether these cells met the hydraulic conductivity requirements.

Environment-Water Quality Management

- *Provided that Jackfish Creek is not an important fisheries area, there are no concerns with the discharge to the creek. If the creek is used for spawning, it is recommended that unionized ammonia levels be monitored in the effluent prior to discharge to ensure that the aquatic life guidelines are not exceeded during the discharge periods. There is adequate travel distance to Lake Winnipeg and dilution in Lake Winnipeg, such that unacceptable ammonia impacts would not be expected in the lake.*
- *Information is not provided on whether there are cottages or residents located on the shore of Lake Winnipeg where Jackfish Creek enters Lake Winnipeg. Are there private domestic water withdrawals from Lake Winnipeg in this vicinity. There is no*

information provided on the potential for effluent to stay concentrated along the shoreline with prevailing northwest winds.

Disposition:

- Although DNR has indicated that the creek provides significant aquatic and riparian habitat, it has not been identified as an important fisheries area. The fish species which have been identified as using the creek are pike, suckers and carp. Monitoring of effluent prior to discharge will not indicate if ambient water quality objectives have been exceeded. The draft Licence requires that a limited ambient water quality monitoring program be carried out.
- As stated: “There is adequate travel distance to Lake Winnipeg--” therefore adequate mixing should occur in the creek and effluent should not be concentrated along the shoreline.
- No cottages or residents have been identified along the shore of Lake Winnipeg where Jackfish Creek enters the lake.

Canadian Environmental Assessment Agency

- *CEAA has indicated that application of The Canadian Environmental Assessment Act with respect to this proposal will not be required. The Department of Fisheries and Oceans indicated that more information is needed before they can determine whether they have a Section 5 trigger.*

PUBLIC HEARING:

A public hearing is not required.

RECOMMENDATION:

A Licence be issued in accordance with the attached draft. Enforcement of the Licence should be assigned to the Approvals Branch until the soil testing has been completed.

PREPARED BY:

Mike Van Den Bosch, P. Eng.
Environmental Engineer
Municipal & Industrial Approvals
December 22, 1997

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Traverse Bay Wastewater Treatment Lagoon
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Telephone: (204) 945-7015

Fax: (204) 945-5229

E-mail Address: mike_van_den_bosch@environment.gov.mb.ca