

## **SUMMARY OF COMMENTS/RECOMMENDATIONS**

**PROPOSER:** City of Steinbach  
**PROPOSAL NAME:** City of Steinbach Wastewater Treatment Lagoon Facility Expansion  
**CLASS OF DEVELOPMENT:** 2  
**TYPE OF DEVELOPMENT:** Wastewater Treatment Lagoon – Waste/Scrap  
**CLIENT FILE NO.:** 40.20

### **OVERVIEW:**

On November 10, 2008, the Department received a Proposal from AECOM on behalf of the City of Steinbach for the expansion, construction and operation of a wastewater treatment lagoon located in Sections 8 and 17-7-6 EPM in the Rural Municipality of Hanover. The existing facilities are located in NE, SE and SW 8-7-6 EPM. Four additional cells would be constructed in NE and SE 8-7-6 EPM and SW and SE 17-7-6 EPM. Treated wastewater from the expanded wastewater treatment lagoon will be discharged between June 15<sup>th</sup> and November 1<sup>st</sup> of any year to a municipal ditch that flows into the Keating drain and subsequently drains into the Manning Canal. This canal then drains into the Seine River Diversion which eventually flows into the Red River.

On November 28, 2008, a letter was sent to the proponent's consultant identifying items that were either required or for which additional information was required.

On December 16, 2008, Manitoba Conservation received responses from the consultant which was not adequate.

On December 22, 2008, an e-mail message was sent to the proponent's consultant to provide previously requested information which was not addressed in their letter. On February 9, 2009, Manitoba Conservation received responses from the consultant.

The Department, on February 26, 2009 placed copies of the Proposal in the Public Registries located at 123 Main St. (Union Station), the Winnipeg Millennium Public Library, the Manitoba Eco-Network, and Jake Epp Public Library. Copies of the Proposal were also provided to the Technical Advisory Committee (TAC) members. The Department placed public notification of the Proposal in the Steinbach Carillon News on Thursday, February 26, 2009. The newspaper and TAC notifications invited responses until March 26, 2008.

On April 2, 2009 Manitoba Conservation forwarded requests for additional information from the TAC to the proponent's consultant. On May 27, 2009, the consultant submitted responses to the comments and requests from the TAC.

On May 29, 2009, the consultant's responses were distributed to the participating TAC for review and comment. On June 16, 2009 and June 23, 2009, Manitoba Conservation received comments on consultant's responses from the TAC.

On June 23, 2009, Manitoba Conservation forwarded comments on consultant's responses from the TAC to the consultant. On June 24, 2009, Manitoba Conservation received responses from the consultant.

On June 25, 2009, Manitoba Conservation forwarded responses from consultant to TAC.

All additional information necessary for the review was provided in the Public Registries

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

No comments were received from the public.

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

#### **Manitoba Infrastructure and Transportation**

- *No concerns*

#### **Manitoba Science, Technology, Energy and Mines**

- *No concerns*

#### **Manitoba Conservation – Parks and Natural Areas Branch**

- *No concerns*

#### **Manitoba Culture, Heritage, Tourism and Sport – Historic Resources Branch**

- *No concerns*

#### **Manitoba Conservation - Sustainable Resource & Policy Management Branch**

- *No concerns*

#### **Manitoba Intergovernmental Affairs – Community Planning Services**

March 23, 2009

- *The revised report indicates that the total storage volume required is based on the daily flow estimation for the year 2020. The report mentions construction will begin before the current lagoon facility reaches capacity. Including the expansion, what is the life expectancy of the Steinbach lagoon?*
- *Why is the growth rate projection for Steinbach using 2.4% as an annual growth rate for 14 years when the past 8 years of growth shows an increase of 4.0% per annum? Should the City not plan for at least a 20 year lagoon capacity?*
- *Steinbach has some areas of rural residential development with on-site wastewater management systems that will require the pumping out of septage. Will the new*

*lagoon accept waste or septage from these areas of the City? Will the new lagoon accept waste or septage from rural residential areas outside of the City?*

- *Were there any community consultations done for the planned expansion of the lagoon? If so, what were the outcomes?*
- *Have required regulatory setback distances (if any) between existing dwellings and the proposed lagoon expansion been met?*
- *Has there been any consideration for new industrial activity or an analysis done to predict the type of new industrial development that may locate in the City of Steinbach? How will Council respond to future applications for industries locating in the City?*
- *A regional wastewater approach with the LUD of Mitchell / RM of Hanover was not mentioned as an upgrade alternative. Why was the regional approach not considered viable?*

Proponent Response (May 27, 2009):

- It is expected that, after expansion, the Steinbach lagoon will reach the end of its useful life — becoming unable to sufficiently treat the volume influent — by 2020, based on the City's rate of growth.
- 2.4% was used as a growth rate as it accounts for years of negative growth. The original design of the lagoon had also used 2.4% and it has proven to be relatively accurate based on current census data. The City had requested that the lagoon expansion be designed to accommodate approximately 15,000 people or a 10-year design life.
- The City does not accept liquid waste from sources outside City limits. Provisions have been made for the controlled discharge of septic waste from City residents/businesses to the City's wastewater collection system before the lagoon facility. Access to the lagoon site is controlled and is limited to City staff only.
- No community consultation was carried out. This is simply an extension of an existing facility. Formal permits will be obtained from the R.M. of Hanover for construction of the expansion once a permit and final drawings are in place.
- A setback distance of 300 meters, between dwellings and the proposed lagoon expansion, has been included in the preliminary design; however, no required regulations exist — the 300 meter setback is being implemented as "best practice".
- According to Phil Kalyta, P.Eng. of the City of Steinbach, the City currently has a policy in place that states that no business, industry, residence, etc., is permitted to discharge wastewater to the collection system that has any characteristics that are above the City's guidelines. A copy of these guidelines is attached. If an industry that produces wastewater above these guidelines did want to set up in the City, they would have to pre-treat the wastewater to get its characteristics down to the acceptable guideline levels. City Council does not actively pursue "wet" industries, but does make all potential companies aware of this wastewater discharge strength policy.
- The City of Steinbach has been open to discussion on a joint use facility since about 2004. The City has always encouraged development of a joint use facility. Hanover Council officially notified the City that they were pursuing their own facility first in 2005. They reopened discussion briefly in 2007, but in late 2007 again decided to

notify the City that they would be constructing their own facility for the Village of Mitchell.

June 17, 2009

- Our department has no further concerns regarding the Environment Act Proposal for the City of Steinbach Wastewater Treatment Lagoon Facility Expansion.

Disposition:

- After receiving the additional information from the proponent, no further comments were received from Manitoba Intergovernmental Affairs – Community Planning Services.

### **Manitoba Conservation – Environmental Services**

March 26, 2009

- *The land title presented was only for the SE & SW ¼ Section of 17-7-6. There is no land title presented for NE & SE ¼ Section of 8-7-6.*
- *The proposed expansion specifies a primary cell and three secondary cells in the summary (Page i) while page 2 section 1.6 indicates only three cells for the expansion.*
- *Numerous test holes are indicated on Figure 2 but there are no bore logs attached for review.*
- *There are no laboratory results attached from the existing facility Monitoring Wells.*
- *The additional information submitted on Feb 06, 2009 shows clay liner as a liner for the construction. However, there is no information submitted from where the anticipated clay will be obtained. There is no soil analysis submitted regarding the liner to be used.*
- *The design criteria do not show existing and projected hydraulic and organic load that need to be handled by the facility.*
- *The current and projected population served by the facility is not indicated in the project description.*
- *The design drawing does not show any detail on the transfer pipes between the cells.*
- *The drawings do not show distance of the facility from nearby residents and other operations.*
- *The wastewater discharge route is not clear. Page 12 shows Chortitz drain while page 17 indicates Keating drain.*
- *There is no information included regarding road crossing design detail and any authorization from the RM of Hanover.*

Proponent Response (May 27, 2009):

- We are including titles for:  
SE 1/4 Section of 8-7-6E: City of Steinbach NE ¼ Section of 8-7-6E: City of Steinbach SE & SW 1/4 Section of 17-6-7E: City of Steinbach

- The new facility will consist of one (1) new primary cell, two (2) storage cells with a combined approximate usable volume of 580,000 m<sup>3</sup> and one (1) storage cell with an approximate usable volume of 580,000 m<sup>3</sup>.
- The test hole logs are provided in the City of Steinbach Wastewater Treatment Facility Expansion Geotechnical Investigation Report prepared by UMA Engineering Ltd. (UMA) on July 2008. A copy of this report was previously forwarded to Manitoba Conservation.
- Analytical for the existing monitoring wells are provided in the *City of Steinbach Wastewater Treatment Facility Expansion Geotechnical Investigation Report* prepared by UMA on July 2008. A copy of this report can was previously forwarded to Manitoba Conservation.
- The liner in the north expansion area could be designed to meet the Provincial guidelines with respect to lining the ponds with 1 m of clay. At most locations within the two quarter sections that comprise the north expansion area, the clay is sufficiently thick to function as a natural clay liner. The measured hydraulic conductivity of the in-situ clay is less than the 10<sup>-7</sup> m/s required by the guidelines, and it ranges from 1.5 m to greater than 6 m thick at all but one test hole location where it was less than 1 m thick. The existing undisturbed clay can be considered to be a liner where it is 1 m or more thick. In some areas the inverts of the ponds will be less than 1 m above the surface of the till and it will be necessary to sub cut to 1 m below the pond and construct a 1 m thick compact clay liner.

The clay in the east expansion area averages 2.2 m thick, but is absent in some locations, particularly at the south end of the site. The clay in much of the east expansion area is not sufficiently thick to meet the guidelines. In many areas it will be necessary to over excavate the bases of the ponds and construct a 1 m thick liner with recompacted clay. Also, the design includes the installation of a clay cut-off wall in the areas where the clay liner is inadequate.

- The existing allowable organic load is 1,089 kg/day. The City of Steinbach would like the New Licence to reflect a new allowable organic load of 1, 214 kg/day, which is the design capacity of the existing aeration treatment system.

To determine the additional storage requirements for the proposed lagoon expansion, an estimate of the total storage requirement was developed. The projected average daily flow into the lagoon system by 2020 is estimated to be 7,400 m<sup>3</sup>/d.

- The assumed population growth per year is 2.4% (note: population growth for the past eight (8) years has been approximately 4% per year based on Census data). The estimated population at the design year of 2020 is 15,424. The population projection and flow data is shown in Table 1 and is also provided in the Wastewater Treatment Facility Expansion Preliminary Design document.

Table 1 - Population Projection and Flow Data

Year	Population	Daily Consumption (m <sup>3</sup> /day)	Daily influent Flow (m <sup>3</sup> /day)
2006	11,066	4,361	5,691
2007	11,332	4,465	5,795
2008	11,604	4,572	5,903
2009	11,882	4,682	6,012
2010	12,167	4,795	6,125
2011	12,459	4,910	6,240
2012	12,758	5,028	6,358
2013	13,064	5,148	6,478
2014	13,378	5,272	6,602
2015	13,699	5,398	6,728
2016	14,028	5,528	6,858
2017	14,364	5,660	6,991
2018	14,709	5,796	7,126
2019	15,062	5,935	7,266
2020	15,424	6,078	7,408

- The details of new transfer pipes between cells will be similar to the existing transfer pipes in the existing facility and will be incorporated into the final design document.
- This information has now been included in Figure 3 attached.
- The effluent will be discharged into the Keating Drain (not the Chortitz Drain), which flows into the Manning Canal then the Seine River which then eventually flows into the Red River.
- According to Phil Kalyta, P.Eng. of the City of Steinbach, the road allowance consists of an unimproved, non-maintained, mud surfaced road that is used for agricultural field access only. The City blades the roadway from Twin Creek Road to the existing rear entrance to the lagoon site. The existing drain crossing consists of twin 1500 mm diameter CSP culverts with very shallow bury. The new crossing will consist of twin 1880 mm x 1260 mm arch CSP culverts. The arch style will allow for a better pipe bury, with adequate pipe coverage, as well as a better channel low flow characteristic. Once project plans are complete, the City of Steinbach will make a formal application to the R.M. of Hanover for a building permit for this project. This road crossing work will be considered to be part of the Lagoon Expansion project, and the City will be looking after the costs. The Keating Drain is also maintained by the City, even though it is located within the R.M. of Hanover.

March 26, 2009

- *The response indicated that some of the information we requested are on their Geotechnical Investigation Report they submitted in July 2008. We request this document from either the licensing office or regional operations to forward to us for review.*

- *As the document does not have a proper detailed engineering design drawing, we would like to review the construction drawings before it is provided to a contractor.*

Proponent's Response (May 27, 2009):

- This email confirms that AECOM will supply tender ready documents to Manitoba Conservation prior to the construction process commencing.

Disposition:

- After receiving the additional information from the proponent, no further comments were received from Manitoba Conservation – Environmental Services.

**Manitoba Water Stewardship – Planning and Coordination Branch**

April 2, 2009

- *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.*
- *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.*
- *The Department may provide comments pertaining to hazard lands at a later date. Currently, the Department's hazard land personnel are seconded to the emergency flood coordination efforts.*
- *The proposal discusses many potential impacts, but inadequately describes the impact of this specific development and the mitigation strategies that would be employed (e.g. stream crossing proposed under this proposal).*
- *There is an inadequate description of the drainage route and the flows that occur along the length of the drainage route.*
- *The proposal has not adequately addressed the issue of nutrient loading from this facility. The proposal dismisses the impact of the nutrient loading to the Lake Winnipeg watershed by stating:*
  - *“Significant impacts due to elevated phosphorus is not expected as phosphorus levels at the point of discharge will be minimal due to dilution.”*

*The proposal also states:*

- *“Based on the amount of nutrients (nitrogen and phosphorus) entering Manitoba waterways from a variety of sources (agriculture, industrial, etc.) the overall contribution from the discharge from the Steinbach lagoon is a small incremental contribution.”*

*Eutrophication of Lake Winnipeg is a result of a large number of small sources all contributing to the Lake Winnipeg watershed. It is clear from the two aforementioned statements, the proponent has not made sufficient efforts to explore nutrient abatement options for this facility.*

- *All wastewater treatment facilities within the Lake Winnipeg watershed should be implementing strategies to reducing their nutrient load to Lake Winnipeg. The above recommendation is proposed because the Minister of Water Stewardship has adopted the Lake Winnipeg Stewardship Board recommend that all small wastewater treatment facilities, including municipal lagoons, should meet a phosphorus limit of 1.0 mg/L. The proposed phosphorus limit of 1.0 mg/L is consistent with efforts underway across Manitoba and in upstream jurisdictions to reduce nutrient loads to Lake Winnipeg and its watershed. It is desirable to recycle these nutrients on land, rather than releasing effluent directly to waterways. In the Lake Winnipeg Stewardship Board’s December 2006 report to the Minister of Water Stewardship, the Board provides several strategies on how nutrient reduction could be achieved for small wastewater treatment facilities (see recommendations 14-20). If land application of the effluent is not feasible for this facility, chemical precipitation of phosphorus may be the next best alternative.*
  - *The Department recommends that an Environment Act Licence includes the following:*
    - *Require a nutrient mitigation plan that reduces nutrient contributions from this facility to an equivalent phosphorus limit of 1.0 mg/L.*
- *The Environment Act Proposal does not address that the proponents need to divert an existing creek/canal that runs through SE 17-7-6E around the proposed new cell 7; this information is only provided in drawings. While a generic list of fish species has been provided for Manning Canal and the Seine River there is no site specific information on the area that will be diverted in terms of fish presence and /or habitat. It is not that far from Manning Canal and therefore not inconceivable that this creek provides at minimum spring spawning and or nursery habitat. Alteration of a creek requires review from the Department of Fisheries and Oceans Canada.*
- *There are best management practices for stream crossings in the proposal but no indication on the plan where the proposed crossings will be located. Crossings should comply with the Department of Fisheries and Oceans Canada operational statements or be reviewed by the Department of Fisheries and Oceans Canada.*
- *A functioning riparian area of undisturbed native vegetation helps stabilize banks, provides aquatic and wildlife habitat and protects water quality. In circumstances where native vegetation is limited or absent, re-establishment of this vegetation should occur through natural succession or assisted through planting of vegetation native to the area.*



- *The Department recommends an Environment Act Licence to include the following requirements:*
  - *In order to protect riparian areas, establish and maintain an undisturbed native vegetation area located upslope from the ordinary high water mark and adjacent to all waterbodies and waterways connected to the provincial surface water network:*
    - *A 15-metre undisturbed native vegetation area is recommended for lands located adjacent to first and/or second order drains;*
    - *A 30-metre undisturbed native vegetation area is recommended for lands located adjacent to third and/or higher order drains and/or waterbodies;*
    - *Alteration within this undisturbed native vegetation area is limited to a maximum of 25 % of the shoreline length (for example: 25 metres per 100 metres of shoreline length) of each lot for a boat house, path, dock, etc.; and,*
    - *Alteration within this undisturbed native vegetation area (including the removal of near shore or stream aquatic habitat) shall not occur unless an activity conforms to a Department of Fisheries and Oceans Canada Operational Statement or an activity is reviewed by the Department of Fisheries and Oceans Canada.*
- *It is unclear how these new cells will be incorporated into the existing infrastructure and the process and sampling regime prior to effluent release. Will the same effluent discharge route be utilized or will there be a new or additional discharge from cell 9? Are the cells to be lined with a PVC or compacted clay?*
- *The existing discharge route is unclear. One section indicates that the effluent flows into municipal ditching which flows into Choritz Drain and then into Manning Canal. Another section indicates that the effluent is discharged into Keating Drain. The Department requests the proponent to provide clarification pertaining to the discharge route.*
- *The Environment Act Proposal indicates the discharge period is between May 15<sup>th</sup> and October 31<sup>st</sup>. Current discharge timeframes are between June 16<sup>th</sup> and October 31<sup>st</sup>.*

Proponent Response (May 27, 2009):

After reviewing the letter from Manitoba Water Stewardship, the following will be added to the City of Steinbach Wastewater Treatment Lagoon Expansion Environment Act Proposal;

- In order to protect riparian areas, establish and maintain an undisturbed native vegetation area located upslope from the ordinary high water mark and adjacent to all waterbodies and waterways connected to the provincial surface water network:
  - Where possible, a 15 m undisturbed native vegetation area is recommended for lands located adjacent to fish and/or second order drains;

- If conditions permit, a 30 m undisturbed vegetation area is recommended for lands located adjacent to third and/or higher order drains and/or waterbodies;
- Alteration within this undisturbed native vegetation area is limited to a maximum of 25% of shoreline length (for example: 25 m per 100 m of shoreline length) of each lot for a boat house, path, dock, etc.; and,
- Alteration within this undisturbed native vegetation area (including the removal of near shore or stream aquatic habitat) shall not occur unless an activity conforms to a Department of Fisheries and Oceans Canada Operational Statement or an activity is reviewed by the Department of Fisheries and Oceans Canada.
- The new cells will be incorporated into the existing infrastructure using transfer pipes similar to those being used in between the existing cells.
- Effluent discharges will normally occur from Cell 9. During periods of low volume, effluent discharges may occur from Cell 7.
- In response to the remaining issues brought forward in the letter from Manitoba Water Stewardship, (are the cells to be lined with a PVC or compacted clay?). The cells will have compacted clay liners.

June 23, 2009

- The Department has a concern respecting the “realignment” of Keating Drain around the new lagoon expansion. The proponent’s consultant has not provided any comment on the realignment in the attachment. The proponent’s consultant indicates responding to the Canadian Environmental Assessment Agency in response to a direct request by the Department of Fisheries and Oceans Canada for more information on the realignment. The information that was provided to the Department of Fisheries and Oceans Canada indicates the proponents are dismissing this “realignment” as it is not a stream but a municipal ditch/drain that only flows during spring runoff and other precipitation events. The remainder of the time it is dry. There has been significant alteration to “natural” surface water channels in the area which now appear to provide for the argument that as altered channels they provide no other function than to expedite the removal of water from the landscape.
- Keating Drain is connected to Manning Canal. Manning Canal has white suckers, fathead minnows and pearl dace. Keating Drain could provide spring spawning/nursery habitat. More importantly it contributes to the overall water quality of Manning Canal. The realignment could cause downstream and/or upstream channel erosion. The proponent’s consultant indicates that the channel may in fact be slightly larger than the original alignment which could have the potential to cause ongoing downstream erosion issues. While the Department of Fisheries and Oceans Canada is involved in this review, the Department recommends that the proposed

realignment be investigated further under the provincial Environmental Assessment and Licensing process; the proposed realignment should be addressed within an *Environment Act* Licence.

Disposition:

- The draft Environment Act Licence requires the Licencee to meet a phosphorus limit of 1mg/L.
- The draft Environment Act Licence includes a Clause that requires the Licencee to actively participate in any future watershed based management study, plan and/or nutrient reduction program, approved by the Director, for the Manning Canal, the Seine River, Red River, and/or associated waterways and watersheds.
- The Draft Environment Act Licence includes a Clause that requires the Licencee to maintain the discharge route of the wastewater treatment lagoon such that it effectively performs its intended service.
- The draft Environment Act Licence contains a Clause that requires the Licencee to
  - conduct all ditch related work activities during no flow or dry conditions and not during the April 1 to June 15 fish spawning and incubation period;
  - not construct the wastewater treatment lagoon during periods of heavy rain;
  - place and/or isolate all dredged and construction material where it will not erode into any watercourse;
  - implement effective long-term sediment and erosion control measures to prevent soil-laden runoff, and/or silt from entering any watercourse during construction and until vegetation is established;
  - routinely inspect all erosion and sediment control structures and immediately complete any necessary maintenance or repair;
  - vegetate any disturbed areas by planting and seeding preferably native trees, shrubs or grasses and cover such areas with mulch to prevent soil erosion and to help seeds germinate; and
  - use rock that is free of silt and clay for rip rap.

**COMMENTS FROM FEDERAL REPRESENTATION:**

**Canadian Environmental Assessment Agency (CEEA)**

March 30, 2009

- *Based on the responses to the CEEA survey, application of the Canadian Environmental Assessment Act may be required.*
- *Health Canada (HC) would be able to provide specialist advice if requested.*
- *Fisheries and Oceans (DFO) has notified that an environmental assessment under the Canadian Environmental Assessment Act may be required with respect to the project.*

### **Fisheries and Oceans Canada**

- A detailed overview on the proposed stream to be diverted, including the upstream and downstream water system.
- A detailed plan for the new stream section including habitat functions.
- The fish and fish habitat that is likely to be affected by your proposal.
- The design details, construction techniques and mitigation measures being proposed.
- Any relocation and redesign options considered for reducing impacts to fish and fish habitat.
- A monitoring plan that will ensure habitat compensation and mitigation measures function properly.

### **Proponent Response (April 14, 2009):**

- The "stream" that will be realigned is not a stream, but a section of municipal ditching, or drain that is known locally as the Keating Drain, Treated wastewater from the Steinbach treatment lagoon is discharged to municipal ditching that flows into the Keating Drain and subsequently drains into the Manning Canal. Throughout the majority of the year the Keating Drain is a dry drainage channel that carries surface run-off from rainfall and spring-thaw events.

The Keating Drain originates in Section 14-6-6E, about 11.5 km south-east of the proposed realignment. The drain terminates in Section 17-7-6E, where it discharges into the Manning Canal about 1 km north-west of the proposed realignment. The Manning Canal then flows north-west to the Seine River Diversion, which then terminates at the Red River.

- A site plan of the Keating Drain diversion has been provided in Figure 1.
- This project will not have any effect on fish or fish habitat. Throughout the majority of the year the Keating Drain is a dry drainage channel that carries surface run-off from rainfall and spring-thaw events.
- Design details for the new drain re-alignment will match the configuration of the current drain. Generally, the cross-section consists of a 2.4 m bottom, with 5 to 1 side slopes. Construction details and mitigation measure will be similar to those proposed in Section 1.10 of the Environment Act Proposal Application.
- To minimize potential impacts to fish and fish habitat, construction will avoid critical periods where fish habitat was determined to be important, and of moderate or high sensitivity to disturbance. Critical periods are spring and fall spawning periods. Therefore, re-alignment of the Keating Drain will only occur between June 15 and September 01, and during times of no/low flow. Appropriate short-term and long-term erosion and sediment control measures will be implemented until such time that adequate site vegetative cover has been established.
- It is our determination that habitat compensation will not be required, as the length and total volume of the Keating Drain diversion will remain the same, if not be slightly larger than the original alignment. Slopes along the route of the diversion will be monitored during construction and maintenance to ensure prompt identification of any problem areas.

Disposition:

- After receiving the additional information from the proponent, no further comments were received from Fisheries and Oceans Canada.

**PUBLIC HEARING:**

A public hearing is not recommended because no comments were received from the public.

**RECOMMENDATION:**

The Proponent should be issued a Licence for the expansion and operation of the wastewater treatment lagoon in accordance with the specifications, terms and conditions of the attached draft Licence. Enforcement of the Licence should be assigned to the Environmental Assessment and Licensing Branch until the liner testing has been completed and the Development is commissioned.

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