

COMMITTEE REPORT TO COUNCIL: INFRASTRUCTURE & RECREATION COMMITTEE

MEETING DATE: October 27, 2009
LOCATION: Ravenna Hall
PREPARED BY: Krista Royal
 Administrative Assistant

A. Recommendations**C.1 EPW.09.100 Fine Bubble Disc Aeration System at the Craigleith Wastewater Treatment Plant - Budget Cost Increase Regarding PST**

THAT Council approve increasing the 2009 Craigleith Wastewater Treatment Plant Aeration Cell Replacement budget from \$43,350.00 to \$46,818.00 for a total increase of \$3,468.00 funded through Capital Reserves to provide for PST as outlined in Report EPW.09.100 "Fine Bubble Aeration System at the Craigleith Wastewater Treatment Plant – Budget Cost Increase Regarding PST".

"CARRIED"

C.2 EPW.09.101 Lake Drive Sole Sourcing E/One Sewage Pumps REVISED

THAT Council receives Report EPW.09.101 "Lake Drive Sole Sourcing E/One Sewage Pumps";

AND THAT Council authorizes the Standardization Procurement Procedures, Schedule E of the Town's Purchasing of Goods and Services Policy for E/One Sewage Pumps for Lake Drive Water & Wastewater Servicing & Road Reconstruction project;

AND THAT Council approve the purchase of 33 units for Lake Drive - DH071-93 – E/One unit with standard 70 gallon tank at a cost of \$3250.00 per unit for a total of \$115,830.00 including PST, excluding GST to the John Brooks Company Ltd.

AND THAT Council approve increasing the 2009 Lake Drive Wastewater Budget to \$115,830.00 in inventory to be resold to the benefitting property owners.

"CARRIED"

C.3 EPW.09.102 Request for Reservoir Cleaning Funds

THAT Council approve funds to create a budget for Reservoir Cleaning at the Happy Valley Reservoirs in the amount of \$ 9,000 excluding GST.

"CARRIED"

D.1 EPW.09.103 Construction/Development Status Report

THAT Council receives Report EPW.09.103 entitled "Construction / Development Status Report" for their information.

"CARRIED"

D.2 Minutes of Museum Advisory Committee

THAT Council receives the Museum Advisory Committee held on September 8, 2009 for information purposes.

“CARRIED”

B. Staff Reports (Attachments)

C.1 EPW.09.100 Fine Bubble Disc Aeration System at the Craigleith Wastewater Treatment Plant - Budget Cost Increase Regarding PST

C.2 EPW.09.101 Lake Drive Sole Sourcing E/One Sewage Pumps REVISED

C.3 EPW.09.102 Request for Reservoir Cleaning Funds

D.1 EPW.09.103 Construction/Development Status Report

D.2 Minutes of Museum Advisory Committee

C. Background

D. Deputations/Presentations

B.1 EPW.09.091 Draft 2010 Capital Plan – Engineering & Public Works Department – Reg Russwurm

B.2 EPW.09.106 Beaver River Bridge Resurfacing – October 29, 2009 PIC #1 – Tom Gray

E. Next Meeting Date

Tuesday, November 10, 2009 at 7:00pm, Ravenna Hall

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: **Infrastructure and Recreation Committee**
MEETING DATE: **October 27, 2009**
REPORT NO.: **EPW.09.100**
SUBJECT: **Fine Bubble Disc Aeration System at the
Craigleith Wastewater Treatment Plant -
Budget Cost Increase Regarding PST**
PREPARED BY: **John Caswell, Manager of Water & Wastewater
Services/Asst. Director**

A. Recommendations

THAT Council approve increasing the 2009 Craigleith Wastewater Treatment Plant Aeration Cell Replacement budget from \$43,350.00 to \$46,818.00 for a total increase of \$3,468.00 funded through Capital Reserves to provide for PST as outlined in Report EPW.09.100 "Fine Bubble Aeration System at the Craigleith Wastewater Treatment Plant – Budget Cost Increase Regarding PST".

B. Background

On September 8, 2009 staff presented Report EPW.09.080, "Fine Bubble Disc Aeration System at the Craigleith Wastewater Treatment Plant". In that report there was a recommendation that "Council approve the purchase of a fine bubble disc aeration system from Aquarius Technologies Inc. as outlined in their Conceptual Design Proposal at a cost of \$14,450.00 per cell including PST and excluding GST for a total of \$43,350.00, as outlined in Report EPW.09.080 entitled "Fine Bubble Disc Aeration System at the Craigleith Wastewater Treatment Plant". There was also a second recommendation that "Council approve increasing the 2009 Craigleith Wastewater Treatment Plant Aeration Cell Replacement from \$31,500 to \$43,350 for a total increase of \$11,850.00. Subsequently on September 14, 2009 Council passed a resolution approving both recommendations.

Unfortunately PST was not included in the original budget for the works from Aquarius Technologies Inc. and the recommendation and resolution should have included the PST and excluded GST. The PST amounts to \$3,468.00.

Staff recommends that Council approve increasing the 2009 Craigleith Wastewater Treatment Plant Aeration Cell Replacement budget by \$3,468.00 to increase the existing budget of \$43,350.00 to \$46,818.00 in order to provide for the cost of PST. Additional funding is to be provided by Capital Reserves.

C. The Blue Mountains' Strategic Plan

The Fine Bubble Disc Aeration System at the Craigleith Wastewater Treatment Plant Report furthers the Town's Strategic Plan Goal # 2 "Addressing the Town's Municipal Infrastructure needs."

D. Environmental Impacts

Oxygen transfer efficiency and mixing requirements are increased significantly with this upgrade due to a full floor aeration system. As a result, air blower load and therefore energy demands will be reduced. In the future, Staff will monitor the difference in air blower load to determine the payback.

E. Budget Impact

The aeration system installation was funded from the Craigleith Sewer Reserves and the estimated 2009 ending balance is approximately \$4.9 million. The additional funds required of \$3,468.00 will also be funded from the Craigleith Sewer Reserve fund as confirmed by the Finance Department.

F. Attached

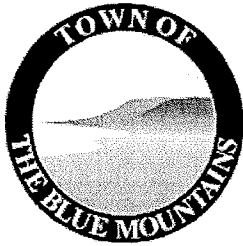
1. EPW.08.090 report entitled Fine Bubble Disc Aeration System at the Craigleith Wastewater Treatment Plant

Respectfully submitted,

John Caswell
Manager, Water & Wastewater Services/Asst. Director
Engineering & Public Works
Office: 519-599-3131 Ext.226
Fax: 519-599-3664
jcaswell@thebluemountains.ca

Reg Russwurm
Director, Engineering and Public Works

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: **Engineering and Public Works Committee**
MEETING DATE: **August 12, 2008**
REPORT NO.: **EPW.08.90**
SUBJECT: **Fine Bubble Disc Aeration System at the
 Craigleith Wastewater Treatment Plant**
PREPARED BY: **Rob Fleming, Wastewater Overall Responsible
 Operator**

A. Recommendations

THAT Council approve the purchase of a fine bubble disc aeration system from Aquarius Technologies Inc. as outlined in their Conceptual Design Proposal at a cost of \$11,850.00 excluding GST and PST, as outlined in Report EPW.08.90.

B. Background

The existing Stage I fine bubble aeration system originally installed in 1986 is outdated, inefficient and not meeting performance standards.

It is noted that this procurement does not strictly follow the Town's Purchasing Policy. Aquarius Technologies was chosen because they have already been pre-selected by price as a diffuser aeration supplier by Stantec Consulting Ltd. for the Thornbury Wastewater Treatment Plant Expansion. The price was negotiated with Aquarius Technologies. The Aeration System will be installed by Wastewater Operations Staff.

C. The Blue Mountains' Strategic Plan

The Fine Bubble Disc Aeration System at the Craigleith Wastewater Treatment Plant Report furthers the Town's Strategic Plan Goal # 2 "Addressing the Town's Municipal Infrastructure needs."

D. Environmental Impacts

Oxygen transfer efficiency and mixing requirements are increased significantly with this upgrade due to a full floor aeration system. As a result, air blower load and therefore energy demands will be reduced. In the future, staff will monitor the difference in air blower load to determine the payback. Also, staff will consider having a consultant provide an estimate for energy audit.

E. Budget Impact

The purchase of the Fine Bubble Disc Aeration System for \$11,850.00 excluding GST and PST will be funded through the Craigeith Wastewater Treatment Capital Budget. Presently, there is \$15,000 available in the 2008 Budget under capital contingencies.

F. Attached

1. Conceptual Design Proposal for the Fine Bubble Disc Aeration System
2. Aeration System Retrofit memo from Aquarius Technologies Inc., July 11, 2008

Respectfully submitted,



Rob Fleming
Wastewater Overall Responsible Operator



Reg Russwurm
Director, Engineering and Public Works



**CONCEPTUAL DESIGN PROPOSAL
FOR THE
TOWN OF THE BLUE MOUNTAINS
FINE BUBBLE DISC AERATION SYSTEM**

**AQUARIUS REPRESENTATIVE:
ENVIROCAN
2 MARCONI COURT, UNIT 15
BOLTON, ON, CANADA L7E 1E5
(905) 951-9672**

AQUARIUS PROPOSAL #2320-08

JULY 11, 2008



INTRODUCTION

Aquarius is pleased to have the opportunity of presenting this conceptual design proposal to the Town of the Blue Mountains for a Fine Bubble Disc Aeration System. The Aquarius system proposed herein has been developed by a team of engineers with an unparalleled background of experience in the design, application and operation of wastewater treatment aeration systems. This experience comes with the knowledge that a high performance diffuser requires an equally well engineered piping system to support it. The Aquarius aeration system is the culmination of this experience. In reviewing and evaluating this proposal we suggest consideration of the following:

Aquarius System Advantages – Fine Bubble

Diffuser Holder

The Aquarius diffuser offers several advantages over alternate diffusion devices. The diffuser is mounted in a holder that is solvent welded in the factory to the crown of the air distribution header. This solvent welded bond is actually stronger than the pipe material itself, which results in long-term structural integrity. With some competitive designs, a metallic rivet is used to fix the diffuser holder to the pipe. The long-term mechanical reliability of this design is suspect, since the plastic will yield with force over time, resulting in leakage or failure at the metal/plastic connection. Moreover, this metallic rivet may not be corrosion resistant to acid cleaning of the diffusers, resulting in mechanical failure. Other competitive designs utilize a small diameter nipple connection and friction fit connection to the header piping. Once again the long-term mechanical reliability of this design is suspect, since plastic will yield with force over time, and the small diameter connection may be insufficient to resist the forces of normal operation and maintenance thereby also resulting in mechanical failure. Finally there are other competitive designs which utilize a clamping saddle to fix the diffuser holder to the pipe. Though this saddle is mechanical sound, it requires the contractor to perform the installation, resulting in the potential for field installation error and higher installed costs than factory installed holder designs.



Membrane Diffuser

The Aquarius membrane diffuser offers a high density of perforations per unit area resulting in smaller bubbles and higher oxygen transfer efficiencies. Therefore, the same surface area of Aquarius membrane discs provided will result in higher quantities of oxygen transferred than competitive 9" diffuser designs. Obviously two equally sized diffusers, one with 10 perforations and one with 100 will perform differently and wear differently. Thus diffuser surface area is no a valid means for specifying performance or durability. Aquarius's membrane disc's perforations are precision die formed slits punched perpendicularly to the membrane grain for greater resistance to elongation. This design eliminates the potential for tearing along the perforations under high stress.

The life and performance of a membrane diffuser is dependent on the environment in which it is operating. Some wastewaters are more aggressive to membrane diffusers than others. Our extensive experience has provided us the opportunity of analyzing environments that are especially aggressive toward membrane materials. By focusing on these environments, we are able to understand and analyze how the membrane diffuser element ages with time in service and how this affects diffuser life. By concentrating on these points, we were able to develop the advanced EPDM recipe that is our membrane diffuser. The Aquarius membrane will provide a longer duty of service and at a higher level of efficiency. The cost associated with replacing units sooner and incurring additional power charges should be considered when purchasing equipment. While it is impossible to predict how a specific wastewater will affect the Aquarius membrane diffuser, we can state with confidence that the diffuser life will be longer than our competitor's diffusers. Based on our experience we can estimate that the life of the Aquarius membrane diffuser will be in excess of seven years and most likely approach ten years.

System Efficiency

In concert with diffuser design is oxygen transfer efficiency. Equally important to diffuser design and density, the arrangement of the diffuser within the tank also effects oxygen transfer efficiency. For example, if an aeration basin contains 1,000 – 9" diameter diffusers spaced uniformly throughout the basin with diffusers 48" on center of the air distribution headers and



48" between air distribution headers, a certain performance will be yield. However, if the same 1,000 diffusers are installed at 24" on center and 96" between air distribution headers, the performance can be as much as 20% lower. The point of this example is that in order to maximize oxygen transfer efficiency, the diffusers should be uniformly distributed throughout the basin and the reviewer should consider this when evaluating competitive proposals.

Piping Grid

One of the significant differences between the Aquarius system and other manufacturers is our approach to the design of the piping grid. Since a diffused aeration system is only as good as the delivery method of the supplied air, we recommend that considerable time be spent evaluating the pipe jointing and pipe supporting system. As noted above, the Aquarius design approach has been extensively field-tested with proven effectiveness. Everything within the grid system from the 2% titanium dioxide used in the PVC to prevent ultraviolet degradation, to the joint and support system is an integral part of the design. No component is assumed to be trivial or considered simply good enough. As such, we have employed sound engineering concepts in the design and implementation of every piece of equipment. The type of pipe joining is an example of this attention to detail. The Aquarius fixed joint system is not only easier to install but helps prevent the "blow apart" problem found in other systems. For reference, "blow apart" is a condition where the mechanical integrity of the piping system is lost and the pipes actually become separated from the support system during operation. A typical cause of this condition would be a system filling with water when air is lost to the aeration grid and then suddenly reintroduced. This is likely to occur during a loss of power to the blower or other unexpected shutdowns common to most treatment facilities. When the air is resupplied to the grid, a significant water hammer is often created which causes considerable stress on the pipe joints. Any design that does not take these additional forces into account is prone to failure. The two most common forms of fixed joint connections are flanged assemblies or threaded couplings. To reduce the cost to the owner, Aquarius has made an investment in special tooling and designed a unique threaded coupling for use in lieu of the more expensive to install flange system. Other suppliers design their piping joining system with expansion couplings or slip joints. In this configuration, which typically has a maximum pipe engagement

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of no more than two inches, the ends of the connecting pipes are free to move within the joint. Considerable evidence is available to substantiate that this design significantly increases the chances of leaking and blow apart. The installing contractor must be cautious when installing this type of system. To prevent failure, proper alignment is crucial. Also, the pipe and joints must be installed tight enough to prevent leaking at the joints, yet loose enough to allow for expansion and contraction of the pipe. Under jobsite condition, where installation procedures are often compromised, this is difficult at best.

The mechanical integrity of a fine bubble system is extremely important to long term successful performance. Our system of guide type supports and threaded union joints is field proven in dealing with blower outages and variations in air temperature. These are two areas that have resulted in common mechanical failure of other piping designs. The Aquarius piping design eliminates the potential for blow apart or failure of expansion or slip on type joint fittings commonly occurring with other manufacturers systems.

We feel very confident in the design, manufacturing and performance of our system and believe that the Aquarius system will provide the customer with the most cost effective and highest performing aeration system on the market today.



BASIS OF DESIGN

Aeration Tanks

| | |
|---------------------|-------|
| Number of Tanks | 4 |
| Outside Dia. (m): | 18.75 |
| Inside Dia. (m): | 7.75 |
| Angular Degrees: | 170 |
| Depth (m): | 4.6 |
| Diffuser Depth (m): | 4.0 |

Design Criteria

| Condition: | <u>Design</u> | <u>Larger Blower</u> |
|---------------------------------------|---------------|----------------------|
| Flow (m ³ /day): | 4,000 | --- |
| BOD Concentration (mg/l): | 160 | --- |
| NH ₃ Concentration (mg/l): | 24 | --- |
| Kg Oxygen per kg BOD | 1.5 | --- |
| Kg Oxygen per kg NH ₃ : | 4.6 | --- |
| Alpha: | 0.6 | --- |
| Beta: | 0.99 | --- |
| Theta: | 1.024 | --- |
| Dissolved Oxygen Conc. (mg/l): | 2.0 | --- |
| Site Elevation (m): | 182 | 182 |
| Wastewater Temperature (°C): | 20 | 20 |
| Blower Output (scfm): | --- | 2,250 |

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System Operating Parameters

| Condition: | <u>Design</u> | <u>Larger Blower</u> |
|-----------------------------------|---------------|----------------------|
| In-Waste Oxy. Delivered (kg/day): | 6,819 | --- |
| Std. Oxy. Delivered (kg/day): | 3,003 | 6,338 |
| Airflow Required (scfm): | 955 | 2,250 |
| Std. Oxygen Transfer (%): | 27.7 | 24.8 |
| Drop Leg Pressure (psig): | 6.1 | 6.5 |

Equipment Arrangement

| | |
|----------------------------|-----|
| # Grids/Tank: | 3 |
| # Diffusers/Grid: | 76 |
| # Air Distributors/Grid: | 4 |
| Distributor Spacing (m): | 1.2 |
| Drop Leg Diameter (mm): | 75 |
| Total Number of Diffusers: | 912 |



DATE: JULY 11, 2008
TO: TOWN OF THE BLUE MOUNTAINS
RE: AERATION SYSTEM RETROFIT
PROPOSAL NO. 2320-08

Aquarius is pleased to provide a proposal for the following equipment and services in order to ensure provision of a complete, integrated, diffused aeration system.

A. EQUIPMENT & SERVICE

Aquarius will provide four (4) fine bubble aeration systems, each consisting of three (3) aeration grids for installation in Aeration Tanks 1 & 2.

A total of three (3) aeration grids are required for each system. Each grid of the fine bubble aeration system will consist of the following:

- One (1) 75 mm diameter x 1 m long Sch. 40 PVC drop pipe including horizontal flange for connection to the stainless steel drop pipe at elevation 177.6 and a connection to the manifold.
- One (1) 100 mm diameter x 3.5 m long Sch. 40 PVC manifold with a connection to the drop pipe and air distributors.
- Four (4) 100 mm diameter SDR 33.5 PVC air distributors with a connection to the manifold.
- Required PVC pipe joint connections.
- Required 304 stainless steel piping supports with vertical supports, clamps, adjusting mechanism and anchor bolts.
- (76) fine bubble diffusers.
- Required 304 stainless steel bolts, nuts and gaskets for field assembly.

B. FIELD SERVICES

Aquarius will provide one (1) day of service, for installation inspection, equipment start-up, and operator training as required. Additional field service is available at a cost of \$950.00/day plus travel, lodging, and meal expenses.



C. AQUARIUS EXCLUSIONS

Aquarius excludes the following from its proposal:

- Field installation of equipment.
- Gaskets, bolts and nuts for connecting manifold to drop pipe.
- Blowers, valves, air main piping.
- Anchor bolts and other embedded materials except for anchor bolts specifically included in the Section A of this proposal.
- Any equipment not specifically listed in Section A.

D. PROJECT SCHEDULE

Approval Drawings & Data: 2-3 Weeks After Order Acceptance

Equipment Ready to Ship: 4-5 Weeks After Receipt of Approved Drawings & Data

E. PRICING

Net sell price in Canadian dollars for the Aquarius Equipment as described above, FOB point of manufacture with freight allowed to jobsite:

One system consisting of three grids – 2008 delivery **\$9,950.00**

Each additional system consisting of three grids – 2009 delivery **\$10,450.00**

F. PRICE NOTES

- Taxes are not included. Purchaser to pay directly all applicable taxes separate from purchase order to Aquarius.
- Quoted price is valid for 30 days from date of proposal.
- Price is based on equipment being released for fabrication no later than the 3rdTH Quarter 2008.
- Terms of Payment: 95% Net 30 days after shipment
5% Upon start up, NTE 120 days after shipment
- An interest charge of 1-½% per month will be added to past due accounts.



F. WARRANTY

All equipment to be free from defects in material and workmanship for a period of eighteen (18) months from date of shipment. If within such warranty period any such equipment is proved to Seller's satisfaction to be defective, Seller shall, at its option, repair or replace the defective equipment without charge, or refund the purchase price of the equipment.

Should you have any questions, please do not hesitate to contact us or our local representative.

Very truly yours,

A handwritten signature in cursive script that reads "David D. Lauer".

David D. Lauer, P.E.
Vice President – Sales & Marketing

cc: **Aquarius Representative:**
Envirocan
2 Marconi Court, Unit 15
Bolton, ON, Canada L7E 1E5
(905) 951-9672



Terms & Conditions of Sale

1. Acceptance and Cancellation. This writing is a solicitation by **Aquarius Technologies Inc.** (the "Seller") of an order for the products and/or services described in Seller's quotation or sales form, subject to these terms and conditions. No orders shall be binding upon Seller until accepted in writing by an authorized official of Seller at its home office in Port Washington, Wisconsin. Each order shall be subject to these terms and conditions, and acceptance of an order by Seller is expressly conditioned on Buyer's assent to such terms and conditions, which assent shall be deemed given by the Buyer's placement of any order for the products and/or services so described. Seller hereby objects to any additional or different terms or conditions, whether contained in any purchase order or other communication from Buyer. No order accepted by Seller may be altered or modified unless in writing signed by an authorized agent of Seller in pen and ink; and no such order may be cancelled or terminated except upon payment of Seller's loss, damage and expense arising from such cancellation or termination.

2. Prices. The prices quoted by Seller automatically expire thirty (30) calendar days from the date of Seller's quotation unless specifically noted otherwise.

The prices stated on the quotation or sales form for the products and/or services are Seller's prices with all of the terms in this form, including the exclusive warranty and the various disclaimers and limitations of liability enforceable against Buyer. If Buyer wants a greater or additional warranty or wants Seller to be liable for some or all of the disclaimed or limited liability, Buyer must notify Seller. Seller will then make a new offer containing prices reflecting that additional exposure. By placing an order at the prices initially quoted by Seller, Buyer understands that it is foregoing the possibility, among other things, of recovering consequential damages from the Seller and of indemnity for tort liability, in exchange for Buyer obtaining a lower sales price for the products and/or services.

3. Changes. Seller may at any time make such changes in design and construction of products, components or parts as Seller deems appropriate, without notice to Buyer. Seller may furnish suitable substitutes for materials unobtainable because of priorities or regulations established by governmental authority or nonavailability of materials from suppliers.

4. Delivery, Claims and Delay. All delivery dates are approximate. Time is not of the essence. Delivery will be f.o.b. point of shipment, and all risk of loss or damage in transit shall be borne by Buyer. Seller reserves the right to make delivery in installments. All such installments shall be separately invoiced and paid for when due, without regard to subsequent deliveries. Delay in delivery of any installment shall not relieve Buyer of its obligation to accept remaining deliveries.

If shipment shall be deferred at Buyer's request, payment shall become due and payable upon notification by the Seller that the products provided for by this agreement are ready for shipment. In case of such delay in shipment, storage shall be at the Buyer's risk and expense. Prorata payments shall be made for partial shipments.

Claims for shortages or other errors in delivery must be made in writing to Seller within 10 days after receipt of shipment; and failure to give such notice shall constitute unqualified acceptance and a waiver of all such claims by Buyer. Claims for loss or damage to goods in transit should be made to the carrier and not to Seller.

Buyer is responsible for the maintenance, operation and, except as otherwise provided in the Seller's quotation or sales form, the installation of the products. Buyer shall keep and maintain said products in good condition and shall not permit waste to be committed thereon and shall keep products fully insured against loss or damage from the normal hazards of such installation, maintenance and operation until the balance of the purchase price is fully paid in cash. Injury or destruction of such property after delivery pursuant to this section shall not release the Buyer from its obligation to make payments as herein provided. Seller shall not be liable for any damage as a result of any delay due to any cause beyond Seller's reasonable control, including, without limitation, an act of God, act of the Buyer, embargo or other governmental act, regulation or request, fire, act of terrorism, accident, strike, slow-down, war, riot, delay in transportation or inability to obtain necessary labor, materials, transportation or manufacturing facilities. In the event of any such delay, the date of delivery shall be extended for a period equal to the time lost by reason of the delay. Buyer's exclusive remedy for other delays and for Seller's inability to deliver for any reason shall be rescission of the purchase agreement.

5. Payment Terms. Terms of payment shall be as specified in Seller's proposal. If not so specified, terms of payment for products shall be net cash, thirty (30) days after shipment of products. Where Seller is to provide installation, terms of payment for installation shall be as specified in Seller's quotation or sales form. If not so specified, terms of payment for installation shall be net cash, thirty (30) days after completion of installation of Seller's products. Interest at the rate of one and one-half percent (1 1/2%) per month (but not greater than the highest rate permitted by applicable law) will be charged on all accounts not paid when due.

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6. Title and Security Interest. Until Seller collects in full all amounts Buyer owes under the order and any other sales between the parties, Seller retains title to the products and Buyer grants to Seller a continuing security interest in and a lien upon the products and the proceeds thereof (including insurance proceeds), as security for the payment of all such amounts and the performance by Buyer of all of its obligations to Seller pursuant to the order and all such other sales, and Buyer shall have no right to sell, encumber or dispose of the products. Buyer shall execute any and all financing statements and other documents and instruments and do and perform any and all other acts and things which Seller may consider necessary, desirable or appropriate to establish, perfect or protect Seller's title, security interest and lien. In addition, Buyer authorizes Seller and its agents and employees to execute any and all such documents and instruments and do and perform any and all such acts and things, at Buyer's expense, in Buyer's name and on its behalf. Such documents and instruments may also be filed without the signature of Buyer to the extent permitted by law.

7. Limitations on Warranties and Remedies. Seller warrants all products manufactured by it and supplied hereunder to be free from defects in material and workmanship appearing within one (1) year from the date of shipment to Buyer. This warranty shall not apply to prime movers, starting products, electrical apparatus, parts, material and any other products not manufactured by Seller; such products are sold **AS IS**, except that the warranties, if any, of the respective manufacturers of such products, parts or material shall be assigned by Seller to Buyer. Seller has no liability for products installed by anyone other than it or its authorized agent. Decomposition by chemical action and wear caused by the presence of abrasive materials shall not constitute defects under the foregoing warranty, nor shall Seller have any responsibility hereunder with respect to products which have been repaired or altered by others without Seller's written consent.

Seller warrants that any services it provides hereunder against failures, appearing within thirty (30) days after completion thereof, by Seller to perform such services in a manner consistent with customary practice in Seller's industry.

If within the applicable warranty period any products or services warranted hereunder are proven to Seller's satisfaction to be defective, such products will be repaired, or at Seller's option, replaced without charge. Seller's obligation hereunder is further conditioned upon Seller's receipt of written notice of any alleged defect within ten (10) calendar days of its discovery and, at Seller's option, the return of the allegedly defective products to Seller at the place Seller directs.

THE FOREGOING WARRANTIES ARE EXCLUSIVE AND IN LIEU OF ALL OTHER REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PURPOSE, AND SELLER SHALL NOT BE SUBJECT TO ANY OTHER OBLIGATIONS OR LIABILITIES WHATSOEVER WITH RESPECT TO PRODUCTS, PARTS OR SERVICES MANUFACTURED OR FURNISHED BY IT, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO.

Any description of the products, whether in writing or made orally by Seller or its agents, specifications, samples, models, bulletins, drawings, diagrams, engineering sheets or similar materials used in connection with Buyer's order are for the sole purpose of identifying the products and shall not be construed as an express warranty. Any suggestions by Seller or Seller's agents regarding use, application or suitability of the products shall not be construed as an express warranty unless confirmed to be such in writing by Seller.

8. Taxes and Other Charges. Any manufacturer's tax, retailer's occupation tax, use tax, sales tax, excise tax, duty, custom, inspection or testing fee, or any other tax, fee or charge of any nature whatsoever, imposed by any governmental authority, on or measured by any transaction between Seller and the Buyer, shall be paid by the Buyer in addition to the prices quoted or invoiced, unless Seller specifically states that such taxes or charges are included in such price. In the event Seller shall be required to pay any such tax, fee or charge, the Buyer shall reimburse Seller therefore (including any interest and penalties relating thereto), or, in lieu of such payment, the Buyer shall provide Seller at the time the order is submitted with an exemption certificate or other document acceptable to the authority imposing the same.

9. Patents, Trademarks and Copyrights. Seller will, at its expense, defend any suits that may be instituted by anyone against Buyer for alleged infringement of any United States patent, trademark or copyright relating to any products manufactured and furnished by Seller hereunder, if such alleged infringement consists of the use of such products, or parts thereof, in Buyer's business for any of the purposes for which the same were sold by Seller, and provided Buyer shall have made all payments then due hereunder and shall give Seller immediate notice in writing of any such suit and transmit to Seller immediately upon receipt all processes and papers served upon Buyer and permit Seller through its counsel, either in the name of Buyer or in the name of Seller, to defend the same and give all needed information, assistance and authority to enable Seller to do so. If such products are in such suit held in and of themselves to infringe any valid United States patent, trademark or copyright, then: (a) Seller will pay any final award of damages in such suit attributable to such infringement, and (b) if in such suit use of such products by Buyer is permanently enjoined by reason of such infringement, Seller shall, at its own expense and at its sole option, either (i) procure for Buyer the right to continue using the products, (ii) modify the products to render them non-infringing, (iii) replace the products with non-infringing goods, or (iv) refund the undepreciated portion of the purchase price and transportation costs paid by Buyer for the products or services, determined after depreciation on the basis of a five-year useful life.

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Notwithstanding the foregoing, Seller shall not be responsible for any compromise or settlement made without its written consent, or for infringements of combination or process patents covering the use of the products in combination with other goods or materials not furnished by Seller. **THE FOREGOING STATES THE ENTIRE LIABILITY OF SELLER FOR INFRINGEMENT; AND IN NO EVENT SHALL SELLER BE LIABLE FOR CONSEQUENTIAL DAMAGES ATTRIBUTABLE TO AN INFRINGEMENT.**

As to any products furnished by Seller to Buyer manufactured in accordance with drawings, designs or specifications proposed or furnished by Buyer or any claim of contributory infringement resulting from the use or resale by Buyer of products sold hereunder, Seller shall not be liable, and Buyer shall indemnify Seller against any award made against Seller for any and all patent, trademark or copyright infringements.

10. Substitutes. Seller may furnish suitable substitutes for products unobtainable because of priorities or regulations established by governmental authority or the non-availability of goods from suppliers.

11. Permits. The Buyer shall have full responsibility for securing the requisite permits and compliance with all health and sanitation laws, ordinances and regulations pertaining to the installation of the products involved in a sewage treatment plant or other products sold by Seller.

12. Limitations on Consequential Damages and Other Liability; Buyer's Indemnity. Except as otherwise agreed in writing, Seller's liability with respect to the products and/or services sold hereunder shall be limited to the warranty provided in Paragraph 7 hereof and, with respect to other performance of this contract, shall be limited to the contract price. **SELLER SHALL NOT BE SUBJECT TO AND DISCLAIMS ANY OTHER OBLIGATIONS OR LIABILITIES, WHETHER ARISING OUT OF BREACH OF CONTRACT, WARRANTY, TORT (INCLUDING NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW, WITH RESPECT TO PRODUCTS SOLD OR SERVICES RENDERED BY SELLER, OR ANY UNDERTAKINGS, ACTS OR OMISSIONS RELATING THERETO.**

Without limiting the generality of the foregoing, Seller specifically disclaims any liability for property or personal injury damages, penalties, special or punitive damages, damages for lost profits or revenues, loss of use of products or any associated products, cost of capital, cost of substitute products, facilities or services, down-time, shut-down or slowdown costs, or for any other types of economic loss, and for claims of Buyer's customers or any third party for any such damages. **SELLER SHALL NOT BE LIABLE FOR AND DISCLAIMS ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES WHATSOEVER.**

Buyer shall indemnify Seller against any and all losses, liabilities, damages and expenses (including, without limitation, attorneys' fees and other costs of defending any action) which Seller may incur as a result of any claim by Buyer or others arising out of or in connection with the products and/or services sold hereunder and based on product or service defects not proven to have been caused solely by Seller's negligence.

13. Technical Information. Any sketches, models or samples submitted by Seller shall remain the property of Seller, and shall be treated as confidential information unless Seller has in writing indicated a contrary intent. No use or disclosure of such sketches, models and samples, or any design or production techniques revealed thereby, shall be made without Seller's express written consent.

14. Buyer's Property. No property of Buyer placed in Seller's custody for performance of this contract is covered by Seller's insurance, and Seller assumes no risk in the event of loss or damage to such property by fire, water, burglary, theft, civil disorder or any accident beyond Seller's reasonable control.

15. Tools. Any dies, jigs or tools which Seller manufactures or acquires for performance of this contract shall remain the property of Seller, notwithstanding any charges therefore. Tool charges convey to Buyer the right to have the tools used by Seller for performance of this contract, but do not convey title or right of possession. Seller shall be responsible for routine maintenance and repair of such tools, dies and jigs. Major overhauls, replacements or changes shall be charged to the Buyer.

16. Returns. Products may be returned to Seller only when Buyer obtains Seller's advance written permission therefore. Returned products must be securely packaged to reach Seller without damage; and any cost incurred by Seller to put products in marketable condition will be charged to Buyer.

17. Governing Provisions. **THE CONTRACT FOR SALE AND THESE TERMS AND CONDITIONS SHALL CONSTITUTE THE ENTIRE AGREEMENT BETWEEN BUYER AND SELLER AND SHALL BE GOVERNED BY AND CONSTRUED ACCORDING TO THE LAWS OF THE STATE OF WISCONSIN (WITHOUT REFERENCE TO PRINCIPLES OF CONFLICTS OF LAWS). THE RIGHTS AND OBLIGATIONS OF THE PARTIES HEREUNDER SHALL NOT BE GOVERNED BY THE 1980 U.N. CONVENTION ON CONTRACTS FOR THE INTERNATIONAL SALE OF GOODS. SELLER RESERVES THE RIGHT TO IMPOSE DIFFERENT OR ADDITIONAL TERMS OF SALE ON INTERNATIONAL SALES AND/OR SALES OF SERVICES.**

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: **Infrastructure and Recreation Committee**
MEETING DATE: **October 27, 2009**
REPORT NO.: **EPW.09.101**
SUBJECT: **Lake Drive Sole Sourcing E/One Sewage Pumps REVISED**

PREPARED BY: **John Caswell, Manager of Water & Wastewater Services/Asst. Director**

A. Recommendation

THAT Council receives Report EPW.09.101 “Lake Drive Sole Sourcing E/One Sewage Pumps”;

AND THAT Council authorizes the Standardization Procurement Procedures, Schedule E of the Town’s Purchasing of Goods and Services Policy for E/One Sewage Pumps for Lake Drive Water & Wastewater Servicing & Road Reconstruction project;

AND THAT Council approve the purchase of 33 units for Lake Drive - DH071-93 – E/One unit with standard 70 gallon tank at a cost of \$3250.00 per unit for a total of \$115,830.00 including PST, excluding GST to the John Brooks Company Ltd.

AND THAT Council approve increasing the 2009 Lake Drive Wastewater Budget to \$115,830.00 in inventory to be resold to the benefitting property owners.

B. Background

On March 24, 2009 a report was presented to Infrastructure & Recreation Committee recommending that Council receive Staff Report FIS.09.16 “Water & Wastewater Service Extensions – Lake Drive” (Attachment #1) This report included payment options for the costs involved with the project. The Town has worked for many years with the residents to secure water & wastewater servicing at an affordable cost. Initially a gravity sewer system was proposed that included a pumping station on the Town road allowance at the intersection of the 10th line and Cameron Street. This proposal was very costly and was not acceptable to the residents or Council.

An alternate proposal to install a low pressure forcemain for wastewater servicing was accepted by Council and the residents agreed to the lower cost. The engineering design included a small diameter (2”, 3” & 4”) PVC forcemain that is buried at 1.7m which is significantly less than a gravity sanitary sewer. The low pressure forcemain design for sizing was based on the E/One Grinder pumps which are distributed in Canada by John Brooks company. There are other positive displacement centrifugal pump manufactures, however the E/One positive displacement progressive cavity pump units are what this design was based on. The forcemain was designed as a system taking into account the amount of energy required to overcome pressures in the forcemain exerted by other connections to the system.

The March 24, 2009 report presented to the residents at a PIC allowed Eone pumps to be financed through the Town. The Town intends to bulk purchase the pumps and each property owner would then purchase their pump from the Town when the pump is picked up. The pumps will be stored in the Water Operations works yard. It is the owner's responsibility and cost to arrange for the installation of the pump, any warranty requirements and any maintenance. In addition, water and wastewater laterals must be extended to the dwelling but will not be financed. The residents are able to purchase any pump they wish however the Town is recommending the E/One pumps.

There have been many quotes for pumps requested over the past few years, however the recent quote of \$3250.00 for a bulk shipment of 33 units from the John Brooks Company Ltd. is less than what was expected. There are 38 properties being serviced by this project, however this includes five vacant properties and therefore only 33 pumping units are being ordered.

C. The Blue Mountains' Strategic Plan

These works address the Town's Strategic Plan Goal #2 "Addressing the Town's Municipal infrastructure needs".

D. Budget Impact (Confirmed with Finance)

The Lake Drive Sanitary sewer has been designed to accommodate the E/One Pump. The Town will purchase the grinder pumps and sell them at cost to each of the residents of Lake Drive. The Town purchasing the pumps will ensure Town records are properly completed and prompt inspections of each pump can be scheduled. The pumps will be placed in inventory until sold to the residents of Lake Drive. The individual pump units cost \$3,250.00 and the overall cost for 33 units is \$115,830.00 including PST, excluding GST. The 2009 wastewater budget for Lake Drive is \$509,000.00 (excluding pumps). Pumps will be added to inventory and sold to the individual benefitting property owners.

E. Attached

1. March 24, 2009 FIS.09.16 Water & Wastewater Service Extensions –Lake Drive

Respectfully submitted

John Caswell
Manager, Water & Wastewater Services/Asst. Director
Engineering & Public Works
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Reg Russwurm
Director, Engineering and Public Works

**STAFF REPORT: Financial and Information Services;
Engineering and Public Works**



REPORT TO: Infrastructure & Recreation
Committee
MEETING DATE: March 24th, 2009
REPORT NO.: FIS.09.16
SUBJECT: Water & Wastewater Service
Extensions - Lake Drive
PREPARED BY: Elizabeth Thompson, Deputy
Treasurer
John Caswell, Manager of
Environment Services

A. Recommendations

THAT Council receives Staff Report FIS.09.16 "Water & Wastewater Service Extensions – Lake Drive";

AND THAT Council authorize in principle the recovery of costs related to a portion of the Lake Drive & 10th Line works from benefiting property owners on an equivalent unit basis,

AND THAT payment options to be offered to the property owners include:

- (a) full payment up front; or
- (b) payment over time based on a 20 year term and at 0.0% for the Lora Bay Corporation portion of the financing and at approximately 6.5% interest per annum for the Town portion of the financing; payments over time are to be added to the tax bill; the balance owing on the loan may be repaid at any time, including interest to that date, with no penalty applied; at the time a property is sold, the balance of the loan becomes due and payable.

B. Background

A further review of the servicing of Lake Drive was conducted by staff during the Lora Bay Development Charges Background Study and the Town has included this area as well as Cameron Street in the Lora Bay Development Charges Background Study.

Rationale for Project

This area is recognized as a full service area under the Town's Official Plan. A number of residents have previously requested installation of municipal water service as well as wastewater servicing. The proposed project to provide Lake Drive with water and sanitary sewer services will proceed pursuant to the Lora Bay Minutes of Settlement.

Cost of Project

At the Infrastructure and Recreation Committee meeting held on March 10, 2009, the Committee recommended:

“THAT Council approve the reconstruction of Lake Drive to a 4m platform road with 1m shoulders to provide a minimum 6m road platform for vehicles as outlined in report EPW.09.015 - Lake Drive Road Reconstruction;

AND THAT Council direct staff to consider the implication of including the cost of existing road replacement in the capital cost recovery”.

The Committee was advised at the March 10, 2009 meeting that the road costs would amount to \$338,978 of which \$92,450 was related to reinstatement and \$246,528 was related to road upgrades. Since that meeting Finance in conjunction with the Engineering Department has reviewed the construction costs and funding sources and found some variations to that Report. Assumptions were made in the March 10 report that showed only raw costs for road reconstruction and did not include all ancillary costs such as site rehabilitation, engineering, drainage works, clearing and grubbing, hydro relocates and contingencies. Based on reviewing the project it has been determined that the total costs for reinstatement would amount to \$140,112 and road improvement costs of \$328,047 for a total of \$465,274.

The March 10 Report also indicated that the road improvement costs were to be funded from Reserves but that the reinstatement costs were also to come from that same source as these costs are not included in the Development Charge eligible funding formula. Due to the Committee’s direction to look at alternate funding sources for the reinstatement costs, staff developed two options. Firstly being that those costs directly related to road reinstatement be charged as a local service cost to the residents or secondly to look at the possibility of the inclusion of these costs in the DC Background Study.

After seeking advice from the Town’s DC Consultants it was determined that these costs would be eligible for recovery under the DC By-law and as such have been added to the overall construction costs for the Lake Drive servicing project. Therefore there the clear funding avenue for this project is as follows;

FUNDING SOURCES

| | Total | Roads | Water | Sewer |
|--------------------------------------|-------------|-----------|-----------|-----------|
| Construction Costs | \$1,484,763 | \$328,047 | \$416,344 | \$740,371 |
| DC Reserves | | | \$416,344 | \$610,871 |
| Taxation - General Roads Reserves | | \$328,047 | | |
| Municipal Act - Grinder Pumps | | | | \$129,500 |

Pre-tender estimates as revised February 9th, 2009, project costs are as follows:

| | Construction (including road reinstatement) | Engineering & Site Supervision |
|--------------|---|-----------------------------------|
| Road | \$ 305,634 | \$22,414 |
| Water | \$ 388,546 | \$27,799 |
| Sewer | \$ 570,084 | \$40,787 |
| Grinder Pump | <u>\$ 129,500</u> | <u>\$ -</u> |
| TOTAL | | <u>\$1,484,763</u> |

These pre-tender costs are estimates only. Tender results will be compared to these pre-tender estimates prior to making a recommendation to award the tender.

Individual sewage grinder pumps will be required for individual properties in addition to the construction of the works. It is estimated that the pumps will cost approximately \$3,500 each and are included in the above costs.

Funding

Approximately 25% of the estimated costs of the water and sewer servicing that benefits property owners will be financed by the developer under the Agreement in Principle with The Lora Bay Corporation with no financing interest to be charged. The Town must provide interim financing of the balance.

The estimated cost of the proposed Lake Drive water distribution extension and sanitary sewer service project is as follows:

| | |
|---------------|---------------------------|
| Construction | \$1,264,263 |
| Engineering | \$91,000 |
| Grinder Pumps | <u>\$129,500</u> |
| Total | <u>\$1,484,763</u> |

In the case of grinder pumps, the cost will ultimately be borne by the property owners. The proposal will allow these pumps to be debt financed under a program financed through the Town.

Project components are to be allocated as follows:

| | |
|---|---------------------------|
| Water servicing costs <i>(excluding lateral services from the property lines)</i> | \$416,344 |
| Wastewater costs <i>(including grinder pumps)</i> | \$740,371 |
| Additional road and drainage upgrade | <u>\$328,047</u> |
| Total cost of the project | <u>\$1,484,763</u> |

Within the 2009 Capital Budget, the Town has budgeted a total of \$632,850 for the Road portion, to be funded from the General Roads Reserve and \$436,855 for the water service extension and \$509,000 for the wastewater service extension for a total of \$1,578,705.

Project Status

The previous report of March 10, 2009 showed a significant reduction in the roads costs from the last estimate that was proposed for servicing Lake Drive.

In 2005, preliminary engineering was undertaken by Hatch Mott Macdonald to determine water and sewer installation and road reconstruction costs. The cost estimates received were \$1,981,905 and were considered prohibitive. In 2006 and early 2007 revisions were made to the preliminary engineering, essentially to eliminate the largest part of the road and storm water works and a cost analysis was completed which determines affected property owners costs. The Town retained a consultant to complete the final design and revise the costs. On August 23rd, 2008, staff and Council held a public information session, presenting the construction plans and an estimated cost per unit of \$42,187.

Early in 2009, the Lora Bay area specific development charges By-law was reviewed to include the Lake Drive service extension projects, substantially reducing the "per unit cost" to the benefiting properties of Lake Drive from \$42,187 to approximately \$24,700. The By-law will be presented to Council for passing on April 6, 2009. After passed, the By-law has a 60 day appeal before the By-law comes into full force and effect on June 6, 2009. The estimates included in this report reflect the costs if the proposed Lora Bay area specific development charges By-law is passed by Council as currently proposed.

During the DC By-law appeal period the Town will tender the project, with award subject to appeal of the Lora Bay DC Bylaw. After the appeal period, Council may award the project to the successful bidder. The project could then commence as early as mid June 2009 and be completed by October 2009. Currently Staff are working with Hydro One and other utilities to relocate existing services.

Capital Charges, Funding, Financing and Payment Options

The capital charges per unit for watermain extensions that have been calculated for the existing units will be adjusted in conjunction with an amendment to By-Law No. 2005-29 (Service Area - Lora Bay Development Charges) based on tender results or actual project costs. The existing units would be subject to the amended charges in effect at the time waterworks rates and sewer rates are imposed by By-law.

The number of existing and future development units that benefit from the works was estimated in the Development Charges Background Study, March 2005 and again in the proposed Development Charges Background Study, being presented to Council for approval on April 6th, 2009. These numbers will be reviewed and if necessary amended, in any re-calculation of the charges per unit.

Charges that are financed by The Lora Bay Corporation are based on a repayment term of 20 years and an interest rate of 0% per annum.

Charges that are financed by the Town are based on a repayment term of 20 years at an estimated interest rate of 6.5% per annum. The interest rate may change before a

By-law is passed to authorize the payment of charges over time; a change in interest rate will result in a recalculation of the annual payment amounts.

Charges, including development charges equivalent rates and local service contribution rates, are as follows:

Lake Drive benefiting properties (37 units)

| | <u>Water</u> | <u>Wastewater</u> | |
|--|-----------------|-------------------|-----------------|
| Capital Construction (for Sewage Grinder Pump) | | \$ 3,500 | |
| Capital Charge (existing works) | | | |
| By-Law 2005-29 as amended | \$ 5,293 | \$ 5,986 | |
| By-Law 2005-27 | <u>\$ 3,887</u> | <u>\$ 5,998</u> | |
| TOTAL | \$ 9,180 | \$ 15,484 | \$24,664 |

Financing -

Lake Drive benefiting properties – water and wastewater
 Total Charge \$24,664 If financed

| | <u>Pay't per Unit per year if Financed</u> |
|----------|--|
| 15 Years | \$2,355 |
| 20 Years | \$1,962 |
| 25 Years | \$1,738 |

NOTE: all properties require an individual sewage grinder pump at an estimated cost of \$3,500 each. Each property is responsible for its own servicing costs from their property line.

Those property owners that choose to pay over time may pay off the balance owing at any time, including interest to that date, with no penalty applied. At the time a property is sold, the balance of the loan will become due and payable.

Affordability

The Town has an Affordability Policy (2005) which recommends residents should not pay more than approximately \$1,500 per year. These costs may be based on a 10, 15, 20 or 25 year payback with Council approval. The “per unit” costs for the project are substantially more than outlined in the Affordability Policy. However, previous correspondence and meeting with property owners have indicated their support when costs were at \$42,000 per unit therefore Staff recommend that the current costs be presented at the upcoming PIC to garner project support based on the most current estimates received.

Communications

October 20, 2001, February 16, 2002, March 23, 2002 - The Town of The Blue Mountains held Public Open House sessions pursuant to the Comprehensive Environmental Study Report for Lora Bay, Clarksburg, Thornbury and Camperdown Service Areas. It was explained that the study was being conducted to determine the water supply and sanitary sewage conveyance/treatment requirements for both existing, unserviced development and future development areas.

December 27, 2003 - Lake Drive Property Owners Association representative Jim Miller wrote to the new Council about issues relating to the Lora Bay golf and residential development and municipal services. The association's primary concern related to the proposed development was safety of their drinking water. Mr. Miller stated that it was imperative that municipal water services be provided to all Lake Drive properties. He further requested consideration for keeping the roadway upgrades to an absolute minimum and preserving the rural/country lane atmosphere.

September 11, 2004 – a public information meeting was held to discuss proposed water and sewer servicing and road upgrades on Lake Drive and receive input from property owners.

May 28, 2005 – a public information meeting was held to provide information on the proposed construction of water and sewer servicing on Lake Drive and to provide a general overview of the project. Eugene Chajka of American Water Services summarized the previous public information meeting and the different servicing options presented: leave road as is (not supportable); upgrade to municipal standards (not welcome); and upgrade to a minimum level, alignment sensitive to existing area. The watermain is proposed to be a 6" main, together with fire protection and looping. The sanitary sewer is the largest challenge - two options were presented at the May meeting. Neither total cost estimates nor cost estimates per unit were presented at the meeting.

August 23, 2008 – Staff and Council held a public information session with the affected Lake Drive property owners regarding the project status and repayment options to recover costs related to the extension of the municipal water and sewer systems. Cost estimates were considered in 2005 for total road reconstruction including widening the road, putting in full granular, addressing storm water concerns and installing gabion baskets for erosion control where required. The previous proposal also included a turning circle at the end of the road to facilitate garbage pickup. The costs at that time, approximately \$68,000 per unit, and were considered prohibitive and limiting; unacceptable to both the residents and the municipality. Further discussion resulted in providing a minimum six meter road platform and to address minor storm water issues. Estimates provided at the 2008 public meeting indicated a cost of \$42,187 per unit.

March 28, 2009 – proposed public information meeting

A public information meeting is scheduled for March 28, 2009 with the benefiting property owners of Lake Drive to review the proposed service extensions. The calculation of the estimates has been revisited and has been considered part of Service Area 1, of the proposed Lora Bay Area Specific Development Charges By-law. This will

allow Lake Drive property owners the same economy of scale recognized by the other residents within the service. The proposed Lora Bay Area Specific Development Charges By-law will be considered for approval by Council on April 6th, 2009 with a 60 day appeal period to follow.

C. Budget Impact

Approximately 25% of the water and sewer servicing that benefits the property owners will be financed by the developer (The Lora Bay Corporation) with no financing interest to be charged (agreement in principle). The Town must provide interim financing of the balance.

The **estimated** project costs (excluding lateral services to property lines) is \$1,264,263, plus grinder pumps at \$129,500 and engineering at \$91,000 with the total estimated cost of the project at \$1,484,763. The Town has budgeted a total for the Road portion at \$632,850 being funded from the General Roads Reserve and \$436,855 for the water service extension and \$509,000 for the wastewater service extension funded from Development Charges for a total of \$1,578,705.

FUNDING SOURCES

| | Total | Roads | Water | Sewer |
|-----------------------------------|-------------|-----------|-----------|-----------|
| Construction Costs | \$1,484,763 | \$328,047 | \$416,344 | \$740,371 |
| DC Reserves | | | \$416,344 | \$610,871 |
| Taxation - General Roads Reserves | | \$328,047 | | |
| Municipal Act - Grinder Pumps | | | | \$129,500 |

D. Environmental Impact

Elimination of septic systems will improve the ecosystem and groundwater quality. Residents will avoid future repairs and maintenance costs for private wells and septic systems. Upon connection to the municipal services the well servicing this property would require decommissioning and the septic tank would either require removal or filling with concrete or gravel.

E. Attached

1. Public Information Session Notice
2. Policy Statement - Guidelines for Municipal Sewer & Water Extension Projects (January 2006)

Respectfully submitted,

Elizabeth Thompson, Deputy
Treasurer/Manager of Accounting &
Budgets

John Caswell, Manager
Water and Wastewater
Services

Reg Russwurm
Director of Engineering and
Public Works

For more information, please contact:
Elizabeth Thompson
ethompson@thebluemountains.ca
(519) 599-3131 ext.250

Or

John Caswell
jcaswell@thebluemountains.ca
(519) 599-3131 ext.226



Lake Drive – Water, Wastewater and Road Works

NOTICE OF PUBLIC INFORMATION CENTRE

The Town of The Blue Mountains has reviewed the Project Design Brief for the installation of municipal water and wastewater servicing for Lake Drive. The proposed work will include approximately 600 metres of watermain on Lake Drive and 600 metres of wastewater low pressure forcemain on Lake Drive as well as approximately 600 metres of low pressure forcemain on the 10th Line. The works includes infrastructure upgrades and reinstatement of the road. The Town is considering calling tenders for this project and would like to meet with residents to deliver a Project Status Update.



PUBLIC INFORMATION CENTRE

This Public Information Centre (PIC) will be held to present to the public ongoing project information, discuss the next steps that will be followed in the process and include discussion regarding cost per unit. The Public Information Centre will be held:

Date: Saturday, March 28, 2009

Time: 10:30 a.m. to 12:00 noon

Location: L.E. Shore Memorial Library, 183 Bruce Street South, Thornbury, ON N0H 2P0

We are interested in hearing any comments or concerns you may have with respect to this project. For further information please contact the following:

Town of The Blue Mountains

John Caswell

Manager of Water and Wastewater Services

Phone: (519) 599-3131 ext. 224

Fax: (519) 599-7723

E-mail: jcaswell@thebluemountains.ca

Town of The Blue Mountains
26 Bridge Street, P.O. Box 310, THORNBURY ON N0H 2P0
www.thebluemountains.ca

Policy Statements
Guidelines for Municipal Sewer & Water Extension Projects
January 19, 2006

The Town's Official Plan provides "that municipal servicing capacity will ultimately be made available for all existing development within the applicable Service Districts". "Municipal water and sewage services are to be provided by centralized treatment plant facilities with an extensive service line infrastructure designed to service existing development".

The following Policy Statements shall be considered when reviewing sewer and water extensions.

GENERAL:

- Council will establish a priority list, which will be reviewed from time to time, establishing the order that various areas may be serviced.
- Sewer & Water budgets will include all necessary work to restore the road to its pre-existing condition.
- Required road costs may include road and drainage improvements over and above pre-construction conditions.

STANDARDS:

- All infrastructure will be constructed to approved Town Engineering Standards
- Any special technical factors which affect the costs will be identified and considered in the analysis.

FINANCING / FUNDING:

- All projects should be deemed to be affordable for both the Town and the property owners.
- The combination of all Town wide capital projects will not cause the Town to exceed an appropriate debt level (i.e. – 80% of its debt limit).
- Projects will proceed into detailed design only after a review of the costs, funding and financing options by Council

- A full range of funding and financing tools will be reviewed for each project including combinations of government grants, user fees, property owner payments, reserves, long term debt financing, developer funding/financing, taxation, etc.
- If there are provincial/federal grants benefiting a project, then Town reserve funds will not be used to further reduce the costs to benefiting property owners, unless necessary to meet the affordability criteria.
- All Capital Charges imposed are to have priority lien status, if possible.
- All benefiting property owners on each project will contribute equally to the cost on an equivalent unit basis.
- For non-residential uses, the Town's "Basis for Equivalent Units" should be reviewed and updated.
- All benefiting property owners on each project will also contribute towards plants and related infrastructure costs as well as project costs.
- Any previous contributions by benefiting property owners will be identified and considered in the analysis.
- The financing options should encourage benefiting owners to maximize their payments early in the payment schedule.
- Benefiting owners will be given payment options. At least one option will allow the property owner to pay not more than an affordable threshold amount annually based on current costs (i.e., approximately \$1,500) over an extended term.
- In the event that effected properties are sold, the balance of the remaining assessment shall be paid to the Town as part of the sale closing process.

COMMUNICATIONS:

- All affected property owners will be consulted prior to establishing any specific charges.

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: **Infrastructure and Recreation Committee**
MEETING DATE: **October 27, 2009**
REPORT NO.: **EPW.09.102**
SUBJECT: **Request for Reservoir Cleaning Funds**
PREPARED BY: **John Caswell, Manager of Water & Wastewater Services/Asst. Director**

A. Recommendation

THAT Council approve funds to create a budget for Reservoir Cleaning at the Happy Valley Reservoirs in the amount of \$ 9,000 excluding GST.

B. Background

Approximately every 5 years Staff inspect Reservoirs and normally this work at the Happy Valley reservoirs would be performed in 2010. However Staff has concerns in regards to legislative requirements for Trihalomethanes (THM's).

Trihalomethanes are chemical compounds that result from the reaction of chlorine with organic matter in the water being treated. Trihalomethanes are environmental pollutants and considered carcinogenic. The Ministry of Environment has a Maximum Acceptable Concentration (MAC) for THM allowable under Regulation 170 of the Safe Drinking Water Act 2002 of 100 ug/L (Micrograms per litre). The half MAC is 50 ug/L, which is considered a trigger to take action by the Ministry of Environment.

Staff are required to report on Trihalomethane detectable results on a running quarterly average. Normally the results are below the half MAC, however recently the results have been slightly above the half MAC which may be an indicator that the reservoirs require cleaning. Staff have flushed much of the distribution system and inspected the Swiss Meadows water storage. Also an inspection of the Happy Valley reservoirs was conducted in August 2009. The report found that the North Reservoir had a layer of sediment across the bottom. This sediment may be the factor resulting in high THM.

In order to properly clean and disinfect the reservoirs, the reservoirs will need to be drained one at a time. This will entail notification to the Town Fire Department and also Collus in regards to water supply and possible assistance with augmented water supply for fire protection if necessary. After the reservoirs have been cleaned and disinfected they will be filled with potable water and then two consecutive bacteria tests will be taken to ensure the water is potable. This exercise should take approximately one week for each reservoir. Each reservoir holds 2500M³ of water.

The reason for performing this work immediately is to ensure this maintenance is completed prior to the increased demands experienced additional in mid December.

C. The Blue Mountains' Strategic Plan

These works address the Town's Strategic Plan Goal #2 "Addressing the Town's Municipal infrastructure needs".

D. Budget Impact

Staff have met with Finance Services and it is recommended that the funding be taken from the Craighleith Water Operating Reserve fund that has a 2009 year end projected balance of \$1,706,708.00.

E. Attached

None

Respectfully submitted

John Caswell
Manager, Water & Wastewater Services/Asst. Director
Engineering & Public Works
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icaswell@thebluemountains.ca

Reg Russwurm
Director, Engineering and Public Works

STAFF REPORT: ENGINEERING AND PUBLIC WORKS DEPARTMENT



REPORT TO: Infrastructure and Recreation Committee
MEETING DATE: October 27, 2009
REPORT NO.: EPW.09.103
SUBJECT: Construction/Development Status Report
PREPARED BY: Tom Gray, Engineering Design Technologist

A. Recommendations

THAT Council receives Report EPW.09.103 entitled "Construction / Development Status Report" for their information.

B. Background

Attached is the monthly report completed to keep Council apprised of the status of the current construction projects and the current development projects.

C. The Blue Mountains' Strategic Plan

The generation of this report furthers the Town's Strategic Goal #2 "Addressing the Town's municipal infrastructure needs", and Strategic Goal #6 "Providing a strong, well managed municipal government".

D. Environmental Impacts

The ongoing projects facilitate the ultimate sustainability of the community.

E. Budget Impact

None.

F. Attached

1. Construction Projects – Status Report, as of October 20, 2009
2. Development Projects – Status Report, as of October 20, 2009

Respectfully submitted,

Tom Gray
Engineering Design Technologist

Reg Russwurm
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**INFRASTRUCTURE & RECREATION COMMITTEE UPDATE
CONSTRUCTION PROJECTS**

As of October 20, 2009

1. Highway 26, North Main – An 18m long section of watermain that could not be constructed with the Hwy 26 works due to work in a cold water stream has been constructed. The watermain has been commissioned and is now in Maintenance Period.
2. Thornbury Water Treatment Plant Filter Replacement - This project reached Substantial Completion on April 3, 2009 and is in Maintenance Period.
3. Craigleith Road Sanitary Sewer - Required warranty period ended September 7, 2008. Final inspection has been completed and deficiencies have been corrected. The Town is in the process of issuing a Certificate of Final Acceptance.
4. Thornbury Wastewater Treatment Plant - The 70% Final design has been reviewed by Town Staff and an application for a Certificate of Approval has been submitted to the MOE.
5. Mountain Drive Phase 2 Re-Construction - Contractor has substantially completed the Works. Top lift of asphalt has been completed and the Contractor is working on minor deficiencies.
6. Camperdown Road - Major deficiencies include road surface, asphalt, and retaining wall. Some minor deficiencies also identified with curb and re-instatement. Discussions have been completed with Contractor and The Ainley Group regarding the correction of deficiencies. The road is to be paved the last week of October.
7. Camperdown Sanitary Sewer - Drexler Construction has filed a statement of claim in Ontario Superior Court. Town Staff are in discussions with solicitors Aird and Berlis, and Skelton Brumwell.
8. Plan 915 - Reconstruction of Plater Street, Campbell Crescent, and Kinsey Place are under way and will be completed within the 2009 construction season. Town Staff are working closely with the contractor and residents to minimize the impact of tree removal and impacts to private property. Carmichael Crescent will be reconstructed in 2010.
9. Lake Drive Water and Wastewater Servicing Extension with SMRS Construction have installed the sewer and water and the watermain is in the process of being commissioned. It is still anticipated the completion date will be November 30th, 2009. The Contractor has requested a 30 day extension to the construction schedule.

**INFRASTRUCTURE & RECREATION COMMITTEE UPDATE
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As of October 20, 2009

10. Georgian View Estates –construction started on September 14, 2009. Town staff are providing contract administration on this project. The contractor is scheduling to complete all underground work by the end of the 2009 construction season and paving all streets next year.
11. Clark Street EA – The Town issued an RFP for the re-alignment of Clark Street at Grey Road 2. The closing date for the RFP was August 13, 2009. Crozier & Associates was recommended for award of the assignment however the project is on hold pending discussions with the Horse Park developer.
12. Slabtown EA – CC. Tatham & Associates is completing the assignment and work is proceeding well. Notice of commencement is out and the study process is underway. A PIC is expected late November 2009 pending completion of cultural heritage and archeological studies.

**INFRASTRUCTURE & RECREATION COMMITTEE UPDATE
DEVELOPMENT PROJECTS**

As of October 20, 2009

1. Far Hills/Beaver Street –Deficiencies remain to be addressed.
2. Willow Creek/Monterra Ridge –Developer has paved the internal road network and has constructed the storm water management pond.
3. Peaks Meadows – Certificate of Completion for Basic Services has been issued with a list of deficiencies to be corrected. Building permits have been issued.
4. Georgian Glen – Work under the Pre-Servicing Agreement has been completed. AFC drawings have been issued and the Town is waiting for the Developer to enter into a Development Agreement.
5. Edgewater Estates/Highway 26 – Construction of Phase II has been completed and the developer is requesting a L.C. reduction. Town Staff has advised the Developer that a site inspection is required prior to issuing certificates and releasing securities.
6. Orchard at Craigleith – Work is continuing on a number of units under construction. There are a substantial number of building permits taken out for this project. The developer has been granted substantial completion of the below ground works. Many deficiencies yet to be addressed. Developer is requesting L. C. reduction.
7. Thornbury Horse Park – Awaiting next submission to advance project.
8. Peaks Bay – Town has entered into Development Agreement for Phase 1 only which consists of the 25 easterly Lots. A Certificate of Completion for Basic Services has been issued which allows issuance of building permits but does not start Maintenance Period.
9. Keeper’s Cove Phase 1- A Certificate of Preliminary Acceptance has been issued for Phase 1 which has started the maintenance period and allows for occupancy.
10. Keeper’s Cove Phase II - Technical Review underway and there are some drainage issues that the Consultant and Developer are working out. Awaiting next submission to advance project.
11. Lora Bay - Phase 3 – The Town has worked with the Developer over the winter to release a portion of the L.C.. A site inspection is required to release additional. Lora Bay (Lower Block) The Town has approved an overall grading change for Lora Bay (Lower Block). This change is intended to improve run-off conditions from the site.
12. 11 Bay Street – Phase 1 building construction is nearing completion and the Developer has started on Landscaping. The foundation for the 2nd building is under construction.
13. Woodlands by Sierra – Water and sewer services are complete.
14. Mill Pond – Developer has started with Landscaping.

15. Thorncroft – Construction complete. Formal request for Certificate of Completion and inspection required to begin maintenance period with developer. Preliminary inspection complete, drainage issues noted and concerns conveyed to developer. Pavement repairs complete. There are outstanding landscaping deficiencies. Developer is requesting reduction in L.C.
16. Neighbourhoods of Delphi Point Phase 1a – Developer has entered into a Pre-Servicing Agreement with the Town and construction of underground services is underway. Town is in process of reviewing design package and preparing Development Agreement.
17. Neighbourhoods of Delphi Point Phase 2 – Developer has submitted a design package for Technical Review and the Town is proceeding with comments back to the developer.
18. Lendvay Subdivision –The Town and the Developer have entered into a Pre-Servicing Agreement and construction is underway. The developer has installed water, sanitary & storm sewer, curb & gutter and base course asphalt. The developer is presently installing street lighting. It is expected to enter into a Subdivision Agreement shortly. Drawings have been “Approved for Construction”.
19. Georgian Bay Estates – Town staff and the consultant have inspected the site and have prepared a deficiency list for the Developer to complete before there can be a LC reduction.

Minutes - Museum Advisory Committee



MEETING DATE: September 8th, 2009
LOCATION: Craigleith Heritage Depot
PREPARED BY: Jody Hodgkinson,
Administrative Assistant,
Recreation

A. Call to Order

- Chair Bob Waind called the meeting to order.
- In attendance; Suzanne Purdy, Rob Potter, Bob Waind, Bud McCannell, Eleanor Pask, Abby Watts and Jody Hodgkinson.

- Approval of Agenda

Eleanor made an addition to the agenda;

- memberships

Moved by: Rob Potter Seconded by: Bud McCannell

THAT the Agenda of September 8th, 2009 be approved as amended ,
Carried.

- Declaration of Pecuniary Interest – None at this time
- Previous Minutes

Moved by: Bud McCannell Seconded by: Eleanor Pask

THAT the Minutes of July 7th, 2009 be adopted as amended, Carried.

B. Deputations / Presentations

Eleanor Pask – Strategic Plan Report

- Eleanor presented the Craigleith Heritage Depot Strategic Plan 2009

The Strategic Planning process, results of which are outlined in the Plan began in the spring of 2009. Members of the Museum Advisory Committee (MAC) met to lay the groundwork for planning the direction for the Depot for the next 3 years.

The Committee discussed the various parts of the plan being the Preamble, Vision, Mission, Priorities and the strategy for these priorities.

There was some discussion regarding funding from the Watershed for Staffing and it was noted that Council needs to be made more aware of the needs for staffing at the Depot.

Moved By: Rob Potter

Seconded By: Eleanor Pask

The Museum Advisory Committee recommends that Council adopt and implement the Craigeith Heritage Depot Strategic Plan 2009 and consider appropriate staffing and funding for the immediate and long term sustainability of the Craigeith Heritage Depot. Carried,

C. Staff Reports

Suzanne gave a verbal report on Depot Days noting that there were 10 kids enrolled and that it was a huge success. Suzanne noted that a profit of approximately \$760.00 was made. Things like kayaking, clay pot making, visit to Scenic Caves among other events took place which gave the kids a real camp experience and taught them a lot about a “team environment”. Suzanne went on to say that staffing was an issue because 4 volunteers dropped out at the last and Abby Watts was sick, the Youth Advisor, Joanna Garland was unable to assist and Suzanne hurt her toe. Suzanne noted that a minimum 3 staff should be required from a safety standpoint.

There was some discussion among the committee members and it was decided that a follow-up letter should go out to the parents of the children that enrolled asking for feed back as well as asking if any of the parents would be willing to assist during the program next year.

The committee asked that Suzanne prepare a report so that Council is aware of the success of the Depot Days Camp Program and this report should be sent along with the minutes of the meeting.

D. Correspondence

None

E. New and Unfinished Business

- Volunteer program – Suzanne indicated that we need to prepare a list of jobs for this program as they like to be “guided”.
- Newsletter – The next Newsletter is to be done in the fall. Suzanne is sending all the information to Rob Potter and he will prepare the layout.
- Lecture Series Update – Very successful! The last speaker was David Rudkin, Assistant Curator – Paleobiology, ROM. Suzanne noted that a partnership with the ROM resulted from this meeting in which joint fossil finding fieldtrip excursions will be planned for next year.

- Educational programming initiatives – Abby Watts is working on this and she has some great ideas for PD days the next one being November 13th, 2009.
- Report to Council – on hold until they see the Strategic Plan
- The Virtual Tour Company – the committee decided against that for now.
- Grant Opportunities – Creative Communities Prosperities fund, Rob Potter noted that Peter Tollefsen is working on cultural planning and Suzanne mentioned working with Peter and the Youth Advisory on submitting a joint grant application bringing cultural heritage education to the broader community through curriculum based and outreach programs. There was some discussion on Canada Trust which does environmental grants. Suzanne will contact the Bank Manager to investigate.
- One Year Anniversary – Newsletter and in the local paper – Rob Potter looking at a press release – free admission to the Depot on September 21st, 2009
- Membership – Eleanor wanted it noted that the Depot flyer does not say how to become a member – Suzanne will arrange to do an insert and send out - look at costs for bulk mailing – using email as much as possible.

There was some discussion on new accessions – pictures from the Toronto Ski Club circa 1930's – pictures from Maggie Black and a video clip of a Toronto Ski Club member skiing down a hill.

F. Next Meeting Date

Tuesday October 6th, 2009 @ 10:00am – Craighleith Heritage Depot

G. Adjournment

Moved by: Rob Potter Seconded by: Bub McCannell

THAT this meeting do now adjourn, Carried.