

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPONENT:** Rural Municipality of Cartier: Applicant  
**PROPOSAL NAME:** Elie Wastewater Treatment Lagoon  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Wastewater Treatment Lagoon  
**CLIENT FILE NO.:** 629.10

### **OVERVIEW:**

On February 19, 1998, the Department received a Proposal on behalf of the Rural Municipality of Cartier to expand its wastewater treatment lagoon to service the Local Urban District of Elie. The wastewater treatment lagoon will be located on the southwest quarter of Section 1-11-3 WPM. The Proposal indicated that treated wastewater will continue to be discharged into a drainage ditch which flows into the La Salle River.

The Proposal prepared by J. R. Cousin Consultants Ltd., indicated that the soil at the site is high plastic clay which will meet the provincial hydraulic conductivity requirements for wastewater treatment lagoons

The Department, on March 16, 1998, placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station); the Centennial Public Library and the Portage Plains 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 Portage Herald on Tuesday, April 17, 1998. The newspaper and TAC notification invited responses until April 17, 1998.

### **COMMENTS FROM THE PUBLIC:**

- No responses were received to the public notification.

### **COMMENTS FROM THE TECHNICAL ADVISORY COMMITTEE:**

#### **Highways**

- *No concerns.*

#### **Natural Resources**

- *The proposed lagoon expansion will lead to a significant increase in the amount of effluent released into the La Salle River.*
- *Emergency discharge or this increased loading could have a detrimental impact on fish populations in the river.*
- *A third cell (natural wet land) to polish the effluent before it reaches the river should be considered to ensure that the effluent will not have any effects on the river.*

Disposition:

- The proposal is to increase the storage capacity of the lagoon system to prevent the need for an early discharge in the spring of the year.
- The department does not use the licencing process to specify treatment technologies that must be used; however limits, terms and conditions are placed on treatment systems to protect the receiving environment.
- It is not reasonable to expect the proponent to remove nutrients without a demonstrated need and without a reasonable expectation that the removal will have a measurable and significant impact on the river water quality. It is reasonable to expect the proponent to share the responsibility with others discharging nutrients, both point source and non-point source discharges, to reduce the nutrient loading to the river when it has been established that nutrient levels must be reduced. The draft Licence requires the Licencee to participate in a watershed based nutrient reduction program that may be developed in the future.

**Historic Resources**

- *No concerns.*

**Health**

*The health concerns with a wastewater treatment lagoon are:*

- *minimization of odours*
- *protection of groundwater sources*
- *public safety i.e. fencing*

Disposition:

- These concerns have been addressed in the draft Licence.

**Urban Affairs**

- *No concerns.*

**Environment-Operations Division**

- *No concerns.*

**Environment-Water Quality Management**

- *The proposed lagoon upgrade calls for increasing the retention period from the present 200 days to 230 days before discharge of the effluent to the La Salle River. This should reduce the levels of unionized ammonia in the effluent and thus alleviate or at least lessen concerns about the potential impacts on aquatic life in the river.*
- *High levels of nutrients in water leads to excessive algal growth which can make the water less potable for domestic and livestock consumption at downstream sites. Previous sampling on the La Salle River has indicated that it is eutrophic (high concentrations of nitrogen and phosphorus) and is prone to algal bloom formation. River sampling in 1995 and 1997 showed that blue-green alga growth and liver toxin production does occur in the river water. The proposal makes no*

*mention of the potential impacts that plant nutrients in the effluent may have on the receiving water of the La Salle River.*

- *Effluent will be routed to the river via a 1500 m long drainage ditch. Development and implementation of a vegetation management plan allowing for the controlled growth of macrophytes in the drainage ditch might help in further refining the effluent as it makes its way to the river. This would require the harvesting of mature vegetation without impeding movement of the effluent (or drainage water).*
- *The proposal states that effluent will be mixed with other drainage waters in the drainage ditch as it travels to the La Salle River. No information is provided about the volume of drainage water that will dilute the effluent.*
- *The lagoon design is based on a design population of 1708 that is approximately 3 times the population being serviced at the present time. This coupled with the increased retention time will likely lessen the impacts of effluent discharge on the river over the short term. The proposal does not make any long term forecast as to the potential impacts.*
- *The proposal does not indicate if any other method for effluent discharge have been explored (i. e. land irrigation).*

**Disposition:**

- The department expects to publish a report within the next two years on the river sampling data that has referred to. It is not reasonable to expect proponents to address environmental considerations before the department publishes the information and provides direction on the need for nutrient removal in the watershed.
- The drain that carries the effluent to the river is a natural drain that is not under the control of the proponent. Changes to the drain could only be undertaken if the proponent acquires the drain.
- Information is not provided on the volume of dilution water in the drain because detailed flow information is not available.
- Effluent irrigation is not a practical alternative disposal method on the heavy clay soils found at the site.
- It is not reasonable to expect the proponent to remove nutrients without a demonstrated need and without a reasonable expectation that the removal will have a measurable and significant impact on the river water quality. It is reasonable to expect the proponent to share the responsibility with others discharging nutrients, both point source and non-point source discharges, to reduce the nutrient loading to the river when it has been established that nutrient levels must be reduced. The draft Licence requires the Licencee to participate in a watershed based nutrient reduction program that may be developed in the future.

**Canadian Environmental Assessment Agency**

- *CEAA has indicated that P. F. R. A. 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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