

**APPENDIX I:
PRESENTATION TO TOWNSHIP COUNCIL – SEPTEMBER 2016**

September 19, 2016

Bayshore Village Effluent Spray Irrigation Class EA Study Update

Problem Statement

- Bayshore Village lagoon effluent is spray irrigated on fields that have been in continuous operation for 25 -38 years
- Soils have become compacted and have reduced absorption capacity
- Increasingly difficult to dispose of effluent from May to October
- Public concerns with runoff, potential impacts on humans/farm animals, aerosols, drainage
- Need to find the most appropriate solution for the disposal of the lagoon effluent

Main Considerations

The preferred solution needs to:

- Provide the required effluent disposal capacity without runoff to ditches and Wainman Creek/Lake Simcoe
- Provide some spare capacity for operational flexibility
- Involve reasonable level of effort for operation and maintenance
- Have reasonable capital costs for construction, equipment and land
- Address adjacent residents' concerns
- Be acceptable to the MOECC so that an approval can be obtained

Alternative Solutions Assessed

1. Do nothing – Status quo
2. Alter spray irrigation practices (reduce frequency and application rates)
3. Establish 1 or 2 new spray irrigation fields and add tree buffers
4. Build an effluent disposal bed and maintain spray irrigation
5. Build a larger effluent disposal bed and discontinue spray irrigation
6. Upgrade lagoons with tertiary treatment and discharge effluent to Wainman Creek (Lake Simcoe)
7. Pump effluent from Bayshore Village to Lagoon City STP
8. Plant trees on the spray fields to increase nutrient absorption and evapotranspiration
9. Rejuvenate soils with aeration

Preliminary Assessment

In 2014, we concluded the better long-term solution would be to:

- Abandon subsurface disposal approaches, because:
 - Soils' low permeability and high water table
 - Always potential for break-outs, runoff and poor performance, and discharge of nutrients to Lake
 - Difficult to acquire additional land at reasonable price
- Discharge tertiary-treated effluent (keep lagoons, add tertiary treatment) directly to Lake Simcoe, because:
 - Have better control of treatment performance and effluent discharge
 - More opportunity to reduce nutrient loadings to Lake Simcoe
 - Not contingent on weather or soil conditions for effluent disposal

Discussions with MOECC and LSRCA

- Nov. 2014: LSRCA agreed tertiary treated effluent discharge to Lake Simcoe would be a more viable option and could reduce TP loadings. No concerns expressed
- June – Oct. 2015: MOECC stated legal issues:
 - Bayshore Village is not listed as a municipal STP in O. Reg. 60. A direct effluent discharge to Lake Simcoe would be considered a new discharge, which is not allowed under the LSP (Policy 4.3)
 - An amendment to O. Reg. 60 would be necessary
 - Could be considered during the 2018 review of the LSP

Discussions with MOECC and LSRC

- Nov. 2015: MOECC Barrie suggested we consider short term solutions, including willow planting and working soils to prevent runoff
- Feb. 2016: MOECC specialists agreed effluent surface discharge is technically preferred solution, but deferred to the legal issues
- Feb. 2016: Township delegation to MOECC Minister requested change to LSP/O. Reg. 60 and remove legal hurdle. MOECC considers LSPP a model and probability of a change appears low.

Preliminary Conclusion for Class EA

- Implementing tertiary treated effluent discharge to Lake Simcoe is the preferred long term solution
- Current provincial legislation and policies prevent this solution from being implemented. Amendments will take time and effort
- Concerns with the effluent spray irrigation system need to be addressed in the short term

Preliminary Conclusion for Class EA

Recommend a phased approach:

- Continue to aerate spray fields if tests prove effective
- Acquire West field and equip it for spray irrigation
- Continue spray irrigation of existing fields at reduced frequency and rates
- Add mitigating measures: effluent UV disinfection and tree buffers
- Continue efforts to modify LSP and O.Reg. 60
- When LSP is amended, upgrade sewage treatment and discharge effluent to Wainman Creek. Include innovative treatment approaches

Establish One New Spray Irrigation Field



Estimated project cost: \$1M
excl. land acquisition

Discontinue Spray Irrigation, Upgrade Sewage Treatment and Discharge to Wainmain Creek



Estimated project cost: \$3M

Proposed Next Steps

- Public consultation (PIC No. 2) on alternatives and proposed phased approach
- Revise assessment of alternatives and make final recommendation
- Update Council and obtain concurrence
- Prepare study report and Notice of Completion of Class EA

Questions?



Bayshore Village Effluent Spray Irrigation
Class EA Study Update