

SUMMARY OF COMMENTS/RECOMMENDATIONS

PROPONENT: Rural Municipality of Mountain: Applicant
PROPOSAL NAME: Birch River Wastewater Treatment Lagoon
CLASS OF DEVELOPMENT: 2
TYPE OF DEVELOPMENT: Wastewater Treatment Lagoon
CLIENT FILE NO.: 4313.00

OVERVIEW:

On February 20, 1998, the Department received a Proposal on behalf of the Rural Municipality of Mountain to construct and operate a new 2-cell wastewater treatment lagoon to service the Local Urban District of Birch River and portions of the Municipality. The Proponent proposes to locate the lagoon on the southeast quarter of Section 31-39-25 WPM. The Proposal indicated that treated wastewater would be disposed of by irrigation onto agricultural land or by discharge to Swede Creek. On March 16, 1998, the Proponent filed an amendment to the Proposal deleting the disposal option of discharge to Swede Creek.

The Proposal and supporting Pre-design Report prepared Dillon Consulting Limited, indicated that there is a layer of silty clay or clayey silt underlying the proposed construction site which will meet the provincial hydraulic conductivity requirements for wastewater treatment lagoons. A clay cutoff will be constructed in the perimeter dykes from the underlying impermeable layer to the top of the dykes to complete the lining system.

The Department, on March 24, 1998, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station); the Centennial Public Library and the North-West Regional Library and provided copies of the Proposal to the Interdepartmental Planning Board and TAC members. As well, the Department placed a public notification of the Proposal in the Swan River Star on Wednesday, April 1, 1998. The newspaper and TAC notification invited responses until April 27, 1998.

COMMENTS FROM THE PUBLIC:

One response was received to the public notification process. Mr. Dale Boychuk, a local property owner near the proposed site, raised the following concerns:

- the proposed site is in a low lying area and is prone to flooding;
- effluent which has been disposed of by irrigation will be prone to running off the irrigation sites during wet periods;
- if the land is too wet to irrigate the only option is to discharge into Swede creek
- information in the proposal that farmers do not water their livestock within 10 km of the discharge point is incorrect since three farmers that have their land fenced

- with Swede Creek running through and would therefore be watering from the creek;
- he owns property approximately 1 km east of the site and intends to fence and use the area around the creek for watering cattle; he is concerned about the impact on the creek and the possibility of his well becoming contaminated; and the lagoon will devalue his property

Disposition:

- During an inspection of the proposed lagoon site with Mr. Dale Boychuk and his neighbour, Mr. Mel Davy, it was evident that the site was subject to flooding although the depth of the flood water is unknown. The lagoon structure will have to be constructed to withstand flood waters and the resulting erosion to the outside of the berms. Clauses in the draft Licence address the concerns about erosion control and flooding.
- The soil in the area appears to be a sandy loam. An effluent irrigation system should function well at this location and surface runoff to Swede Creek is not expected provided good management practices are followed.
- The use of Swede Creek for cattle watering should not be affected.
- The location of Mr. Boychuk's water well is removed from the irrigation site (>1 km) and an impact to his use of ground water is not expected.
- The impact on land value as a result of the wastewater treatment lagoon development is a land use matter and should be referred to the municipal government which acts as the land use authority in the area.
- The clay layer below the surface sandy loam will protect the groundwater in the area; however it will also make construction of the clay cutoff very difficult. The surface sandy soil will be saturated in the zone above the clay layer and trench stability problems will likely occur during construction of the clay cutoff walls. If an impermeable liner is to be constructed, it is critical that the cutoff walls are properly keyed into the underlying clay and the clay material forming the cutoff wall must be placed and compacted without being contaminated with sand intrusions. The owner of the facility should ensure that rigorous inspection occurs during the construction of the cutoff walls. The draft Licence includes the hydraulic conductivity requirements and stipulates the post construction soil sampling procedures that will be followed.

COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:

Highways

- *No concerns.*

Natural Resources

- *Land spreading is being proposed on what appear to be quite coarse sandy soils. Possible impacts from this land spreading on these potential shallow aquifers should be considered.*
- *Emergency releases from the lagoon should occur only after June 15.*

Disposition:

- An effluent irrigation system is similar to other irrigation systems in that it will function better on coarse soils with a high sand content (i.e. irrigation systems will not function well on clay soils). The nutrient content of domestic sewage is limited and will be removed by the growing crop provided good management practices are followed. The site is underlain with a clay zone that will also protect the shallow aquifers.
- The proponent has withdrawn its request for approval of an option involving emergency discharge to Swede Creek.

Historic Resources

- *No concerns.*

Health

- *No concerns.*

Rural Development

- *No concerns.*

Environment-Operations Division

- *No concerns.*

Environment-Water Quality Management

- *No concerns.*

Canadian Environmental Assessment Agency

- *CEAA has indicated that Western Economic Diversification will conduct an environmental assessment under The Canadian Environmental Assessment Act with respect to this proposal.*

PUBLIC HEARING:

A public hearing is not required.

RECOMMENDATION:

A Licence should 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:

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