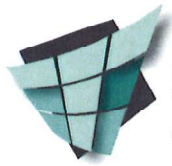


APPENDIX K:

PIC NO. 2



C.C. Tatham & Associates Ltd.
Consulting Engineers

Collingwood Bracebridge Orillia Barrie Ottawa



**THE CORPORATION OF THE
TOWNSHIP OF RAMARA**
Proud History - Progressive Future

NOTICE OF PUBLIC INFORMATION OPEN HOUSE NO. 2 AND COMMENTS INVITED BAYSHORE VILLAGE EFFLUENT SPRAY IRRIGATION SYSTEM CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE 'B'

The Township of Ramara is undertaking a Class Environmental Assessment study (Class EA) to consider the effluent spray irrigation system serving the Bayshore Village Sewage Works. Currently, treated effluent from the sewage lagoons is spray irrigated on two fields near Concession Road 8 and Sideroad 20. The addition of spare spray irrigation capacity and other alternatives for effluent disposal are being considered due to the deterioration of the spray fields' infiltrative capacity.

The study is being carried out in accordance with the planning and design process for a Schedule 'B' project as outlined in the Municipal Engineers Association Municipal Class Environmental Assessment document (October 2000, as amended in 2007, 2011 and 2015).

A Public Information Open House is being held to provide an opportunity for the public to review the alternatives for effluent disposal, and to provide input and comments. Representatives from the project engineering consultants and the Township of Ramara will be present to answer questions.

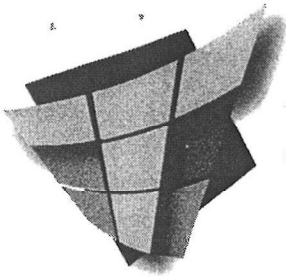
PUBLIC INFORMATION OPEN HOUSE

Date: Tuesday, November 15, 2016
Time: 5:00 – 8:00 pm
Location: Township Council Chambers
2297 Highway 12
Brechin, ON L0K 1B0

Written comments are invited and must be received by Friday, December 9, 2016 to be considered in the study. Comments and requests for information regarding this project should be submitted to:

C.C. Tatham & Associates Ltd.
Suzanne Troxler, M.Sc., P.Eng.
Manager – Environmental Engineering
115 Sandford Fleming Drive
Collingwood, ON L9Y 5A6
Ph: 705-444-2565 ext. 285
Email: stroxler@cctatham.com





R/M/File

C.C. Tatham & Associates Ltd.
Consulting Engineers

Collingwood Bracebridge Orillia Barrie Ottawa

115 Sandford Fleming Drive, Suite 200
Collingwood, Ontario L9Y 5A6
Tel: (705) 444-2565
Fax: (705) 444-2327
Email: info@cctatham.com
Web: www.cctatham.com

October 27, 2016

COPY

via Mail
CCTA File 100080-2

Ms. Cindy K. Hood
District Manager
Ministry of the Environment and Climate Change
Barrie District Office,
54 Cedar Point Drive, Unit 1201
Barrie, ON L4N 5R7

**Re: Township of Ramara
Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment
Notice of Public Information Open House No. 2 and Comments Invited**

Dear Ms. Hood:

The Township of Ramara is conducting a Municipal Class Environmental Assessment study for the disposal of effluent from the Bayshore Village wastewater lagoons. The Township has identified the need to find the most appropriate solution for improving the current effluent spray irrigation system.

You are invited to Public Information Open House No. 2 on Tuesday November 15, 2016 at the Township of Ramara Council Chambers to review the alternative solutions and to provide input and comments. A copy of the Notice of Public Information Open House is attached. If you cannot attend the PIC, copies of the displays will be available on the Township's website or upon request.

Upon completion of the study, a project file documenting the Class EA process and preferred solution will be prepared for review and comment.

We look forward to the receipt of your comments and input on this Class EA study, by December 9, 2016.

If you are not the appropriate recipient for this letter, please pass it on to the appropriate person within your organization, and advise us accordingly.

If you have any questions, please do not hesitate to contact me.

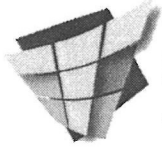
Yours truly,
C.C. Tatham & Associates Ltd.

Suzanne Troxler

Suzanne Troxler, B.Eng., M.Sc., P.Eng.
Director, Manager – Environmental Engineering
KES/ST:rlh
Encl.

copy: Janice McKinnon and David Readman, Township of Ramara

I:\Wpdocs\100080\Spray Irrigation EA\PIC No. 2\L - Bayshore PIC 2 Cover Letter.doc



C.C. Tatham & Associates Ltd.
Consulting Engineers

Collingwood Bracebridge Orillia Barrie Ottawa



**THE CORPORATION OF THE
TOWNSHIP OF RAMARA**
Proud History - Progressive Future

**NOTICE OF PUBLIC INFORMATION OPEN HOUSE NO. 2
AND COMMENTS INVITED
BAYSHORE VILLAGE EFFLUENT SPRAY IRRIGATION SYSTEM
CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE 'B'**

The Township of Ramara is undertaking a Class Environmental Assessment study (Class EA) to consider the effluent spray irrigation system serving the Bayshore Village Sewage Works. Currently, treated effluent from the sewage lagoons is spray irrigated on two fields near Concession Road 8 and Sideroad 20. The addition of spare spray irrigation capacity and other alternatives for effluent disposal are being considered due to the deterioration of the spray fields' infiltrative capacity.

The study is being carried out in accordance with the planning and design process for a Schedule 'B' project as outlined in the Municipal Engineers Association Municipal Class Environmental Assessment document (October 2000, as amended in 2007, 2011 and 2015).

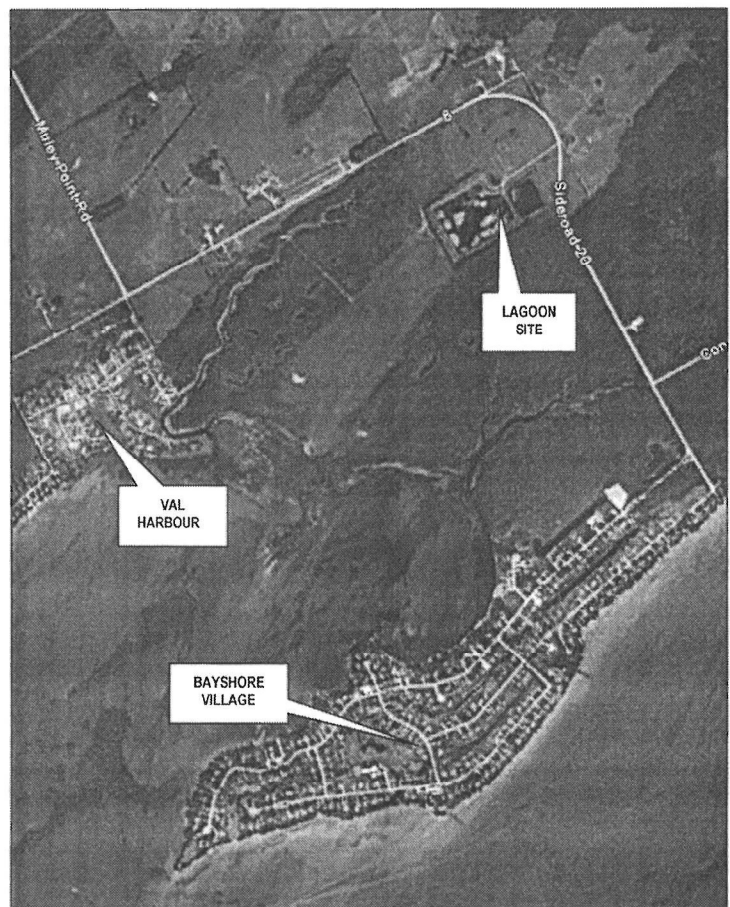
A Public Information Open House is being held to provide an opportunity for the public to review the alternatives for effluent disposal, and to provide input and comments. Representatives from the project engineering consultants and the Township of Ramara will be present to answer questions.

PUBLIC INFORMATION OPEN HOUSE

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2297 Highway 12
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Written comments are invited and must be received by Friday, December 9, 2016 to be considered in the study. Comments and requests for information regarding this project should be submitted to:

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Suzanne Troxler, M.Sc., P.Eng.
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Ph: 705-444-2565 ext. 285
Email: stroxler@cctatham.com



Ms. Cindy K. Hood, Manager
Ministry of the Environment and Climate Change
Barrie District Office,
54 Cedar Point Drive, Unit 1201
Barrie ON L4N 5R7

Dr. Charles Gardner Medical Officer of Health
Simcoe Muskoka District Health Unit
15 Sperling Drive
Barrie ON L4M 6K9

Mr. Ben Longstaff General Manager, Integrated Watershed
Management
Lake Simcoe Region Conservation Authority
120 Bayview Parkway,
Newmarket ON L3Y 3W3

Ms. Jennifer Sharpe, Manager of Planning and Properties
Simcoe Muskoka Catholic School Board
46 Alliance Boulevard
Barrie ON L4M 5K3

Mr. Brent Kennedy, Director
Ministry of Agriculture, Food and Rural Affairs
Rural Programs Branch,
1 Stone Road West, 4th Floor
Guelph ON N1G 4Y2

Ms. Chantal Larochelle, Regional Manager, Client Services
Department of Fisheries and Oceans
867 Lakeshore Road
Burlington ON L7R 4A6

Mr. Rob Dobos, Manager
Environment Canada
867 Lakeshore Road
Burlington ON L7S 1A1

Ms. Chunmei Liu, Environmental Resource Planner & EA
Coordinator
Ministry of the Environment and Climate Change
Place Nouveau 9th Floor
5775 Yonge Street, 8th Floor

Mr. Rick Howse
Simcoe County District School Board
1170 Highway 26
Midhurst ON L9X 1N6

Mr. Rob Baldwin General Manager, Planning and
Development
Lake Simcoe Region Conservation Authority
120 Bayview Parkway,
Newmarket ON L3Y 3W3

Mr. Colin Bonnell, Manager Access Network
Bell Canada
136 Bayfield Street
Barrie ON L4M 3B1

Mr. Francois Lachance, Senior Advisor
Ministry of Indigenous Relations and Reconciliation
160 Bloor St. East, 9th Floor
Toronto ON M7A 2E6

Indigenous and Northern Affairs Canada
25 St. Clair Avenue East, 8th Floor
Toronto ON M4T 1M2

Mr. Mark Aitken, Chief Administrative Officer
The County of Simcoe
1110 Highway 26
Midhurst ON L9X 1N6

Mr. Shawn Carey, District Manager
Ministry of Natural Resources and Forestry
2284 Nursery Road
Midhurst ON L9X 1N8

Chief Rodney Noganosh
Chippewas of Rama First Nation
5884 Rama Road, Suite 200
Rama ON L0K 1T0

Ms. Katana Ljubica
1165692
65 Port St. E., Apt. 506
Mississauga ON L5G 4V3

Mr. Kenny Bodenstein
85 Woodland Acres Cres.
Maple ON L6A 1G1

Mr. Mark Wainman
2182 Concession Road 9, R.R.#3
Brechin ON L0K 1B0

Mr. Derek Love
3484 Concession Road 8, R.R.#7 STN MAIN
Orillia ON L3V 6H7

Mr. John Smith
4129 Sideroad 20, R.R.#7 STN MAIN
Orillia ON L3V 6H7

Chief Donna Big Canoe
Chippewas of Georgina Island
P.O. Box N-13, P.O. Box 12
Sutton West ON L0E 1R0

Bayshore Village Association
1 Hayloff Lane, R.R.#3
Brechin ON L0K 1B0

Ms. Palle Skaade
24 Personna Blvd
Markham ON L6C 1E9

Ms. Tammy Kindler
3736 Concession Road 8, R.R.#7 STN MAIN
Orillia ON L3V 6H7

Mr. James Newlands
3456 Concession Road 8, R.R.#7 STN MAIN
Orillia ON L3V 6H7

Mr. Reginald Wainman
2182 Concession Road 9, R.R.#3
Brechin ON L0K 1B0

Mr. John Smith
159 Sunnyslope Ave.
Scarborough ON M1C 2P3

Mr. Calvin Smith
3677 Concession Road 9, R.R.#7 STN MAIN
Orillia ON L3V 6H7

Ms. Yvonne Hirst
144 Main St. S.
Georgetown ON L7G 3E8

Joyland Beach Association
4303 McRae Park Road
Ramara ON L3V 0S2

Union Gas
PO Box 2001
Chatham ON N7M 5M1

Mr. Wesley Trinier
40 Orchard Pt. Rd.
Orillia ON L3V 2C6

Mr. Ken Szijarto
4478 Orkney Heights
Ramara ON L3V 6H7

Ms. Janice MacKinnon, CAO
Ramara Township
2297 Highway #12, P.O. Box. 130
Brechin ON L0K 1B0

Mr. Murray Rowan
4 Thicketwood, Bayshore Village,
R.R. #3
Brechin ON L0K 1B0

North Mara Beach Residents Association
P.O. Box 103
Brechin ON L0K 1B0

Chief Mary McCue-King
Beausoleil First Nation
11 O'Gemaa Miikaans, Christian Island
Cedar Point ON L9M 0A9

Mr. David Dusome, President
Georgian Bay Métis Council
355 Cranston Crescent, P.O. Box 4
Midland ON L4R 4K6

David Dusome, Métis Consultation Unit
Métis Nation of Ontario Head Office
500 Old St. Patrick Street, Unit 3
Ottawa ON K1N 9G4

Ms. Janet Townson, Claims Analyst, Specific Claims Branch
Indian and Northern Affairs Canada
10 Wellington Street, Suite 1310
Gatineau QC K1A 0H4

Mr. Sean Darcy, Manager, Claims Assessment and Treaty
Mechanisms
Indian and Northern Affairs Canada
10 Wellington Street
Gatineau QC K1A 0H4

Jan & Geraldine Toebes
3733 Concession Road 8, R.R.#7 STN MAIN
Orillia ON L3V6H7

Ms. Diane Cammelino
Hydro One
45 Sarjeant Drive, Box 6700
Barrie ON L4M 5N5

Suzanne Troxler - re: Township of Ramara – Bayshore Village Effluent Spray Irrigation – Class Environmental Assessment – Notice of Public Information Open House No. 2 and Comments Invited.

From: Chief Rodney Noganosh <chief@ramafirstnation.ca>
To: "stroxler@cctatham.com" <stroxler@cctatham.com>
Date: 11/2/2016 9:45 AM
Subject: re: Township of Ramara – Bayshore Village Effluent Spray Irrigation – Class Environmental Assessment – Notice of Public Information Open House No. 2 and Comments Invited.
Cc: Chief Rodney Noganosh <chief@ramafirstnation.ca>

Dear Suzanne;

Thank you for your letter re: Township of Ramara – Bayshore Village Effluent Spray Irrigation – Class Environmental Assessment – Notice of Public Information Open House No. 2 and Comments Invited.

Please be advised that we reviewed your letter. I have shared it with Council and we've forwarded the information to Karry Sandy McKenzie, Williams Treaties First Nation Process Co-ordinator/Negotiator. Ms. McKenzie will review your letter and take the necessary action if required. In the interim, should you wish to contact Ms. McKenzie directly, please do so at k.a.sandy-mckenzie@rogers.com

Thank you,

Chief Rodney Noganosh

Hollie Nolan

Executive Assistant to the Chief, Administration

Chippewas of Rama First Nation

(ph) [705-325-3611](tel:705-325-3611), 1216

(cell)

(fax) [705-325-0879](tel:705-325-0879)

(url) www.ramafirstnation.ca

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By submitting your or another individual's personal information to Chippewas of Rama First Nation, its service providers and agents, you agree and confirm your authority from such other individual, to our collection, use and disclosure of such personal information in accordance with our privacy policy.



Please consider the environment before printing this e-mail.

November 15, 2016

Bayshore Village Effluent Spray Irrigation Class EA PIC No. 2

Purpose of PIC No. 2

- Present potential solutions to improve the Bayshore Village effluent spray irrigation system
- Obtain your input and comments
- Answer your questions

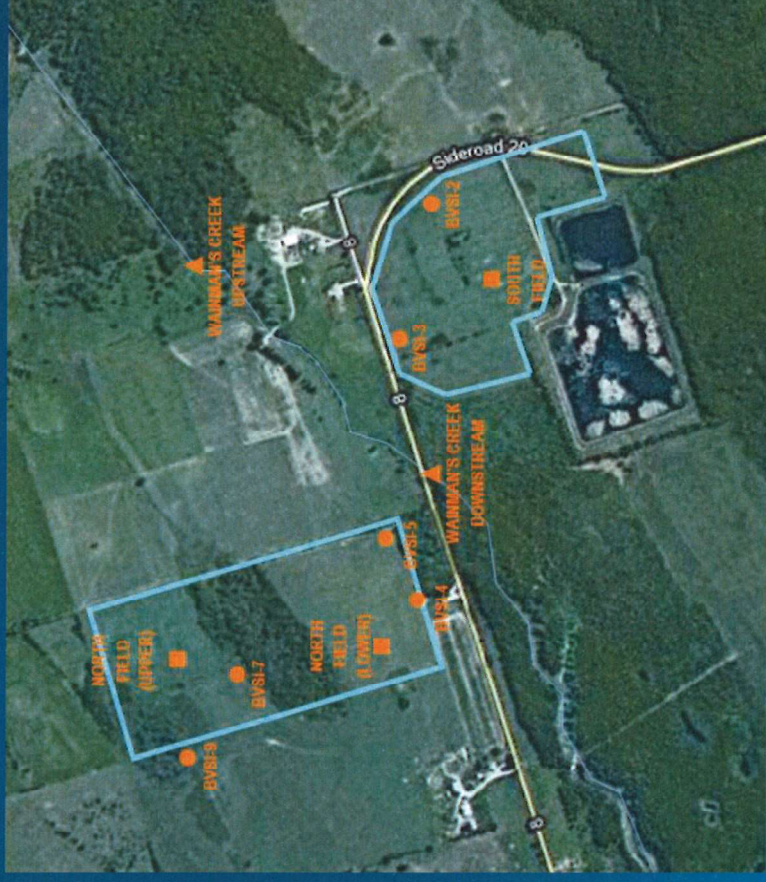
Bayshore Village Sewage Works

- Sewage from Bayshore Village is pumped to 2 stabilization and storage ponds (lagoons)
- Biological treatment and settling of sewage
- Treated effluent is spray irrigated on fields from May to October
- Effluent disposal by evapotranspiration and infiltration



Monitoring

- Township monitors the quality of the sewage, effluent, groundwater, surface water and soils
- Samples are collected in May, August and November, since 1995



Problem Statement

- The 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
- There is no spare capacity to temporarily take spray irrigation fields out of service as needed to restore and maintain their original effluent absorption capacity.

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 and meet the policies of the Lake Simcoe Protection Plan so that an MOECC approval can be obtained.

Alternative 1: Status Quo



Alternative 2: Alter Spray Irrigation Practices



Alternative 3: Establish New Spray Irrigation Field



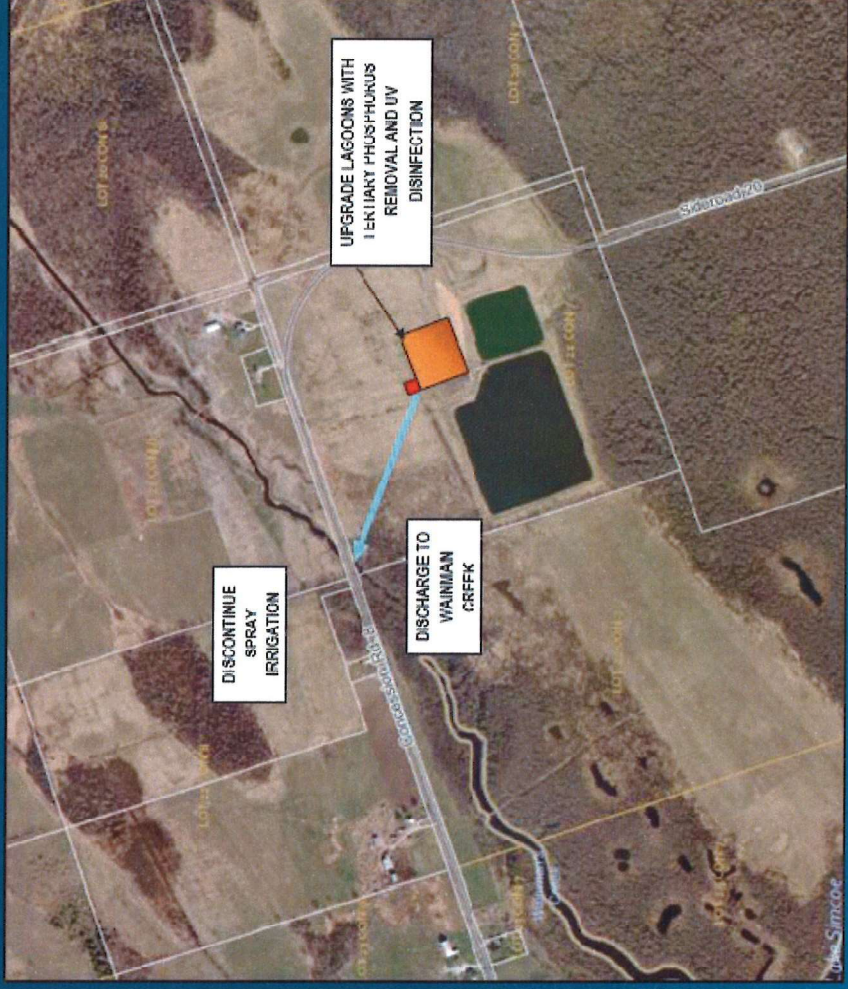
Alternative 4: Build Effluent Disposal Bed and Maintain South Field



Alternative 5: Build Larger Effluent Disposal Bed and Discontinue Spray Irrigation



Alternative 6: Discontinue Spray Irrigation, Upgrade Sewage Treatment and Discharge to Wainmain Creek



Comments

- Please give us your comments in writing
- Drop off the comment sheet or send comments by email
- PIC information will be on the Township website

www.ramara.ca

Next Steps after PIC

- Review all comments received from public and review agencies
- Finalize evaluation of alternatives and determine preferred solution
- Prepare Study Report and present to Township Council
- Issue Notice of Completion of Class EA and 30-day review period
- Design and MOECC approval of preferred solution

Questions?

Bayshore Village Effluent Spray Irrigation
Class EA Study PIC No. 2





**THE CORPORATION OF THE
TOWNSHIP OF RAMARA**
Proud History - Progressive Future

**BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT
SCHEDULE B**

PUBLIC INFORMATION OPEN HOUSE

NOVEMBER 15, 2016

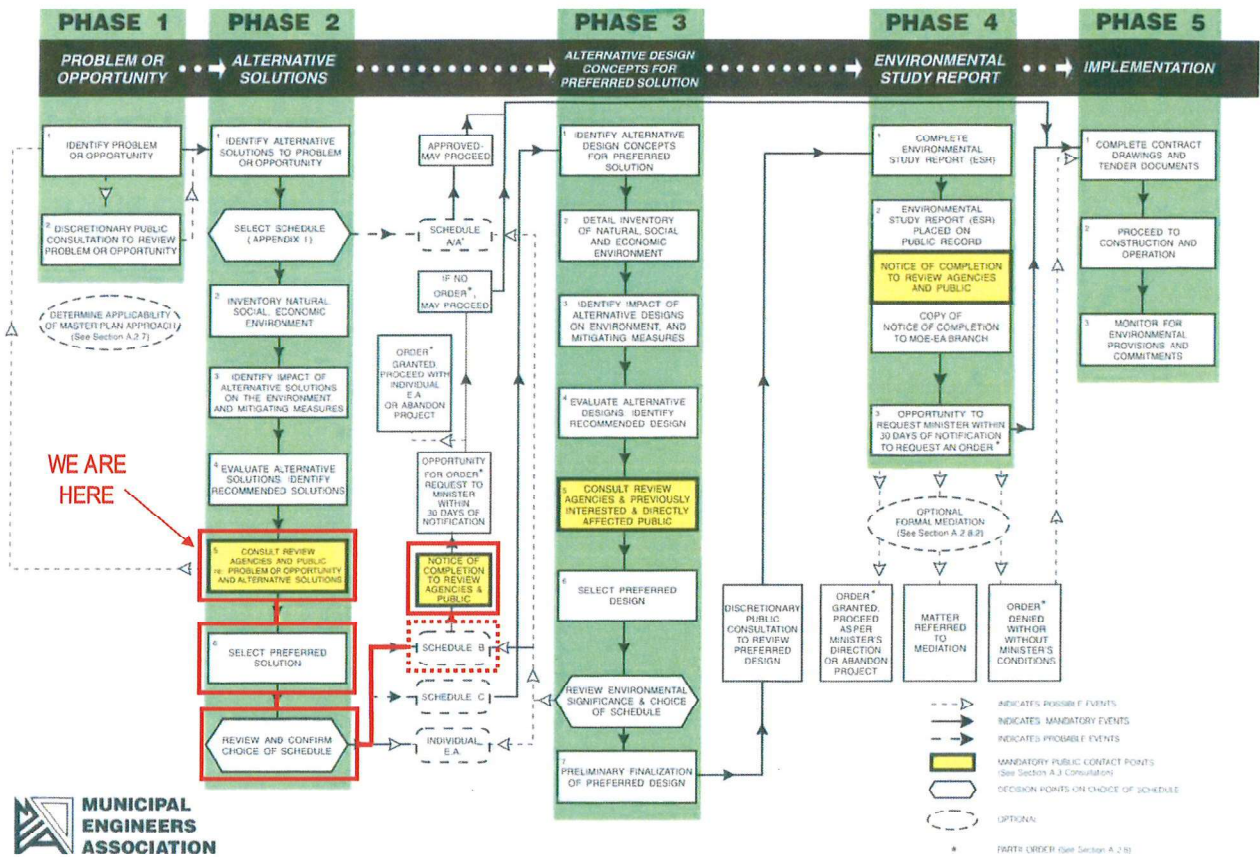


C.C. Tatham & Associates Ltd.
Consulting Engineers

Collingwood Bracebridge Orillia Barrie

**Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2**

MUNICIPAL CLASS EA PROCESS



**Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2**

STUDY AREA



BACKGROUND

SEWAGE WORKS

- The Bayshore Village Sewage Works consist of two facultative waste stabilization ponds (lagoons) with a capacity of 399 m³/day, an effluent pumping station and spray irrigation system.
- The lagoons provide biological treatment and settling of the sewage from Bayshore Village.
- Treated effluent from the lagoons is spray irrigated from May to October on two fields near Concession Road 8 and Sideroad 20.
- The Sewage Works operate under a 1996 MOE Certificate of Approval.
- The Township monitors the performance of the lagoons as well as the soil, groundwater, and surface water quality at and near the spray fields.

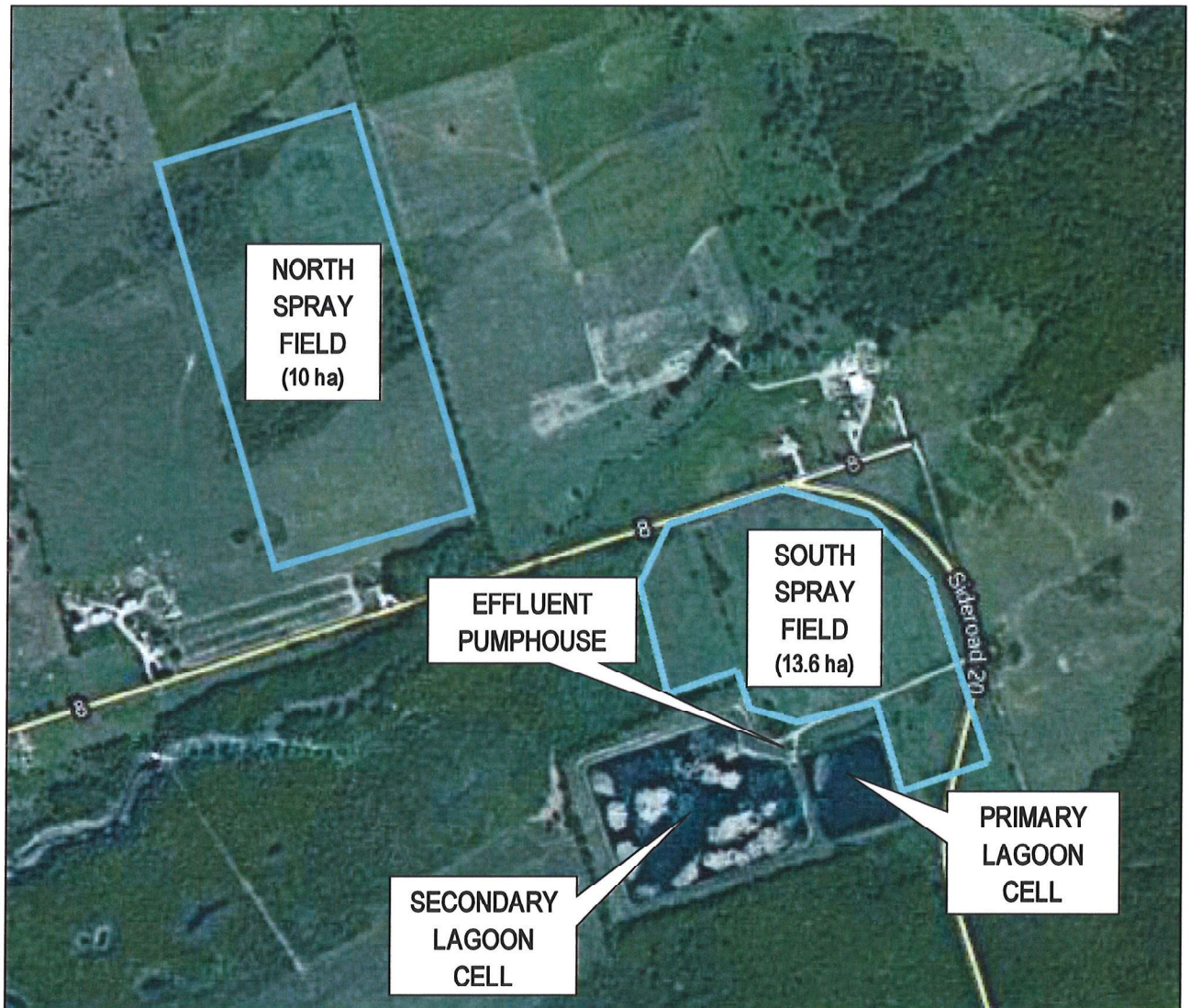
Lagoon Performance Summary

	Suspended Solids (mg/L)	BOD ₅ (mg/L)	Total Phosphorus (mg/L)	Total Kjeldahl Nitrogen (mg/L)
Raw Sewage	114	119	3	18
MOECC Design Guidelines Expected Effluent	30	25	6	N/A
Lagoon Effluent	13	11	1	3
Reduction	89%	91%	65%	83%

(Average of 2004 to 2016 data)

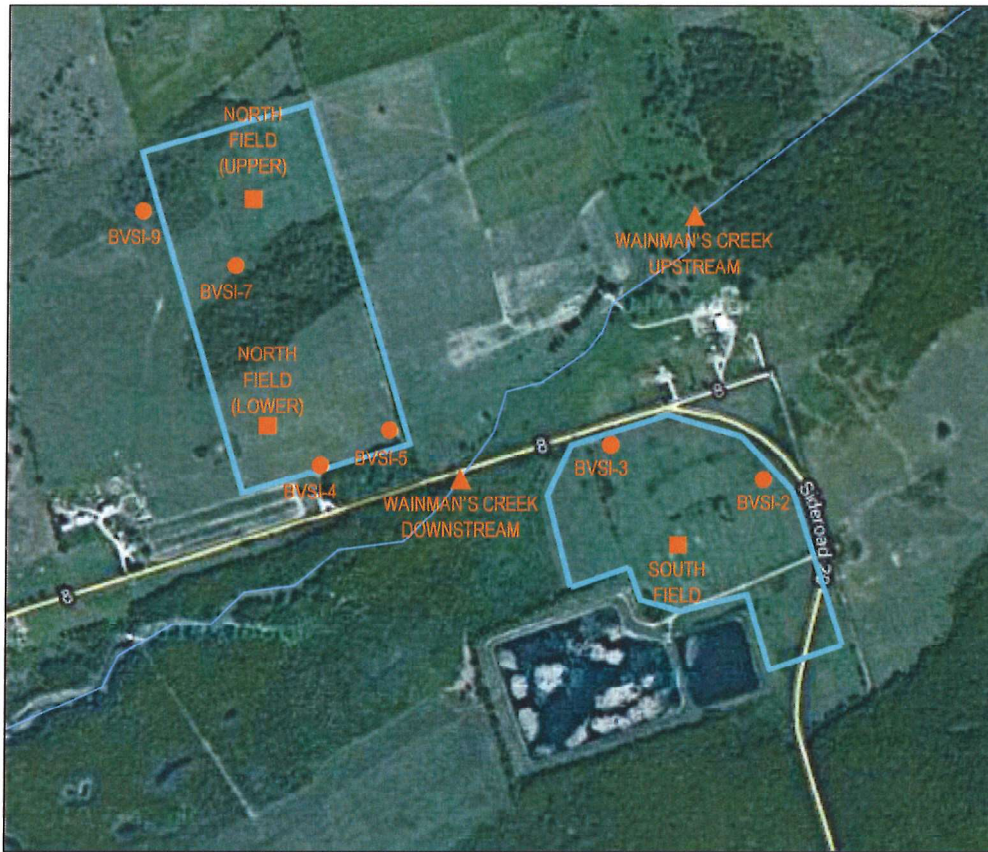
Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2

EXISTING SEWAGE WORKS



Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2

SPRAY IRRIGATION SYSTEM MONITORING LOCATIONS



LEGEND

- GROUNDWATER
- ▲ SURFACE WATER
- SOIL

Samples are collected:

- In May, before the start of the spray irrigation season.
- In August, during the spray irrigation season.
- In November, after the spray irrigation season.

BACKGROUND

CLASS EA STUDY TO DATE

- PIC No. 1 was held in February 2011, presenting two alternatives:
 - Status quo
 - Establish an additional spray field
- Comments received expressed concerns with the spray irrigation operation: runoff, potential impacts on humans and farm animals, aerosols, and local drainage.
- Drainage improvements were completed in 2011 and 2012.
- The Problem Statement was broadened and additional alternatives were developed.
- Soil aeration pilot tests were conducted in 2016 using deep tining and shattertine techniques.
- Consultation meetings were held with MOECC and LSRCA.

REVISED PROBLEM STATEMENT

- Bayshore Village effluent spray irrigation fields have been in continuous operation for 25 to 38 years.
- Soils have become compacted and have reduced absorption capacity. A longer spray irrigation period is often required.
- There is no spare capacity in the spray irrigation system to temporarily take spray irrigation fields out of service for aerating and/or tilling the soils as needed to restore and maintain their original effluent absorption capacity.
- The effluent disposal system must have sufficient capacity to adequately dispose of the effluent from the Bayshore Village lagoons.
- The effluent disposal system should minimize impacts on the environment and on adjacent residents and farms, meet current regulatory requirements, satisfy the Township's operational needs, and be affordable.

ALTERNATIVE SOLUTIONS

CONSIDERED IN DETAIL:

- 1 Do Nothing – Status quo
- 2 Alter spray irrigation practices (reduced spray frequency and application rates); add effluent UV disinfection
- 3 Establish new spray irrigation field(s); add tree buffers; add effluent UV disinfection
- 4 Build an effluent disposal bed and maintain spray irrigation on one field
- 5 Build a larger effluent disposal bed and discontinue spray irrigation
- 6 Upgrade the lagoons to tertiary treatment and discharge effluent to Wainman Creek/Lake Simcoe; discontinue spray irrigation

SCREENED OUT:

- Pump lagoon effluent to the Lagoon City STP
- Plant poplars or willows on the spray fields to increase nutrient absorption and evapotranspiration

MAIN CONSIDERATIONS

The preferred solution needs to:

- Provide the required effluent disposal capacity without runoff.
- Provide some spare capacity for operational flexibility.
- Involve reasonable level of effort for operation and maintenance.
- Address adjacent residents' concerns.
- Have a reasonable capital cost for construction, equipment and land.
- Be acceptable to the MOECC and meet the policies of the Lake Simcoe Protection Plan so that an MOECC approval can be obtained.

The preferred solution(s) may be considered in a phased approach, for the short-term, and/or for the long term.

ALTERNATIVE 1: DO NOTHING

DESCRIPTION

- Continue with current spray irrigation operation on existing fields.

ADVANTAGES

- No significant changes to existing operation, equipment and facilities.
- No capital costs or increase in operating and maintenance costs.

DISADVANTAGES

- Does not provide spare effluent disposal capacity.
- Labour-intensive setup and maintenance of above-ground irrigation piping and spray nozzles.
- Likely to result in deteriorating soil conditions and reduced effluent disposal capacity, leading to:
 - increased potential for ponding and runoff;
 - increased potential for contamination of ditches, Wainman's Creek and Lake Simcoe.
- Potential for dispersion of microbiological aerosols.
- Some negative visual impacts.
- Ongoing costs for the maintenance and repairs to the existing equipment



Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2

ALTERNATIVE 2: ALTER SPRAY IRRIGATION PRACTICES

DESCRIPTION

- Maintain existing spray irrigation fields.
- Modify spray irrigation rates and scheduling to provide one week drying period between irrigation events.
- Add UV disinfection of effluent before spray irrigation.

ADVANTAGES

- Utilizes existing equipment and facilities.
- Likely to decrease potential for ponding/runoff and contamination of ditches, Wainman's Creek and Lake Simcoe.
- Reduces potential impact of aerosols on residents.
- Low capital costs

DISADVANTAGES

- Provides only 60% of required effluent disposal capacity.
- Labour-intensive set-up and maintenance of above-ground irrigation piping and spray nozzles.
- More difficult operation, requiring additional piping and fittings, to isolate fields for variable spray irrigation rates.
- Some negative visual impacts.
- Estimated project cost: \$220,000
- Ongoing costs for the maintenance and repairs to the existing equipment



Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2

ALTERNATIVE 3: ESTABLISH NEW SPRAY IRRIGATION FIELD

DESCRIPTION

- Establish additional field(s) with spray irrigation equipment.
- Modify spray irrigation rates and scheduling to provide one week drying period between spray irrigation events.
- Add UV disinfection of effluent before spray irrigation.
- Add tree buffers.

ADVANTAGES

- Utilizes existing equipment and facilities.
- Provides 20% spare effluent disposal capacity.
- Likely to improve soil conditions and decrease potential for ponding/runoff and contamination of Wainman's Creek and Lake.
- Reduces potential impact of runoff, aerosols and visual impacts.

DISADVANTAGES

- Labour-intensive set-up and maintenance of above-ground irrigation piping and spray nozzles.
- More difficult operation, requiring additional irrigation piping and fittings, to isolate fields for variable spray irrigation rates.
- Increases operation and maintenance costs.
- Estimated project cost \$1.0M
- Ongoing costs for the maintenance and repairs to the existing equipment.



Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2

ALTERNATIVE 4: BUILD EFFLUENT DISPOSAL BED AND MAINTAIN SOUTH FIELD

DESCRIPTION

- Maintain spray irrigation on South field only.
- Construct a fully raised effluent disposal bed (4.8 ha) on a new field.
- Modify spray irrigation rates and scheduling to provide one week drying period between spray irrigation events.
- Add UV disinfection of effluent before spray irrigation.
- Add tree buffers.

ADVANTAGES

- Replaces fields that have less capacity and are not frequently used.
- Provides 17% spare effluent disposal capacity.
- Likely to improve soil conditions and decrease potential for ponding/runoff and contamination of Wainman's Creek and Lake Simcoe.
- Reduces potential impact of aerosols and visual impacts on residents.
- Utilizes existing equipment and facilities; eliminates road and creek crossing with irrigation piping.

DISADVANTAGES

- Maintains labour-intensive setup and maintenance of above-ground irrigation piping and spray nozzles.
- Potential for effluent breakout from raised bed on poor soils.
- Increases operation and maintenance for dosing systems to ensure even distribution of effluent to large disposal bed.
- Tile bed cannot be used for crops. Grass must be cut regularly to maintain tile bed performance.
- Estimated project cost \$4.1M.
- Ongoing costs for the maintenance and repairs to the existing equipment.



ALTERNATIVE 5: BUILD LARGER EFFLUENT DISPOSAL BED AND DISCONTINUE SPRAY IRRIGATION

DESCRIPTION

- Abandon spray irrigation.
- Construct a fully raised effluent disposal bed (5.6 ha) on a new field.

ADVANTAGES

- Discontinuing spray irrigation eliminates potential for runoff, aerosols, and negative aesthetic impacts.
- Eliminates labour-intensive setup and maintenance of above-ground irrigation piping and spray nozzles.

DISADVANTAGES

- Potential for effluent breakout from fully raised disposal bed on poor soils.
 - Increases operation and maintenance for dosing systems to ensure even distribution of effluent to large tile beds.
 - Tile bed cannot be used for crops. Grass must be cut regularly to maintain tile bed performance.
- Estimated project cost \$4.4M



**ALTERNATIVE 6: DISCONTINUE SPRAY IRRIGATION,
UPGRADE SEWAGE TREATMENT AND DISCHARGE EFFLUENT TO WAINMAN CREEK/LAKE SIMCOE**

DESCRIPTION

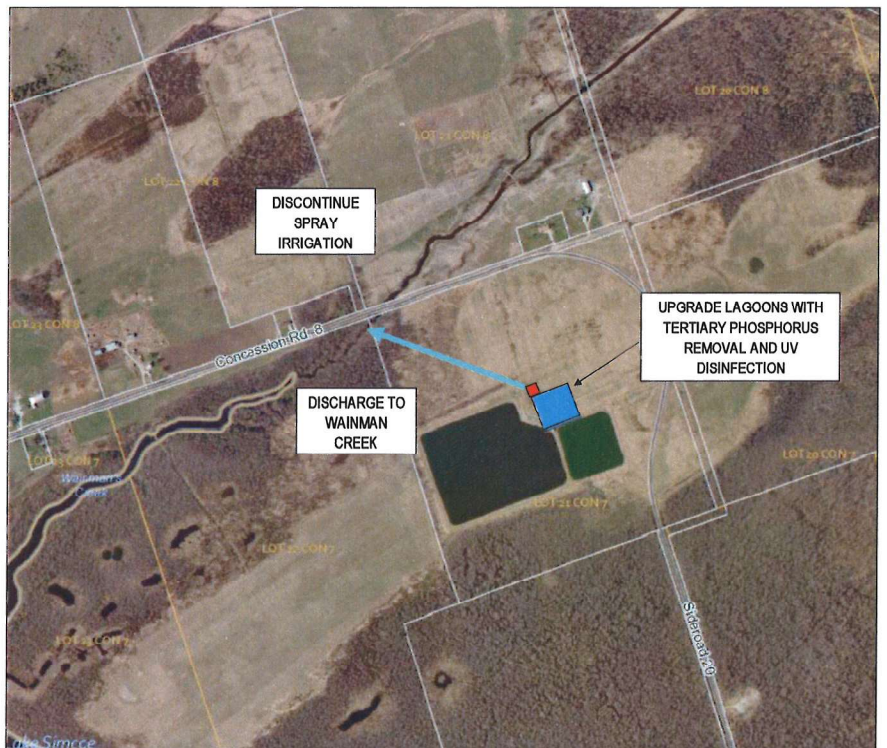
- Discontinue spray irrigation.
- Upgrade sewage lagoons with tertiary phosphorus removal and ultraviolet disinfection, and discharge effluent to Wainman Creek.

ADVANTAGES

- Eliminates potential for runoff, aerosols, and negative aesthetic impacts.
- Provides a higher level of sewage treatment before disposal.
- Well defined effluent point source that can be easily controlled and monitored.

DISADVANTAGES

- Lake Simcoe Protection Plan policies prohibit the construction of a new municipal STP that discharges to Lake Simcoe. MOECC approval will be difficult to obtain without changes to LSPP.
- High capital and operating costs (power, chemicals, labour) of a mechanical STP.
- Estimated project cost: \$3M.



**Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2**

NEXT STEPS

- Respond to questions and review all comments received from public and review agencies.

- Finalize evaluation of alternative solutions and determine preferred solution.

- Prepare study report and present to Township Council.

- Issue Notice of Completion of Class EA study and request public comments (30-day review period).

- Design of preferred solution.

**Bayshore Village Effluent Spray Irrigation
Class Environmental Assessment – PIC No. 2**



COMMENTS



Please fill out a comment sheet and either leave it with us today or send it to the address provided.

FREEDOM OF INFORMATION ACT

Comments and information regarding this project are being collected to assist the project team in meeting the requirements of the *Environmental Assessment Act*. These comments will be maintained for reference throughout the project and, with the exception of personal information, will be used in the Environmental Project File and become part of the public record.

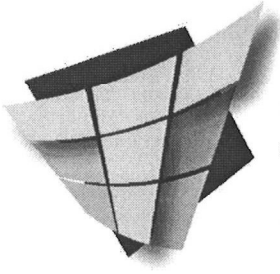
ACCESSIBILITY FOR ONTARIANS WITH DISABILITIES ACT

The Township of Ramara continues to enhance accessibility that is inclusive of all ages and abilities. The information presented at today's Public Information Open House can be provided in alternative formats upon request. Such a request should be submitted to:

C.C. Tatham & Associates Ltd.
Ms. Suzanne Troxler, M.Sc., P.Eng.
115 Sandford Fleming Drive
Collingwood, ON L9Y 5A6
Ph: 705-444-2565 ext. 285
Fax: 705-444-2327
Email: stroxler@cctatham.com

or

Township of Ramara
Mr. David Readman
2297 Highway 12 P.O. Box 130
Brechin, ON L0K 1B0
Ph: 705-484-5374 ext. 248
Fax: 705-484-0885
Email: dreadman@ramara.ca



C.C. Tatham & Associates Ltd.
Consulting Engineers

Collingwood Bracebridge Orillia Barrie Ottawa

**BAYSHORE VILLAGE EFFLUENT SPRAY IRRIGATION CLASS EA
PUBLIC INFORMATION OPEN HOUSE NO. 2, NOVEMBER 15, 2016**

QUESTIONS/COMMENTS AND ANSWERS

Following a brief presentation on the project, attendees of the Public Information Open House were invited to ask questions to the consultant team. The following is a record of the questions and answers. Where required, further clarifications obtained after the meeting are included.

1) Does the water and soil quality monitoring data indicate any impact on Wainman Creek and/or the spray fields?

The water quality monitoring data indicate no adverse impact from the spray irrigation on the water quality of Wainman Creek. Soil quality monitoring data show localized and temporary increases in contaminants such as phosphorus and chlorides during the spray season, but the overall soil quality is constant from year to year.

2) Water from the irrigation pipe crossing Concession Rd 8 has been observed leaking into Wainman Creek.

This question was passed on to Township operating staff after the PIC. The Township operator suggests that this water is likely groundwater, not lagoon effluent. The pipe does not leak when the spray fields are in operation. When the pipe is not pressurized, the pipe coupling gaskets relax, which allows groundwater to enter and escape at pipe joints.

3) What temperature is required for evaporation of the lagoon effluent when spray irrigated?

Evaporation is proportional to the temperature and relative humidity of the surrounding air. Unless the surrounding air is completely saturated with water vapour, some degree of evaporation will take place. Regardless, evaporation is not taken into account when calculating the quantity of effluent that can be spray irrigated and absorbed by the soils.

4) What depth of soil is required to treat the spray irrigated lagoon effluent?

The 2008 MOE Design Guidelines for Sewage Works require 0.5 m (20 inches) of unsaturated soil for contaminant and pathogen removal. Particulate phosphorus is adsorbed onto soil particles. However, dissolved phosphorus is more mobile and typically migrates to the local groundwater.

5) How much lagoon effluent actually soaks into the ground?

The amount of effluent that soaks into the ground depends on the soil type and its degree of saturation. Operators strive to operate the spray irrigation equipment such that all lagoon effluent soaks into the ground. However, ponding and some runoff have been observed when the soils have not dried up before spraying.

6) What is the cost of each the alternative? Who will pay for any new or expanded sewage works? Will residents on septic systems in the Township pay for any new or expanded sewage works?

The estimated cost of each alternative is shown on the PIC display boards, which are posted on the Township website. Only the residents on municipal sewer systems will pay for any new or expanded sewage works. Residents on septic systems do not pay for sewer system projects.

7) Which option provides highest degree of treatment?

Properly designed and operated lagoons and subsurface disposal systems can achieve a high degree of treatment. However, Alternative No. 6, upgrading the lagoons with tertiary treatment and UV disinfection, would provide the highest level of treatment and produce an effluent quality that can be measured at the point of discharge.

8) Which option requires the most operation and maintenance?

Feedback from Township operators suggests alternatives that include spray irrigation require significant operation and maintenance. Setting up and tearing down the spray irrigation piping each season, monitoring and repairing the spray irrigation piping, risers and heads, and controlling application rates, is very labour intensive. All other options also have operation and maintenance requirements.

9) It appears that the best option (Alternative No. 6) is at odds with the Lake Simcoe Protection Plan.

The Lake Simcoe Protection Plan (LSPP) prohibits the establishment of a new municipal sewage treatment plant that discharges to Lake Simcoe. As the LSPP does not recognize the Bayshore Village sewage works as an existing municipal sewage treatment plant that contributes phosphorus to Lake Simcoe, Alternative 6 cannot be implemented without changes made to the LSPP regulations and/or policies.

10) Is it possible to take advantage of phosphorus credits/trading?

This has been discussed with the Ministry of the Environment and Climate Change (MOECC). It is difficult to quantify phosphorus reductions from non-point sources. To account for this, phosphorus credits are given at a ratio. For example, for a 1 kg phosphorus reduction credit, one must demonstrate 3 to 4 kg of phosphorus has been reduced from other non-point sources. Further, there are limited opportunities for non-point source phosphorus reduction in the Township. There is the potential for sharing the allowed phosphorus load from the Lagoon City Sewage Treatment Plant (STP), which services Brechin and Lagoon City. The Lagoon City

STP achieves a high level of phosphorus removal and discharges a fraction of its allowed phosphorus contribution to Lake Simcoe. However, this could place some limitations on the development potential in Brechin and Lagoon City. Phosphorus trading may form part of the preferred solution and will be discussed further with the Township.

11) Adding tertiary treatment requires upstream primary and secondary treatment.

The Bayshore Village sewage lagoons provide primary and secondary treatment. A tertiary treatment system can be added to the lagoon effluent.

12) Why not truck or pipe the lagoon effluent elsewhere for disposal?

This would be a costly endeavour. It is also at odds with the MOECC's policy to treat and dispose of sewage in the community in which it is generated.

13) Would you drink the water out of Wainman Creek?

No. Water from surface water sources should not be drunk without proper water treatment and disinfection. Sewage is never treated to drinking water quality. It is treated to remove pollutants. In the US because of water shortages, there are now some water reclamation facilities that treat sewage to a very high level and then discharge the effluent in man-made reservoirs that are then used as the source for water treatment plants. They are very complex and expensive. This is not required nor possible here.

14) Is government funding available for any new or expanded sewage works?

The Township has aggressively pursued a number of government funding programs in the past few years for the Bayshore Village spray irrigation project, with no success so far. The Township will continue to apply for provincial/federal government funding.

15) What is the capacity of the lagoons, how deep are the lagoons, and how much sludge has accumulated in the lagoons?

The primary cell has a capacity of 30,000 m³ and the secondary cell has a capacity of 110,000 m³. Both cells are approximately 3 m deep. Sludge accumulation was measured in the primary cell in 2013 and in the secondary cell in 2014. Sludge accumulation was found to be 0.1 m to 0.2 m deep (4 to 8 inches), well below the 0.6 m (24 inches) of lagoon capacity allocated for sludge storage.

16) What happens to "flushable" wipes that are flushed down toilets?

The wipes are conveyed with the rest of the sewage and settle to the bottom of the primary cell where they will very slowly biodegrade. They can plug pumps and should not be flushed down toilets.

17) Microbeads, primarily from exfoliating soaps, and microfibers, from clothing fabrics, are problematic for sewage treatment plants to remove.

Microbeads in sewage likely settle at the bottom of the lagoons. Fortunately, Canada has moved to ban microbeads in 2018. We cannot comment on the fate of microfibers, which is an emerging issue that has not been studied extensively to date.

18) If we were to build Bayshore Village now would you as engineers recommend spray irrigation or a tile bed?

A development such as Bayshore Village would be difficult to make happen today as sewage treatment and disposal would be a major constraint in view of the poor soils in the area for subsurface disposal and the prohibition of new STPs in the Lake Simcoe watershed. If the regulatory environment allowed it, we would likely suggest a tertiary sewage treatment plant with a surface water discharge.

19) Can you please explain the Lake Simcoe Protection Act and Lake Simcoe Protection Plan and how they affect this project?

The policies of the Lake Simcoe Protection Plan prohibit the establishment of new municipal sewage treatment plants in the Lake Simcoe watershed unless it replaces an existing municipal STP. Regulation 60/08 of the *Lake Simcoe Protection Act* lists the existing municipal STPs that discharge to Lake Simcoe. Bayshore Village Sewage Works is not one of them. Bayshore Village was not listed and considered as a municipal STP that contributes phosphorus to Lake Simcoe, likely because spray irrigation is considered a subsurface effluent disposal system, and its contribution to the phosphorus loads to Lake Simcoe was not added in the model.

In order to move forward with Alternative No. 6, which involves a tertiary STP and direct discharge to Wainman Creek to Lake Simcoe, the Township would need to convince the MOECC to amend Regulation 60/08 and recognize Bayshore Village Sewage Works as an existing municipal STP that is currently contributing phosphorus to Lake Simcoe through groundwater discharge. There are sufficient groundwater quality data to estimate how much phosphorus is reaching Lake Simcoe. It could be demonstrated that adding tertiary treatment to the lagoon system would result in no net increase or even a reduction in the phosphorus load to Lake Simcoe from the Bayshore Village Sewage Works.

CCTA and the Township have met with MOECC staff on numerous occasions, and with the Minister of the Environment and his deputies, to discuss the situation and the need for a viable long term solution. The Township has also extended an open invitation for the Minister to tour the spray irrigation facilities. So far, the Minister has not responded.

20) Can we add tertiary treatment and spray irrigate the tertiary treated effluent?

Spray irrigating tertiary treated effluent was considered. This approach would improve the effluent quality but it would not address the challenge associated with the limited area for spray irrigation unless more lands

were acquired and set-up with spray irrigation equipment. The costs of this approach would therefore be very high.

21) Does the Township own the long narrow field shown in the figures for the Alternatives to the west of the lagoons? Was the price of acquiring land included in the cost estimates presented for each option? Are the soil characteristics known?

The parcel of land west of the lagoons is privately owned. Future facilities on this piece of land are shown on the figures for the Alternatives for illustration purposes only. They could be located on other adjacent land. The cost of acquiring additional land was not included in the cost estimates for any of the alternatives. Lands in the immediate vicinity of the Bayshore Village Sewage Works also have soils with low permeability and high groundwater table. Upgrading the lagoon with tertiary treatment would not require additional land.

22) Can Bayshore Village residents construct individual septic systems to treat their sewage?

It would be very difficult to retrofit each home with a septic system and meet the clearances required by the Ontario Building Code for decks, sheds, driveways, etc. Furthermore, approval from the MOECC would not likely be obtained: where there is municipal piped drinking water service, there should also be municipal sewage service.

23) Can Bayshore Village install a holding tank and haul sewage to a municipal sewage treatment plant?

Hauling sewage on an ongoing basis would be a very costly endeavour. Further, the MOECC does not permit holding tanks as a means of sewage treatment and disposal except under very extenuating circumstances that do not apply to Bayshore Village.

24) Where do the Barrie Sewage Treatment Plant and the Orillia Sewage Treatment Plant discharge their effluent?

Barrie and Orillia discharge their treated effluent to Lake Simcoe. These municipal sewage treatment plants are currently, or have recently, implemented upgrades to reduce the phosphorus content of their effluent to meet the requirements of the Lake Simcoe Protection Plan.

25) What is the quality of the soil in the spray fields?

The spray fields are not contaminated. The Bayshore Village sewage works treat domestic sewage only, not industrial sewage, and it contains mainly organic matter and nutrients. Soil quality monitoring data show localized and temporary increases in contaminants such as phosphorus and chlorides during the spray season, but the overall soil quality is constant from year to year. The spray fields' decreasing hydraulic infiltrative capacity is driving this project. Soil quality is not the issue.

26) Can the soil be excavated and replaced?

The Township uses approximately 24 ha of land for spray irrigation. Excavating and replacing the soils would be prohibitively expensive.

27) Can the soil be tilled in the spring before the spray season or in November after the spray season?

Evapotranspiration through vegetation is a major component of effluent disposal by spray irrigation. Tilling the fields destroys the vegetative cover and root structure. The existing spray fields do not have sufficient capacity to take all or part of a field out of service for a season in order for it to re-establish its vegetative cover. The Township piloted turf aeration techniques, including deep tining and shatter tining, in the spring of 2016. The aeration appears to have marginally increased the soil permeability.

28) How long does it take effluent to absorb into the ground?

The rate at which the effluent absorbs into the ground depends on the soil type and saturation. Studies have not been undertaken to quantify this rate on the Bayshore spray irrigation fields.

I:\Wpdocs\100080\Spray Irrigation EA\PIC No. 2\PIC #2 Questions & Answers.docx

TOWNSHIP OF RAMARA
 BAYSHORE VILLAGE
 EFFLUENT SPRAY IRRIGATION
 CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
 PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

SIGN-IN SHEET

#	NAME	COMPANY	ADDRESS	PHONE #	EMAIL
1	KATHI KERR		86 Bayshore Drive	705-484-1032	Kathi.kerr@gmail.com
2	FERN KERR		" "	" "	fern.kerr@gmail.com
3	JOHN WALDAN		" "	" "	John.Waldan@ramara.ca
4	Jeanne Morehouse		168 Bayshore Dr.	705-484-1446	morehousejeanne@gmail.com
5	Glen Morehouse		" "	" "	
6	Wade Tower		3979 Bonnie Beach Rd	705-323-2781	wadetower@rockton.ca
7	Lance Tower		4028 Bonnie Beach Rd	705-329-2293	Lance.Tower@rockton.ca
8	L & S. McCreith		4649 R4043 Bonnie Booch	705-326-9906	Landsmcreith@Lisp
9	Paul Tremblay		3860 Eppesville Rd	705-325-8166	
10	Phil W. Giesler		3803 Teopie Dr	327-8667	Dwagney@draculaweb.com
11	Konrad Brenner		5498 Fawn Bay Dr ONT L3U	326 6544	Kabrenner@gmail.com

TOWNSHIP OF RAMARA
 BAYSHORE VILLAGE
 EFFLUENT SPRAY IRRIGATION
 CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
 PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

#	NAME	COMPANY	ADDRESS	PHONE #	EMAIL
12	DON SCOTT		3786 LEO CR. RAMAR ON	705 321-2051	
13	JACK & JILL PIGNATELL		24 MAPLE GATE	705-330-9457	j.pignatelli@comcast.net
14	BILL & ANNE AIKE		19 MAPLE GATE	705-484-5289	
15	BIB & JANE MASCHEWISZ		3488 ANILA	416-425-1499	1308, MASCHEWISZ @TARTO.W.COM
16	DOUG DAVIES		20 THICKETWOOD PLACE	705-484-5557	ddavies@bell.net
17	IAN MEAD		167 BAYSHORE DR	705-484-5235	IANNY@VIANET.CA
18	Jim Gowh		8630 Amilia Dr	705 484 1330	jimgowh @sympatico.ca
19	Amita Cook	President - NYBRA	4142 Glencoe Bell Rd	705-331-2098	amysnow@ndm.com
20	Teresa Stot-Barrow		3828 Glenhurst Dr	705-484-1455	barlowta@bell.net
21	MARY WARD		3826 Glenhurst Dr	416-483-9092	MTward@gmail.com
22	R. M. MASTRACCI		128 Sandstone Dr	705-484-5186	
23	Catherine & Herb Bernans		20 Maple Gate	705-242-9624	

TOWNSHIP OF RAMARA
 BAYSHORE VILLAGE
 EFFLUENT SPRAY IRRIGATION
 CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
 PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

#	NAME	COMPANY	ADDRESS	PHONE #	EMAIL
24	Kyl Johnson	Ramara	2 South Island Trail	705-345-6374	KalJohnson@hotmail.com
25	Jim + June Newlands		3456 Con 8 Ramara L3V0M4	705-326-8460	4j.farms@erillia.com
26	Murray Lowan		4 Thicketwood Pl.	705-484-5211	MurrayLowan2007@yahoo.ca
27	Mark Priddy			205-326-9650	
28	C. Clarke		227 Bayshore Dr	705-484-9962	calvin.clarke@sympatico.ca
29	John Deenie Toebes		3733 Concession Rd 8 L3V0M4	705-307-0540	fantobees@bell.net
30	Simon	Sutton	4 Bristol Sands on Sloffell	4-735-5788	
31	MARG SHARPE	Ramara Councillor	135 Bayshore Dr. Bracklin	484-5786	m.sharpe@ramara.ca
32					
33					
34					
35					

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT – SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 – NOVEMBER 15, 2016

COMMENT SHEET

NAME: Bob Masching

ORGANIZATION: _____

ADDRESS: 518 - 21 Burkebrook Place [3458 Amilia Dr., in Ramara]

Toronto, ON M4G 0A2

PHONE: 416-425-1499 EMAIL: bob.masching@yahoo.com

Do you wish to be added to the project mailing list? You will be notified of the study conclusions.

Yes

No

Do you have any specific comments, questions or suggestions?

It appears that the existing STP has been working well - based on test results from Wainman Creek.

Township should not waste time and resources on Alternative 6. This will only delay making the necessary changes to the STP. The only viable options, in my opinion are expand spray fields and/or disposal beds.

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT – SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 – NOVEMBER 15, 2016

COMMENT SHEET

NAME: Konrad Brenner

ORGANIZATION: _____

ADDRESS: 5498 Lawn Bay Rd
Ramara L3V0W2Z

PHONE: 705 326 6844 EMAIL: Kabrenner@sympatico.ca

Do you wish to be added to the project mailing list? You will be notified of the study conclusions.

Yes

No

Do you have any specific comments, questions or suggestions?

Considering overall benefit
Alternative 3 is the best
choice

Fax 705 325 7420

TOWNSHIP OF RAMARA
 BAYSHORE VILLAGE
 EFFLUENT SPRAY IRRIGATION
 CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
 PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

COMMENT SHEET

NAME: Elizabeth Barker
 ORGANIZATION: _____
 ADDRESS: 3852 Glen Road Dr
Brechin ON
 PHONE: 705 484 0722 EMAIL: ebarker50@rogers.com

Do you wish to be added to the project mailing list? You will be notified of the study conclusions.

Yes

No

Do you have any specific comments, questions or suggestions?

- > Brechin community has
 Waste Water Treatment Plant
 Serves the community area including
 Lagoon City
- > Bayshore Village consists of 348 lots.
 (approx 900 people)
- > Install WWTP / Sewage Treatment Plant
 for Bayshore Village & communities
 of Val Harbour & residential properties
 within community area.
- > Service connections similar to Brechin and

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
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Keswick (York Region).

> All properties along Lake Simcoe shoreline should have service connections to protect Lake Simcoe's water quality.

> Georgina Township (York Region) upgraded system to protect waters of Lake Simcoe. It appears the south end of Lake Simcoe (Georgina + Keswick) have spent money to protect water quality.

> Priorities for Lake Simcoe
aquatic life

Improve water quality

maintain water level (low currently)

Improve ecosystem

address climate change

Please complete the form and submit it to us today, or if you wish to complete this sheet at your convenience, return by December 9, 2016 to:

C.C. Tatham & Associates Ltd.

Suzanne Troxler, M.Sc., P.Eng.

50 Andrew St S, Suite 100

Orillia, ON L3V 7T5

Ph: 705-444-2565 ext. 285

Email: stroxler@cctatham.com

Thank you for your involvement in this study. Comments and information supplied by the public, agencies and interested parties are being collected to assist the Town of Innisfil in meeting requirements under the *Environmental Assessment Act*. This information will be kept on file for use during the study and may be included in study reports. It will become public information and will be used to forward further documentation to you in the future.

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

COMMENT SHEET

NAME: LINDSAY MCCREITH
ORGANIZATION: NORTH RAMARA BEACH ASSOCIATION
ADDRESS: 4049 BONNIE BEACH RD
PHONE: 905-326-9906 EMAIL: LANDSMCCREITH@LIVE.CA

Do you wish to be added to the project mailing list? You will be notified of the study conclusions.

Yes

No

Do you have any specific comments, questions or suggestions?

LIKE MOST OF THE COTTAGE OWNERS WE LOOK
AFTER OUR OWN WASTE. MY SEPTIC SYSTEM HAS BEEN CHANGED
TWICE & PUMPED EVERY FIVE YEARS NO PROBLEMS. BAYSHORE
VILLAGE HAS LARGE LOTS & THEY COULD EASILY PUT A
PROPER SYSTEM IN. JUST LIKE BERKIN WAS FORCED TO GO ON
SEWERS. WHY DO WE LOOK AFTER BAYSHORE WASTE PROBLEMS.
WHO'S PAYING FOR THE LAND & PIPING I FOR ONE DON'T SEE ANY
ADVANTAGE DOING THE SAME MISTAKE AS DOCTOR GARY OVER &
OVER. IN FORTY YEARS WE HAVE LEARNED ABSOLUTELY
NOTHING

EXCUSE MY PRINTING BUT I AM

SHOUTING.

Lindsay McCreith

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT – SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 – NOVEMBER 15, 2016

BARNSTABLE BAY IS ONLY 10FT DEEP AND ITS
SOUTH WESTERLY PRODOMINATE WINDS. GIVE THE BAYSHORE
RESIDENTS \$5,000.00 BOLLARS OFF THEYRE \$20,000.00
SYSTEMS, END OF RAMARA PROBLEMS. & A LOT CHEAPER.

Please complete the form and submit it to us today, or if you wish to complete this sheet at your convenience, return by December 9, 2016 to:

C.C. Tatham & Associates Ltd.
Suzanne Troxler, M.Sc., P.Eng.
50 Andrew St S, Suite 100
Orillia, ON L3V 7T5
Ph: 705-444-2565 ext. 285
Email: stroxler@cctatham.com

Thank you for your involvement in this study. Comments and information supplied by the public, agencies and interested parties are being collected to assist the Town of Innisfil in meeting requirements under the *Environmental Assessment Act*. This information will be kept on file for use during the study and may be included in study reports. It will become public information and will be used to forward further documentation to you in the future.

Mara Beach cottagers reply

Re: Bayshore Village — effluent pipe:

Your editorial of Saturday, September 10, ("Bayshore Village has done it right") would have been greeted only with disappointment had it been simply a legitimate expression of a different opinion. Unfortunately, it seriously misrepresented a number of matters which could easily have been verified.

You refer to two years in studies and hearings. We attended at the Ministry of the Environment and reviewed the Ministry of the Environment's portion of the file and were unable to locate any studies or reports other than those prepared by the developer's representative.

You refer to hearings, to our knowledge, only one "hearing" ever took place. The hearing was advertised prior to the long weekend in May of 1981 on Wednesday in local papers. The hearing was held on the Tuesday evening following the long weekend. The cottagers in front of whose cottages the sewage pipe is to be installed did not become aware of the hearing and did not participate. It is absurd to think that such a method of bringing the hearing to the attention of the affected cottagers could be successful.

You suggest that the cottagers "shouted down" representatives of Bayshore, Mara and the Ministry at a meeting. The events described did not occur and the statement is false. A meeting of the executive of the cottagers' association was held and the association invited, by letter, the Bayshore Residents Association. We advised that we would place no restrictions on the persons in attendance or the subjects to be discussed. The meeting was taped with the consent of all parties. No shouting down of any person occurred and at the conclusion of the meeting all were offered an uninterrupted opportunity to speak.

At the meeting in question, Neil Embree of the Ministry of the Environment stated that if given the choice he would not purchase a cottage in the area of the sewage pipe, but would purchase elsewhere.

Under the June 27, 1977 M.O.E. approval, the sewage system was to have had three ponds not two.

At the meeting, the following facts were discussed:

(a) — That the developer had been prosecuted and fined for constructing a portion of the original sewage system without approval. (M.O.E. correspondence indicates that deficiencies were found and ordered to be remedied.)

(b) — the original system approved at the time of the prosecution provided for a 57 acre underground irriga-

tion system with above ground spray heads for discharge of effluent sufficient to meet the requirements of 200 homes. The system was never built and we are unable to obtain any sensible explanation as to why it was not built in accordance with the approval.

(c) — You say that the sewage pipe may not be needed for ten years or possibly not at all. Why then does the Ministry of the Environment file contain a letter from the developer's consultant requesting that the approval process be expedited because of the urgent need for the pipe and the possible.... "severe difficulty to the owner should it become necessary during mid-year."

The Ministry of the Environment official, Neil Embree has acknowledged that the water is not drinkable and the developer's representative has acknowledged that he would not share a glass of the sewage with Dr. Gary. Mr. Embree has also acknowledged that he would not build a cottage in the area of the effluent pipe and that it would be unwise to swim in the discharge. We also wish to point out that the Ministry of the Environment's own documentation establishes that if the sewage were sprayed on land (as originally proposed), crops for human consumption cannot be planted for a period of six months after the last spray.

The emergency overflow for the system is to remove the pump and allow the raw sewage to drain into the lake. Spills can and do happen with depressing regularity throughout the Province.

The Ministry of the Environment has not asserted that the sewage is fully treated, probably because it falls within the category of partly treated sewage and has not asserted that the discharge is cleaner than the lake itself. One wonders why Mr. Embree would consider it unwise to swim in the discharge if such were the case.

We wonder why The Packet and Times did not take the trouble to verify its facts with the cottagers. We are particularly confused because representatives of the beach association were in contact with The Packet and Times during the week prior to the publication of the editorial and no effort to verify the allegations in the editorial was made. Moreover, the

information set out above and copies of the M.O.E. documents were available.

Why would a developer construct a sewage outfall pipe at a cost of close to \$500,000 when the pipe would not be necessary for approximately ten years. The interest costs at today's rates would be in the order of \$65,000 per year. Why is it being constructed prior to the construction of the originally approved spray system which would service 200 homes (there are only 90 homes constructed to date).

We are particularly disturbed by The Packet and Times' irresponsible effort to create a division between the summer residents and the full-time residents of Mara Township. Many of the cottagers are members of families that have been on these beaches for several generations. Others are the descendants of local families who have been forced to go to the city to earn their living, but whose roots are in the township. Whatever the case may be, cottagers and permanent residents share one thing, which is their concern for the protection of the environment of Mara Township.

The cottagers contribute significantly to the tax base of the township and the dollars spent during the summer months contribute to the economy. Cottagers are entitled to participate as are all residents in the decisions affecting us and our environment. The summer residents are not second class citizens and are entitled to exercise their democratic right to vote and participate in the township's elections. We do not seek to tell the permanent residents what to do, but neither do we expect to be told by The Packet and Times that our views and concerns are not welcome because we are summer residents.

The cottagers feel that their interests are not being protected by their council. We have made it clear that we will support any candidate for election whether a permanent or parttime resident or present council member who has at heart the interests of the cottagers as well as all of the other residents of the township. There is no reason for The Packet and Times to fear the exercise by the cottage residents of their democratic rights in attempting to elect to council persons whom they feel more properly represents the interests of the township's population as a whole. It appears reasonably clear that the protection of the environment in Mara Township requires political action by all residents since we appear to have a Reeve who cannot distinguish between sewage and drinking water.

PAUL J. STOUTT,
North Mara
Beach Association



..... BAYSHORE (LAKE SIMCOE) LIMITED

..... STOUFFVILLE, ONTARIO

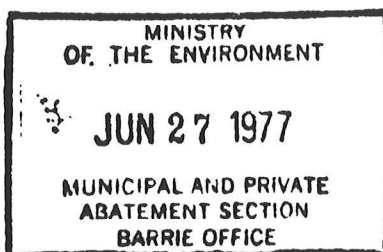
Construction of a sewage works system to serve up to 200 lots within the Bayshore Village subdivision in the Township of Mara consisting of the following facilities:

SANITARY SEWERS (construction of the uncompleted sewers in the following schedule)

<u>STREET</u>	<u>FROM</u>	<u>TO</u>
Bayshore Drive	Approx. 1700' East of Misty Court	Cottonwood Place
Bayshore Drive	Fernwood Lane	Thicketwood Place
Bayshore Drive	Thicketwood Place	Lavender Court
Misty Court	Bayshore Drive	Cul-de-Sac
Cottonwood Place	Bayshore Drive	Cul-de-Sac
Maple Gate	Bayshore Drive	Sandlewood Trail
Fernwood Lane	Bayshore Drive	Cul-de-Sac
Park Lane	Bayshore Drive	Cul-de-Sac
Thicketwood Place	Bayshore Drive	Cul-de-Sac
Lantern Court	Bayshore Drive	Cul-de-Sac
Lavender Court	Bayshore Drive	Cul-de-Sac
Sandlewood Trail	Bayshore Drive	Bayshore Drive
Southview Drive	Approx. 100' West of Road Allowance between Lots 20 & 21	Cul-de-Sac
Easement	Fernwood Lane	Southview Drive
Easement	Fernwood Lane	Bayshore Drive
Easement	Lavender Court	Cottonwood Place

including building sewers from the main sewer to the lot line;

...2



1st

June

77

FORCEMANS AND PUMPING STATIONS

<u>STREET</u>	<u>FROM</u>	<u>TO</u>
Lavender Court and Easement	West Pumping Station (Lavender Court)	Cottonwood Place
Easement, Bayshore Drive, Road Allowance between Lots 20 & 21	East Pumping Station	Lagoons (Lot 21, Conc. 7)

together with the construction of: West Pumping Station to be located on Lavender Court, equipped with two 130 gpm submersible sewage pumps; East Pumping Station to be located at the rear of Lot 106 equipped with two 275 gpm submersible sewage pumps and magnetic flow meter;

TREATMENT WORKS - a three celled sewage lagoon storage system to be located on Lot 21, Conc. 7, with a total storage capacity of 1,000,000 gallons at a maximum liquid depth of six feet; irrigation pumphouse equipped with two 833 gpm pump and flow meter; a surface irrigation system with sprinklers covering 15.4 acres; spray area tile field drainage system; emergency alarm system and all appurtenances, all in accordance with the plans and specifications prepared jointly by W. T. Dempsey Limited, Consulting Engineers, and Underwood McLellan and Associates Limited, Consulting Engineers and Planners, at a total estimated cost, including engineering and contingencies, of FOUR HUNDRED FOURTEEN THOUSAND THREE HUNDRED DOLLARS (\$414,300.00).

THIS IS A TRUE COPY OF THE ORIGINAL CERTIFICATE MAILED

ON June 27 1977

(R)read

1st

June

77

[Handwritten signature]



Ministry of the Environment

CERTIFICATE OF APPROVAL (AIR)

Granted under Section 8 of The Environmental Protection Act, 1971

Application number 3-0304-77-006 This Certificate dated June 1st, 19 77

Owner/Operator Bayshore (Lake Simcoe) Limited

Owner/Operator address P. O. Box 10, Stouffville, Ontario

This approval is for a sewage lagoon and spray irrigation system to serve the Bayshore
village subdivision

located at north half of Lots 21 and 22, Concession VI, Township of Mara
Your application has been reviewed on the basis of the information submitted and is approved, subject to the terms and conditions stated below.

THIS IS A TRUE COPY OF THE ORIGINAL CERTIFICATE MAILED

ON June 2, 1977

[Signature]
(Stamp)

[Signature]

DIRECTOR, SECTION 8

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT – SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 – NOVEMBER 15, 2016

COMMENT SHEET

NAME: Paul Stott

ORGANIZATION: _____

ADDRESS: 3815 Glenrest Drive Ramara

PHONE: 705 484-0647 mobile 416 573-4264 EMAIL: pauls@reuven.com

Do you wish to be added to the project mailing list? You will be notified of the study conclusions.

Yes

No

Do you have any specific comments, questions or suggestions?

My family and are completely and totally opposed to the discharge of any effluent into Wainmans creek. We support options ~~1~~, 3, 4, and 5.

It should be noted that at the inception of the system it was proposed that the discharge take place into Lake Simcoe by pipe between Glenrest Beach and Southview Cove . discharge into Wainman's creek was prohibited because it was a protected area and a fish spawning area . When the public became fully aware of what was proposed there were demonstrations 18 hours a day at the entrance to Bayshore by cottagers from Brechin beach to Joyland beach and beyond During the long weekend The North Mara Beach Residents Association was founded and a lawsuit against the township and Ministry of the Environment as well as the Developer was commenced with the result that the permit put the discharge into the lake was quashed and the spray irrigation developed .

The political uproar that ensued ran throughout the township and in the municipal election there were threats against members of the cottage association and lively meetings during which one of the local ministers presented the then Reeve with a bottle of effluent to drink.

Cottage residents voted in unprecedented numbers and buses were rented to transport those Who could not drive . The Reeve and others who had supported lake discharge were defeated. You can expect a similar response if you push lake or creek discharge although such an option probably remains prohibited under the original court order

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT – SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 – NOVEMBER 15, 2016

option 3

We support the addition of a spray field which would allow rotation tilling and maintenance in a reasonable and environmentally sound manner as the best outcome. The residents of Bayshore Should not be permitted to offload their responsibility onto the other communities around the lake and the lake itself in order to save costs. They knew the system they had and have the responsibility to maintain and keep it up without passing the costs onto the rest of us who use the lake. The idea that the increase could be like a cap and trade approach and if some part of the lake isn't polluting its share then Bayshore gets to increase the pollution going into the lake is outrageous particularly when there are other alternatives that are not unreasonably costly and when Bayshore ^{has} day one has made a series of promises to keep its pollution out of the lake then tried to back track. Got stopped once and should not be permitted to back track again.

Paul Stott

Please complete the form and submit it to us today, or if you wish to complete this sheet at your convenience, return by December 9, 2016 to:

C.C. Tatham & Associates Ltd.
Suzanne Troxler, M.Sc., P.Eng.
50 Andrew St S, Suite 100
Orillia, ON L3V 7T5
Ph: 705-444-2565 ext. 285
Email: stroxler@cctatham.com

Thank you for your involvement in this study. Comments and information supplied by the public, agencies and interested parties are being collected to assist the Town of Innisfil in meeting requirements under *the Environmental Assessment Act*. This information will be kept on file for use during the study and may be included in study reports. It will become public information and will be used to forward further documentation to you in the future.

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

COMMENT SHEET

NAME: JANICE MIYATA
ORGANIZATION: COTTAGE OWNER - MULEY POINT LANE
ADDRESS: 405-162 MARTINDALE RD.
ST. CATHARINES, ON L2S 3S4
PHONE: 905-704-1957 EMAIL: jmiyata@becan.org

Do you wish to be added to the project mailing list? You will be notified of the study conclusions.

Yes

No

Do you have any specific comments, questions or suggestions?

① DOING NOTHING IS ~~NOT~~ AN OPTION.
WORK MUST BE DONE TO REPLACE OLD
SYSTEM.

② TOTAL COST TO BE BORNE BY BAYSHORE
VILLAGE.

③ NOTHING IS TO BE RELEASED INTO
WAINMAN'S CREEK OR LAKE SIMCOE.

TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

COMMENT SHEET

NAME: Sandra McCreith
ORGANIZATION: _____
ADDRESS: 4049 Bonnie Beach Rd
Ramara On L3V0L1
PHONE: 705 326 9906 EMAIL: lands@mcCreith@live.ca

Do you wish to be added to the project mailing list? You will be notified of the study conclusions.

Yes No

Do you have any specific comments, questions or suggestions?

- The original treatment plan passed 3 lagoons, what happened to the third lagoon.
- the fields are saturated or flows into lake via ^{weir} Weirman
- the slyph also follows down Weirman neck, have seen solid waste
- more spray fields or septic beds not an option, valuable too close to lake
- each individual in Beupha should install septic systems, lots are plenty plenty large enough, all contained on own property, no spills into lake. less cost than proposed plans. 1-3-6 million plus cost of more land.
- present system old, rusty valves, clogged, needs a lot of maintenance. Hard to find anyone to take over upkeep.
- NOT sure I believe Bayshore association picking up total cost of upgrades.



TOWNSHIP OF RAMARA
BAYSHORE VILLAGE
EFFLUENT SPRAY IRRIGATION
CLASS ENVIRONMENTAL ASSESSMENT - SCHEDULE B
PUBLIC INFORMATION OPEN HOUSE NO. 2 - NOVEMBER 15, 2016

- the rest of new residents in area should not be included in cost
- contained septic best idea - but service has depreciated over the 40 yrs.
- we could pump in water by small island in Barnstable Bay - Hard sand bottom, now all weeds.
- Seems to be a silt deposit on bottom

Please complete the form and submit it to us today, or if you wish to complete this sheet at your convenience, **return by December 9, 2016** to:

C.C. Tatham & Associates Ltd.
Suzanne Troxler, M.Sc., P.Eng.
50 Andrew St S, Suite 100
Orillia, ON L3V 7T5
Ph: 705-444-2565 ext. 285
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Thank you for your involvement in this study. Comments and information supplied by the public, agencies and interested parties are being collected to assist the Town of Innisfil in meeting requirements under the *Environmental Assessment Act*. This information will be kept on file for use during the study and may be included in study reports. It will become public information and will be used to forward further documentation to you in the future.

From: Blain Hughes <blain.hughes@sympatico.ca>
To: Suzanne Troxler <STROXLER@cctatham.com>
CC: vampnsnow Anita <vampnsnow@cottagecountry.net>, Basil Clarke <bclarke@ra...>
Date: 11/16/2016 3:28 PM
Subject: Re: Public Meeting

This is certainly not a significant sample of the population in the area. I don't believe that this can be attributed to apathy. This meeting was scheduled to limit public input. With that agenda in mind it was a success.

I have given you my address. I look forward to reviewing the list of attendees plus the information which was presented at the meeting.

Can you also give me the date of the next public meeting?

Sent from my iPad

> On Nov 16, 2016, at 10:40 AM, Suzanne Troxler <STROXLER@cctatham.com> wrote:

>

> Mr. Hughes,

>

> The sign-in sheet has 38 names. Our staff and Township staff did not sign-in as attendees.

>

> Suzanne

>

>>>> Blain Hughes <blain.hughes@sympatico.ca> 11/16/2016 9:35 AM >>>

> How many people excluding politicians, engineering company employees, and Ramara employees attended the public meeting?

>

> Sent from my iPad

Suzanne Troxler - Re: Bayshore Village Effluent System (CCTA No. 100080)

From: Suzanne Troxler
To: Blain Hughes
Date: 11/17/2016 8:43 AM
Subject: Re: Bayshore Village Effluent System (CCTA No. 100080)
Cc: Keith Shular; Tim Collingwood; Bea Lamont; vampnsnow Anita; John O'D...

Mr. Hughes,

To answer your question regarding the sludge removal, I have checked the old annual reports. The 1995 annual report confirms that in 1995, works were completed at the stabilization ponds including relining the large lagoon with clay. In order to install the clay liner, the contractor removed the sludge and then spread it back on the bottom of the lined pond. This was confirmed by one of the Township operators who was present in 1995. He also indicated there wasn't enough sludge to warrant removal.

Suzanne

>>> Blain Hughes <blain.hughes@sympatico.ca> 11/15/2016 11:58 AM >>>

Thank you for the information. Regarding the operation of the Bayshore sewage lagoons, I have two more questions regarding the lagoons.

1. The date 95 or 96 is vague. After the debacle in 1984 surely the Township kept records to protect themselves as all eyes were on these lagoons. I'm surprised that no one reported it to NMBRA. Can you give me the date when the sludge was last removed from the lagoons?
2. I find it rather odd that the sludge was removed in 1995. At that point Bayshore was very small population-wise and the sewage lagoons had only been in service for less than 20 years. Since that time the population of Bayshore has increased significantly and 25 homes on Southview Drive have been added to the Bayshore sewage system. According to your email the sludge has not built up to the point that it needs to be removed from the lagoons. Could you please explain this anomaly in sludge build up?

I apologize for my skeptical attitude but the timing of the meeting does not pass the smell test and sets off alarm bells. The questions I am asking would be asked in person if the meeting hadn't been scheduled to exclude public input.

Sent from my iPad

On Nov 14, 2016, at 4:48 PM, Suzanne Troxler <STROXLER@cctatham.com> wrote:

Mr. Hughes,

I can provide a few clarifications:

With regards to sewage treatment:

- The Bayshore Village facultative stabilization ponds are definitely providing sewage treatment. It is a well established biological sewage treatment approach. I can provide excerpt from reference books and MOE Design Guidelines if you would like more details.

- Facultative stabilization ponds are different from septic tanks in that there is oxygen and sunlight available in the upper layer that enable the aerobic oxidation of the organic matter. There is some septic activity at the bottom of the ponds where anaerobic conditions are present.
- Alum is not added to the Bayshore lagoons. Alum is typically added to assist in the precipitation of solids, including phosphorus. Alum addition is not required at this facility as there is good settling. It is also not a requirement of the current Certificate of Approval.
- The Township last measured the depth of sludge in the small lagoon in 2013 and in the large lagoon in 2014. Sludge build-up was found to be low and not warrant removal. Sludge is removed if it exceeds a preset depth. Low sludge accumulation is expected as the raw sewage is fairly dilute and the sludge is anaerobically digested at the bottom of the ponds. We understand sludge was last removed in 1995 or 1996.

With regards to the Class EA consultation process:

- The PIC to be held this week was advertised in the Packet and Times on three occasions and was posted on the Township website, in order to reach the general public in the area. Similarly the materials presented at the PIC will be available on the Township website. We may be able to arrange for a link to this information on the NMBRA website.
- At this time, we do not anticipate having another PIC. The next opportunity to comment will be when the Study Report is made available for public review.
- The Study Report will be prepared this winter. The date this report will be placed on the public record has not been set. We will discuss this with the Township.

We will mail you a copy of the PIC displays and the sign-in sheet.

Suzanne

>>> Blain Hughes <blain.hughes@sympatico.ca> 11/14/2016 10:06 AM >>>

On further reading I think calling the sewage lagoons a sewage treatment plant would be stretching the point.

They are nothing more than a large open air two stage septic tank.

Stage one precipitates out the solids. Stage two treats the remaining effluent.

In stage one in the 80's the prescribed treatment to assist the in the precipitation was to spread a chemical (I believe alum) on the surface and mix it by driving a boat with an outboard motor around the lagoon. Is this still the prescribed treatment method?

In a septic tank the solids which precipitate out must be pumped out every couple of years. As far as I know, in the last 32 years the solids have never been removed from lagoon one. Is this statement true? Can you provide dates that the solids have been removed from the bottom of the lagoon?

Stage two the larger lagoon is dewatered by spray irrigation. This spray irrigation was not this year because dry conditions made spraying unnecessary.

Sent from my iPad

On Nov 13, 2016, at 3:42 PM, Blain Hughes <blain.hughes@sympatico.ca> wrote:

Thank you for the email.

I still find it strange that a public meeting and a 30 day review period where you are asking for public input are occurring when you have the smallest attendance and the least public input.

Could the meeting and review period not have been planned so the maximum attendance and input from the review period could be attained? This type of scheduling reminds me very much of the 80's and frankly I have difficulty not being skeptical of the motives regarding the timing of this meeting.

You suggest making information available in the Bayshore Newsletter and the township website. There are many shore line residents in the area who do not live in Bayshore and full time residents who do not live on the water who will also be affected by these changes. I would like to request that this information be made available on the NMBRA's website, the municipal offices and in the tax notices mailed out by the township.

You also mention one more opportunity to have input before the end of the EA. If it is really your intention to get more public input this meeting should be held in May or June on a Saturday to encourage public input.

I would very much like to see the sign in sheet and the material from the presentation in hard copy.

My address is:

Blain Hughes
32 Parkview Hill Cres
Toronto ON
M4B 1P8

Sent from my iPad

On Nov 10, 2016, at 10:45 AM, Suzanne Troxler
<STROXLER@cctatham.com> wrote:

Mr. Hughes,

Thank you for taking the time to email us about the Bayshore Village spray irrigation Class EA.

In answer to your questions:

- We agree that it would have been preferable to hold this PIC in the summer months, however, we were not ready for this summer. We will place all of the PIC presentation material on the Township's website to facilitate access. We will also prepare a summary that can be included in the Bayshore Village Association newsletter.

- We are looking for input from the residents of the Bayshore Village area on potential alternative solutions. Once we have this input, we will complete our assessment of the

alternatives and suggest the preferred solution, all of which will be presented in the Study Report, including all the comments received. This report will be made available on the Township's website and at locations in Ramara for a 30-day review period. So further to the input we get at this PIC, there will be one more opportunity to comment before the end of the Class EA study. (This Class EA process that the Township is following was not a requirement back in 1984.)

- The Bayshore spray irrigation system did not operate frequently this summer because of the dry weather. The contents of the lagoons was significantly reduced due to evaporation.

- The sewage from Bayshore Village is treated in two facultative stabilization ponds, which we simply refer to as lagoons. In these earthen lagoons, the organic material is stabilized by biological activity from aerobic, anaerobic and facultative bacteria, and the quiescent conditions provide settling. The sewage is treated in the first cell for at least one month before it transfers by gravity to the second cell, sized to provide storage over the fall, winter and spring months. Stabilization ponds are common in rural areas and are quite effective. The Bayshore lagoons typically achieve 90% reduction in suspended solids, organic matter (BOD) and nitrogen; they also achieve about 65% reduction in phosphorus. The Bayshore Village lagoons achieve better effluent quality than is typically expected of stabilization ponds.

- We will have a sign-in sheet at the PIC that will be included in the Study Report. All presentation material at the PIC will be placed on the Township website. If you prefer, we can send you this material in the mail. We would very much like to obtain your comments.

Please do not hesitate to email me again if you need further clarifications, now or once you have had a chance to review the PIC material.

Sincerely,

Suzanne Troxler, M.Sc., P.Eng.
Manager, Environmental Engineering

C. C. Tatham & Associates Ltd.
Consulting Engineers
115 Sandford Fleming Drive, Suite 200
Collingwood, ON L9Y 5A6
Tel: (705) 444-2565 (ext. 285)
Fax: (705) 444-2327
Email: stroxler@cctatham.com

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>>> Blain Hughes <blain.hughes@sympatico.ca> 11/6/2016 6:27 PM >>>

I read with interest the notice of meeting to be held Nov 15 at Ramara Township office. I had contact with the developer's engineering firm in 1984 when the developer tried to put an outfall pipe into the lake during the winter, calling it an inlet pipe. At that time the developer had received ministry approvals by holding public meetings in the winter when cottagers could not attend. In fact at one meeting the only member of the public to attend was the developer's wife. I notice this public meeting is once again being held when cottagers are away. I hope this does not suggest that your firm is trying to get approvals while excluding many people from having input.

Why aren't these meeting held in the summer months? During the summer I also noticed that the spray irrigation system was only used a couple of times. Why was the system not used much this year?

There is also a comment in the article about the meeting that this effluent is treated. Could you please tell me how this is treated?

I will not be able to attend the meeting but I would like to request all information with regard to this project and the minutes of the meeting on the 15th, including the list of attendees.

I look forward to your response in regard to my questions regarding date of meeting, lack of use of the spray irrigation system and how exactly the effluent becomes "treated effluent".

Sent from my iPad

Sent from my iPad

Suzanne Troxler - Re: Bayshore Village Sewage Treatment (100080)

From: Suzanne Troxler
To: Bob Masching
Date: 11/18/2016 8:55 AM
Subject: Re: Bayshore Village Sewage Treatment (100080)
Cc: dreadman@ramara.ca; Keith Shular
Bc: CCTA File
Attachments: bayshore wainman creek_20161118085101.pdf

Bob,

Please find attached excerpts from the Bayshore Village Sewage Works Annual Reports for 2011 to 2015.

If you have any questions, please phone or email me.

Suzanne

>>> "Bob Masching" <bob.masching@yahoo.com> 11/17/2016 2:09 PM >>>

Thank you for your excellent presentation on Tuesday evening, it was very informative.

Would either you or David sent me the water test results for Wainman Creek upstream and downstream for the past 3 or 4 years.

Many thanks

Bob Masching
3458 Amilia Dr

Table 7: Surface Water Monitoring

Location and Parameters	Sampling Date		
	May 2015	Aug 2015	Nov 2015
Wainman's Creek (Upstream)			
BOD ₅ (mg/L)	4	< 4	< 4
Total Suspended Solids (mg/L)	2	< 4	20
Total Phosphorus (mg/L)	0.01	0.06	0.07
TKN (mg/L)	0.8	0.7	0.6
TAN (mg/L)	< 0.1	< 0.1	< 0.1
Nitrate (mg/L)	0.62	< 0.06	0.94
Nitrite (mg/L)	< 0.03	< 0.03	< 0.03
pH	7.9	7.8	8.0
Temperature (°C)	5	16	7
Chloride (mg/L)	31	26	31
Dissolved Organic Carbon (mg/L)	16.3	9.9	12.6
Unionized Ammonia (µg/L)	1.2	2.5	1.6
Wainman's Creek (Downstream)			
BOD ₅ (mg/L)	< 4	< 6	< 4
Total Suspended Solids (mg/L)	< 2	4	5
Total Phosphorus (mg/L)	0.01	0.10	0.03
TKN (mg/L)	0.7	0.6	0.9
TAN (mg/L)	< 0.1	< 0.1	< 0.1
Nitrate (mg/L)	0.61	< 0.06	0.94
Nitrite (mg/L)	< 0.03	< 0.03	< 0.03
pH	7.9	7.9	7.9
Temperature (°C)	5	16	7
Chloride (mg/L)	31	27	31
Dissolved Organic Carbon (mg/L)	17.6	10.4	12.3
Unionized Ammonia (µg/L)	1.2	2.5	1.5

Table 7: Surface Water Monitoring

Location and Parameters	Sampling Date		
	May 2014	Aug 2014	Nov 2014
Wainman's Creek (Upstream)			
BOD ₅ (mg/L)	< 4	< 4	< 4
Total Suspended Solids (mg/L)	6	< 2	12
Total Phosphorus (mg/L)	0.04	0.05	0.02
TKN (mg/L)	0.8	0.9	0.8
TAN (mg/L)	0.2	< 0.01	< 0.1
Nitrate (mg/L)	0.97	< 0.06	1.94
Nitrite (mg/L)	< 0.03	< 0.03	< 0.03
pH	8.5	8.29	7.79
Temperature (°C)	7.0	10.0	7.0
Chloride (mg/L)	18	28	25
Dissolved Organic Carbon (mg/L)	11.8	12.6	13.4
Unionized Ammonia (µg/L)	10.8	< 0.4	< 1.1
Wainman's Creek (Downstream)			
BOD ₅ (mg/L)	< 4	< 4	< 4
Total Suspended Solids (mg/L)	6	3	5
Total Phosphorus (mg/L)	0.01	0.07	0.04
TKN (mg/L)	0.6	0.8	1.1
TAN (mg/L)	< 0.1	< 0.1	< 0.1
Nitrate (mg/L)	0.92	< 0.06	1.94
Nitrite (mg/L)	< 0.03	< 0.03	< 0.03
pH	8.47	8.22	7.84
Temperature (°C)	7.0	10.0	7.0
Chloride (mg/L)	17	27	25
Dissolved Organic Carbon (mg/L)	14.5	14.2	13.1
Unionized Ammonia (µg/L)	< 5.0	< 3.6	< 1.2

Table 7: Surface Water Monitoring

Location and Parameters	Sampling Date		
	May 2013	Aug 2013	Oct 2013
Wainman's Creek (Upstream)			
BOD ₅ (mg/L)	<4	<4	<4
Total Suspended Solids (mg/L)	11	7	4
Total Phosphorus (mg/L)	0.042	0.067	0.030
TKN (mg/L)	0.7	0.7	0.8
Total Ammonia (mg/L)	0.1	0.1	0.1
Nitrate (mg/L)	2.14	<0.06	2.5
Nitrite (mg/L)	<0.03	<0.03	<0.03
pH	8.29	8.18	7.81
Temperature (°C)	9.0	10.0	5.0
Chloride (mg/L)	24	31	27
Dissolved Organic Carbon (mg/L)	14.3	10.2	11.8
Unionized Ammonia (ug/L)	3.9	3.3	1.0
Wainman's Creek (Downstream)			
BOD ₅ (mg/L)	<4	<4	<4
Total Suspended Solids (mg/L)	6	6	3
Total Phosphorus (mg/L)	0.036	0.072	0.028
TKN (mg/L)	0.8	0.8	0.6
Total Ammonia (mg/L)	0.1	0.1	0.1
Nitrate (mg/L)	2.12	<0.06	2.51
Nitrite (mg/L)	<0.03	<0.03	<0.03
pH	8.24	8.18	7.83
Temperature (°C)	9.0	10.0	5.0
Chloride (mg/L)	24	30	26
Dissolved Organic Carbon (mg/L)	14.0	11.7	12.2
Unionized Ammonia (ug/L)	3.5	3.3	1.0

Table 7: Surface Water Monitoring

Location and Parameters	Sampling Date		
	May 2012	Sept 2012	Nov 2012
Wainman's Creek (Upstream)			
BOD ₅ (mg/L)	< 4	< 4	< 4
Total Suspended Solids (mg/L)	< 2	8	10
Total Phosphorus (mg/L)	0.034	0.121	0.027
TKN (mg/L)	0.8	0.9	0.7
Total Ammonia (mg/L)	0.2	< 0.1	0.2
Nitrate (mg/L)	0.19	< 0.05	2.73
Nitrite (mg/L)	< 0.06	< 0.06	< 0.06
pH	8.25	7.91	8.03
Temperature (°C)	7	18	11
Chloride (mg/L)	25	30	24
Dissolved Organic Carbon (mg/L)	21.9	17.2	10.4
Unionized Ammonia (ug/L)	6.2	3.3	5.1
Wainman's Creek (Downstream)			
BOD ₅ (mg/L)	< 4	< 4	< 4
Total Suspended Solids (mg/L)	21	13	3
Total Phosphorus (mg/L)	0.045	0.117	0.020
TKN (mg/L)	0.8	0.8	0.7
Total Ammonia (mg/L)	0.2	< 0.1	< 0.1
Nitrate (mg/L)	0.18	< 0.05	2.73
Nitrite (mg/L)	< 0.06	< 0.06	< 0.06
pH	8.27	7.81	8.02
Temperature (°C)	7	18	11
Chloride (mg/L)	25	29	24
Dissolved Organic Carbon (mg/L)	22.2	17.7	16.2
Unionized Ammonia (ug/L)	6.5	2.6	2.5

Table 7: Surface Water Monitoring

Location and Parameters	Sampling Date		
	May 11, 2011	Aug 3, 2011	Nov 10, 2011
Wainman's Creek (Upstream)			
BOD ₅ (mg/L)	<4	<4	<4
Total Suspended Solids (mg/L)	8	3	5
Total Phosphorus (mg/L)	0.042	0.09	0.04
TKN (mg/L)	0.5	0.9	0.7
Total Ammonia (mg/L)	<0.2	<0.1	<0.7
Nitrate (mg/L)	0.55	0.15	0.51
Nitrite (mg/L)	<0.06	<0.06	<0.06
pH	7.92	8.18	7.88
Temperature (°C)	11	14	8
Chloride (mg/L)	17	17	21
Dissolved Organic Carbon (mg/L)	15.0	15.9	14.2
Unionized Ammonia (ug/L)	4.0	4.5	10
Wainman's Creek (Downstream)			
BOD ₅ (mg/L)	<6	<4	<4
Total Suspended Solids (mg/L)	9	4	5
Total Phosphorus (mg/L)	0.028	0.031	0.034
TKN (mg/L)	0.5	0.8	0.6
Total Ammonia (mg/L)	<0.1	<0.1	<1.1
Nitrate (mg/L)	0.54	0.17	0.51
Nitrite (mg/L)	<0.06	<0.06	<0.06
pH	7.89	8.07	7.9
Temperature (°C)	11	14	8
Chloride (mg/L)	16	17	21
Dissolved Organic Carbon (mg/L)	12	16.6	16.6
Unionized Ammonia (ug/L)	1.9	3.5	17

Suzanne Troxler - FW: FW: FW: Bayshore Village Spray Irrigation Class EA PIC

From: "Ian Mead" <ianm@vianet.ca>
To: <stroxler@cctatham.com>
Date: 11/21/2016 5:30 PM
Subject: FW: FW: FW: Bayshore Village Spray Irrigation Class EA PIC
Attachments: PIC #2 Displays.pdf

First off I would like to thank you for the very informative meeting last week. After considerable thought I think the best plan of attack would be to try for alternative 6. I realize that it will take time and a lot of effort to get the required approvals but I think it should be very doable. I'm sure innovation in the future will allow for near complete reduction of phosphorus from the effluent after tertiary treatment. If alternative 6 can't be achieved at this time, I would opt for Alternative 3. I don't think a tile bed alternative (full or partial) is the answer for the long term. The spray field methodology appears to have worked well for years and perhaps an investment in more modern technology could reduce the manual burden and hence maintenance/operation costs. Obviously an extremely important task, whatever the direction, is to be very aggressive in applying for a grant. I'm sure your company has the expertise to help Ramara with that task.

Cheers

Ian Mead

*We don't inherit the earth from our ancestors;
 we borrow it from our children.
 - David Brower*

From: Bayshore Village Association [bva@bayshorevillage.ca]
Sent: Friday, November 18, 2016 8:56 AM
To: members@bayshorevillage.ca
Subject: Fwd: FW: FW: Bayshore Village Spray Irrigation Class EA PIC

----- Forwarded message -----

From: Bayshore Village Association <bayshorevillageassociation@cottagecountry.net>
Date: Thu, Nov 17, 2016 at 11:31 AM
Subject: FW: FW: Bayshore Village Spray Irrigation Class EA PIC
To: bayshorevillage@gmail.com

Subject: Bayshore Village Spray Irrigation Class EA PIC

Attached is the pdf of the displays for the Bayshore Village Spray Irrigation PIC, these were presented in a Public Meeting on Tuesday with a presentation and question and answer period for the people who came to the meeting.

The purpose of the PIC was to solicit comments on alternative solutions. The hope is that Bayshore Village residents will take the time to communicate their comments in writing to us.

Councillor Marg Sharpe

Submit your comments to the contact below

Suzanne Troxler, M.Sc., P.Eng.

Manager, Environmental Engineering

C. C. Tatham & Associates Ltd.
Consulting Engineers
115 Sandford Fleming Drive, Suite 200
Collingwood, ON L9Y 5A6
Tel: (705) 444-2565 (ext. 285)
Fax: (705) 444-2327

Email: stroxler@cctatham.com

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Suzanne Troxler - Re: Bayshore Effluent System

From: Suzanne Troxler
To: vampnsnow Anita
Date: 11/23/2016 4:59 PM
Subject: Re: Bayshore Effluent System
Cc: Keith Shular

Anita,

E.Coli has not been measured in Wainman Creek for a couple of reasons. The main one is that it is not required by the MOE Certificate of Approval for the system. This C of A specifies all the parameters the Township has to monitor.

Also, Wainman Creek is not used for swimming or bathing, so E.Coli would not be monitored by the Township like they do the beaches to check if the waters are safe for that purpose.

Hope this answers your question.

Suzanne

>>> "Kelly and Anita Cook" <vampnsnow@cottagecountry.net> 11/23/2016 4:00 PM >>>

Good Day Suzanne,

Thank you for the copy of the reports that covered 2011 to 2015, on the Waymen Creek testing.

Has there been ever a testing for E-Coli? If so when and are there reports to verify this. Next question would be if the reply is no there have not been E-Coli testing done, then my question back will be why not?

Looking forward to hearing from you.

Thank you

Anita Cook
President
NMBRA

Suzanne Troxler - Bayshore Village Effluent Spray Irrigation System Environmental Assessment

From: Rick Matthews <rickemathews@outlook.com>
To: "stroxler@cctatham.com" <stroxler@cctatham.com>
Date: 12/7/2016 3:14 PM
Subject: Bayshore Village Effluent Spray Irrigation System Environmental Assessment

Dear Suzanne:

My name is Rick Matthews. I am a resident of Bayshore Village and currently I am the Treasurer for the Bayshore Village Association. (The following are my thoughts and not those of the BVA). The Directors of the BVA do intend to heighten the awareness of this issue with the residents as you move forward with the EA.

I have lived in Bayshore for the last six years and have been a resident of Lake Simcoe for fifty-seven years. I have seen the changes to the Lake in my lifetime and I am committed to its protection.

I attended the Public Information Open House November 15, 2016. I reviewed the options proposed and was present for the formal presentation.

I believe Option Six, the new state of the art sewage treatment plant, \$3.0M, is the most cost effective and efficient solution to the current spray field and the other hybrid options of larger spray fields and disposal beds. I understand that the costs quoted for the other options ranging from \$4.1M to \$4.4M do not include the costs required to purchase additional land to make those options viable, and are highly labour intensive to operate.

The Lake Simcoe Protection Plan enabled by the passage of the Lake Simcoe Protection Act in 2008 required in Chapter 4:

4.2-DP Within one year of the date the Plan comes into effect, the *Director* shall review and amend the approvals for all *sewage treatment plants in the Lake Simcoe watershed*.

It appears that during that timeframe the BVA sewage treatment was overlooked. In neither the Lake Simcoe Protection Plan or Act is there a definition of the term "Sewage Treatment Plant. In 2008 the BVA sewage treatment had been in operation for over 25 years. That oversight puts us in conflict with the Lake Simcoe Protection plan and the most environmentally friendly option. The Plan states:

4.3-DP No new *municipal sewage treatment plant* shall be established in the *Lake Simcoe watershed* unless:

- a. the new plant is intended to replace an existing *municipal sewage treatment plant*; or
- b. the new *sewage treatment plant* will provide sewage services to a *development* that is on *partial services*, or

ii. a *development* where one or more *subsurface sewage works* or *on-site sewage are failing*

I understand the moratorium on new plants. But the BVA plant is really existing and meets the requirements of the plan above to upgrade where systems are failing or replace an existing plant.

When questioned at the EA meeting, engineers were asked if Bayshore was a new community to be developed, which EA option they would choose. They chose option six, the new treatment plant.

I understand that the Lake Simcoe Protection Plan is up for renewal in 2018 and the Lake Simcoe Protection Act provides for the ability to amend the plan.

The core principles of the Lake Simcoe Protection Plan state we should be guided by the following:

Adaptive Management Approach

Continuously improve and adapt our approaches, policies and management by incorporating new knowledge and innovative design, practices and technology from ongoing science and monitoring.

This will allow the Plan to evolve and improve over time based on new science and implementation experience.

Clearly an amendment to the plan, or recognition that the BVA facility is a sewage treatment plant, would ensure development of option six as the best option to facilitate the vision and core principles of the Lake Simcoe Protection Plan.

Finally for phosphorus management, I thought we actually may have an option seven which would be to use existing spray fields, in annual rotation, rather than discharging the new plants effluent in Wainman creek. Or alter the discharge between the creek and the existing fields each year.

If you have any questions please email me or call me at my Home phone: 705-484-5187.

I am looking forward to the results of your EA. Hopefully we won't let past planning deficiencies and politics stop us from implementing the best alternative for Bayshore Village and Lake Simcoe.