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**Niagara  Region**

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**REPORT TO:** Chair and Members of the  
Public Works & Utilities Committee

**SUBJECT:** Update on Follow-Up Actions Regarding  
the Wainfleet Servicing Class  
Environmental Assessment (EA)  
In the Township of Wainfleet

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**RECOMMENDATION(S)**

That this Committee recommend to Regional Council:

That approval be given to complete the Class Environmental Assessment process for the Wainfleet Water and Sewer Servicing Class EA and submit the Environmental Study Report and supporting documentation to the Ministry of the Environment no later than June 2005,

That the additional fees associated with the Value Analysis Exercise in the amount of \$145,000 be approved, and

That this additional amount be charged to Project ZSW0010 / SW0241.

**PURPOSE**

The purpose of this report is to apprise members of Public Works and Utilities Committee (PWUC) of the steps taken by Public Works and Public Health Departments to implement the action plan developed for the Wainfleet Servicing Class Environmental Assessment (EA) as previously set out in PWP 67-2004.

The report also updates PWUC members of the status of the Wainfleet Servicing Class EA project, Wainfleet Township's COMRIF application, additional out-of-scope costs, and the next steps in the approval process.

**BACKGROUND**

In 2001 and 2002, Regional Public Health and Public Works Departments undertook studies to assess potential public health and environmental concerns associated with

malfunctioning private water and wastewater facilities in Lakeshore communities of Wainfleet Township. These studies indicated that private septic systems were affecting local groundwater supplies, polluting many private wells and posing a significant contamination threat to others, as well causing detrimental impacts to the Lake Erie water environment. Small lot sizes, concentrated residential development and geological and hydrogeological sensitivities were also determined to be contributing factors. Details on these studies were provided in PWP 61-2004.

The 2001 and 2002 Public Health and Public Works studies confirmed that many of Wainfleet's lakeshore residents face potentially serious human health risks. This matter was reported to Council and, subsequently, Earth Tech Canada was engaged to conduct a "Water and Sewer Servicing Class Environmental Assessment (EA)" for the study area.

During the Class EA process, three Public Information Centres were held to inform the Lakeshore Community and solicit public input into each phase of the process; namely, "problem identification", "examination of alternative solutions" and "identification of a preferred design concept" for the preferred solution. Based on community residents' lack of confidence in the results of the EA process (as expressed in public comments and letters to local newspapers) and a need for a greater level of technical detail, Council directed a staff working group comprised of Public Health, Public Works and Wainfleet Township representatives to cooperatively execute an action program comprised of the following:

1. Additional water quality testing,
2. An examination of the carrying capacity of lots for on-site sewage disposal,
3. Implementation of a comprehensive Communications Plan
4. A re-examination of alternative servicing solutions,
5. Meetings with public representatives (i.e. the Wainfleet PAC) and Township Council members
6. Meetings with federal and provincial political representatives.

This report provides members of the Committee with an update on each of the above.

## **REPORT**

### **1.0 Phase II Water Well Quality and Septic System Survey**

In response to community residents' concerns about the statistical validity of results, MacViro Consulting was retained to update its 2002 Phase 1 Water Well Study. The Phase 2 survey, undertaken in January 2005, included the collection and testing of 107 new water samples from residences not previously sampled, in order to ensure adequate coverage of the entire study area.

Laboratory tests found that of the untreated water samples, 34% of homes exceeded the Ontario Drinking Water Standards for E.coli bacteria and 68% exceeded the standard for total coliform bacteria. In addition, 24% of the Lakeshore residents consuming source water are exposed to additional health related risks due to poor groundwater quality and lack of adequate treatment.

The survey also found that 41% of homes had septic systems greater than 20 years old (the average septic systems life span), 49% did not meet legal setbacks between wells and septic systems, and 21% were not adequately maintained. A comparison of the findings of the 2002 and 2005 MacViro studies is provided below.

Survey Parameters	2002 Survey	2005 Survey
E.coli Exceedences	30%	34%
Total Coliform Exceedences	52%	68%
Septic Tanks >20 Years Old	40%	41%
Building Code Non-Compliance	44%	49%
Inadequately Maintained Systems	29%	21%

The Phase 2 study followed a statistically representative methodology. In order to conduct an objective and unbiased field survey, MacViro adopted a sampling approach that was representative of the entire Lakeshore Community. To ensure true and fair representation, the study area was divided into ten zones and homes to be sampled were randomly identified.

As illustrated in the table above, the substantial number of problems found during the 2005 survey confirms a significant impact on local water supplies resulting from malfunctioning private sewage disposal systems. Specifically, local groundwater resources are already contaminated, or at high risk of contamination, from sewage effluent contaminants (including bacteria and other pathogens). These findings corroborate the 2002 Phase 1 study conclusions.

## **2.0 Feasibility Study of On-Site Sewage Disposal**

In January 2005, the Region engaged the services of AMEC Earth and Environmental to undertake an examination of physiographic conditions (i.e. soil type, water table depth, rock conditions) in the Lakeshore area. The purpose of the study was to determine the effectiveness and sustainability of private septic systems and the cumulative effects of many individual septic systems on the immediate environment, specifically groundwater.

The report examined two separate and independent sets of considerations. The first involved the ability of lots to meet minimum, on-site sewage disposal requirements. Factors considered included lot size, setbacks, tank and file bed area, and Ontario Building Code (OBC) prescribed separation distances between wells and septic systems. The second involved an assessment of whether lots generate more effluent than the local soils and groundwater can reasonably assimilate, without producing unacceptable levels of groundwater contamination.

Considering the first criterion, of the 1,244 residential lots examined, 67% (or 836 lots) could not meet OBC legal requirements. The greatest concentration of lots meeting OBC standards are found in the sand dunes area located between Quarry Road and Wainfleet Township's boundary with Port Colborne. Very few residential beach lots found outside the easterly sand dunes area meet OBC requirements.

Considering the second factor, cumulative groundwater effects, 54% (or 663 lots) are located in areas where unacceptable contamination of groundwater has likely taken place. Overall, 92% of the residential properties in the Lakeshore area (or 1,138 lots) do not meet both screening standards.

### **3.0 Wainfleet Community Outreach Plan**

The Wainfleet Community Outreach Plan is an internal document, cooperatively developed by Corporate Communications, Public Health and Public Works staff for the Wainfleet Water and Sewer Servicing Class EA. The Outreach Plan sets out objectives, strategies, key messages, target audiences, tactics, and critical timelines, designed to improve community awareness and understanding of the Class EA process. The Plan identified various consultation and communications elements that assist in moving the infrastructure planning process forward to appropriately address Wainfleet's serious contamination issues and water and wastewater servicing challenges.

To increase awareness and understanding, information on the Lakeshore community's public health and environmental conditions was published in media releases, local newsletters, and the Regional website. Three "Health Water/Health Environment" newsletters were prepared and distributed, highlighting different aspects of the Class Environmental Assessment process and describing local public health and environmental conditions.

### **4.0 Wainfleet Lakeshore Public Advisory Committee (PAC)**

The Lakeshore PAC was established in late 2004 to provide a mechanism for ongoing public input into the Wainfleet Water and Wastewater Servicing Class EA. The eight-member PAC has formally met monthly with Township and Regional staff to contribute information and community advice into the process, including the development of public communication materials.

PAC members actively participated in the Value Analysis Workshop and publicly expressed support for the process, its conclusions and its recommendations. Additional PAC meetings will be held in May and June 2005 to continue to identify, address, and present landowner/residents' concerns regarding public health risks and proposed servicing solutions. The group's function has been further enhanced through the designation of a Chair of the PAC.

### **5.0 Re-assessment of Alternative Solutions - The Value Analysis Workshop**

Over a seven day period, from February 8 to 14, 2005, a Value Analysis (VA) Workshop was held to identify the best design solution for the Wainfleet Water and Sewer Servicing project through the analysis of all feasible design alternatives. Details of the VA workshop were provided in PWP 67-2004.

The VA Workshop is an intensive work session during which a project design is analyzed for ways to optimize initial construction costs. These are balanced against long-term operation and maintenance costs and the needs of the community and environment.

The rationale for holding a "Value Analysis" workshop for the Wainfleet water and sewer servicing project is consistent with similar workshops held by the Region. In 2004, following Council direction provided in PWP 80-2003, good results were obtained from workshops held for infrastructure projects in Niagara Falls and Welland that also involved high estimated capital costs. However, for the Wainfleet project, an important element was the critical objective of addressing key issues and concerns of affected area residents by including PAC members in the VA exercise.

The VA Workshop brought together external technical experts and knowledgeable local representatives. Participants included civil engineers who do not exclusively specialize in conventional urban water and wastewater systems, but have extensive expertise in small private systems. For example, one VA Team member worked extensively with the U. S. Environmental Protection Agency. He was responsible for developing manuals for small community cluster systems and private on-site facilities. VA Team members who took an active role in the workshop included:

- Cost estimators,
- Wells and small on-site systems experts,
- Facility constructors,
- A legal advisor,
- Experts in environmental regulations (MOE),
- Public health professionals,
- Hydrogeologists,
- Municipal financial experts
- Medical practitioners,
- Water and wastewater system operators,
- Community land use planners,
- Members of the Wainfleet PAC and community observers,

- Local politicians, and
- Township and Regional staff.

### *5.1 Mission of the Value Analysis Team*

The mission statement reviewed by VA workshop participants defines the focus for the exercise, as stated below:

“The mission of the project is to provide the residents of the Wainfleet Lakeshore Community with adequate, safe, potable water for domestic use and appropriately address substantive public health and environmental issues associated with local malfunctioning septic systems, in a manner that satisfies all mandated approval requirements at an affordable cost to the benefiting property owners.”

The VA Team’s task involved critically assessing a wide variety of alternative water and wastewater servicing solutions, including private and municipal options. In addition, the Team evaluated the recommended “baseline” solution previously put forward by Earth Tech Canada in its March 2004 Technical Working Paper.

The baseline project, presented at the August 2004 Public Information Centre #3, involves constructing new water distribution and wastewater collection systems within the Lakeshore community. These systems would be connected by pipelines to the Region’s Port Colborne Water Treatment Plant and Seaway Wastewater Treatment Plant located in Port Colborne.

The VA Team comparatively evaluated a broad range of alternative technology options against the baseline solution, in terms of their ability to satisfy the VA mission statement. The Team also independently examined alternatives to determine their specific suitability as solutions to the Wainfleet problem statement.

### *5.2 Summary of Initial Findings*

A summary of the Major findings of the Value Assessment Team, based on the information presented at the workshop is presented below:

- There is a public health problem in the Lakeshore Community that directly results from failing on-site sewage disposal systems on small lots with inadequate separation distance between sewage disposal and wells.
- Local soils, geology and plus small lot sizes make on-site treatment and disposal of household wastewater in septic systems an unacceptable solution that violates provisions of the Ontario Building Code as well as the policies of the MOE and Regional Health Department.
- The health risk involved in the use of contaminated water from private wells cannot be completely eliminated through the use of household water treatment units, as evidenced by contaminated water sampled from homes that rely on such units.

- Where water from private wells is contaminated by *E. coli* or total coliform, well water should be limited to non-potable use (irrigation, car washing, and toilet flushing) and not be used for drinking, cooking, bathing, or other hygienic purposes.
- In recognition of the failure of on-site water treatment units to consistently produce safe potable water (both in Wainfleet and elsewhere) it is recommended that publicly-owned and maintained systems be established to assure reliable performance of constructed facilities.
- The VA team considers the need so urgent that should financial limitations prevent the simultaneous construction of improvements to both the water and wastewater facilities, the VA Team would encourage the early, accelerated construction of the best water solution considering both capital and life cycle costs.

### 5.2 Evaluation of Alternative Technologies

Prior to commencing the VA Workshop, technical information requests were sent to more than 60 water and wastewater technology vendors asking for up-to-date data on proprietary systems that could satisfy the study area's servicing needs. In general, these were grouped into three water and wastewater categories, including individual or private, on-site systems; cluster systems and centralized systems. This technical information allowed the VA experts to fully understand the advantages and limitations of each and determine their applicability to the Lakeshore area's specific physical conditions.

During the workshop, VA Team identified and evaluated over 170 servicing ideas and creative possibilities. A few of the water and wastewater alternatives examined are listed below.

#### Examples of Servicing Solutions Considered in the VA Workshop

• Solar aquatic systems	• Expanding the private water system
• Low water consumption fixtures and appliances	• Low pressure, steady flow water system
• Chemically assisted filtration systems	• Localized treatment facilities
• UV disinfection	• Sewage lagoons
• Reverse osmosis	• Biological treatment systems
• Sand/media filters	• Effluent disinfection processes
• Wetlands	• On-site private treatment alternative
• Vacuum collection systems	• Bioreactor systems
• Low pressure sewers	• Home-based treatment systems

While adoption of some options suggests potential capital cost savings, it was agreed that the ability to satisfy Ontario's regulatory requirements is of paramount importance.

Accordingly, the VA Team evaluated and eliminated most technical alternatives considering this criterion and one or more of the following considerations:

- Ontario Building Code provisions, Public Health Department requirements and/or Ministry of the Environment policies could not easily be satisfied
- Systems were ineffective considering local geological, hydrogeological and land use circumstances
- Some technologies had little or no performance history in Ontario
- Potential for adverse water quality would be outside municipal control
- Annual operating and maintenance costs would be substantially greater than the equivalent cost of the modified baseline system.
- Potentially high annual costs would be passed on to Lakeshore area residents.

Considering the importance placed on innovative systems by area residents, special emphasis was given to examining “community system” options for water and wastewater servicing. The most promising innovative community water system included a low pressure, low flow system with in-house storage tanks. Similarly, the community wastewater system involved a low pressure cluster collection system designed to dispose of treated effluent in sub-surface drip systems located in nearby vacant land.

While economically attractive, the VA Team concluded that these options would not be granted MOE approval in a post-Walkerton environment. Because of reliance on on-going private maintenance, risk of contamination and potential municipal liability resulting from adverse water quality, the VA Team did not recommend these innovative community options.

### *5.3 VA Workshop Conclusions and Recommendations*

As a result of the broad assessment of servicing alternatives undertaken during the workshop, the VA Team identified numerous design, construction and operational ideas to lower costs without reducing the functional adequacy and reliability of the systems to be constructed. The VA Team found ways to both reduce costs and add value.

Based on the conclusions reached at the workshop, the VA Team recommended that the modified ‘baseline’ project be carried forward as the most cost-effective and technically appropriate servicing solution. The modified “baseline” solution, involving piped water and wastewater service connections to treatment plants in Port Colborne, was determined to be the best way to service the Lakeshore community.

In the opinion of the VA Team, no community-wide solution can more effectively address pressing public health and environmental concerns. The VA Team identified potential cost savings that could be realized by the following baseline modifications:

- Using shallow insulated water pipes;
- Providing a community storage tank booster station;

- Reducing pipeline diameters by reducing designing flows;
- Utilizing a rock trencher to reduce diameter of sewage forcemains and watermains;
- Providing chemical injection to prevent potential sewage odours;
- Shallow burying and insulating reduced diameter forcemains; and
- Purchasing prefabricated pumping stations.

These recommendations have the potential to add value and trim capital cost by about \$3 million for the baseline project, while reducing estimated annual costs and 20-year life cycle costs.

Despite finding capital cost savings, based on the assistance of a construction cost estimator, the VA Team concluded that estimates for the modified “baseline” solution were insufficient to adequately address unforeseen and non-construction costs. Consequently, the VA Team recommended that costs be substantially increased by providing higher built-in contingency allowances.

Recognizing that no field work has been started and the project design is still at a conceptual level, VA Team members recommended that additional funds be budgeted to cover potential unforeseen costs. Possible significant “unknowns” include extensive rock excavation, large-scale construction dewatering requirements, design and construction changes, inflation, and unpredictable cost increases related to the bidding process, material costs, etc.

The VA Team recommended an upward cost revision to \$65.5 million. Using refined capital cost estimates developed at the workshop, the VA Team suggested that the adjusted “baseline” project budget range should be conservatively established at \$50 million to \$72 million for both water and wastewater facilities.

#### *5.4 Outcome of the VA Exercise*

The VA process brought together the best available experts to identify the best solution. Within a compressed 7-day workshop, all possible options were examined. Experts presented scientific evidence confirming the seriousness of the Lakeshore public health situation and introduced technical information underscoring the need to address environmental contamination risks.

During the VA Workshop, Public Advisory Committee (PAC) members and local politicians were presented with a first-hand understanding of local conditions, the results of additional technical studies, and an awareness of the challenges causing some options to be eliminated. The PAC witnessed an open and unbiased process that confirmed the need for community-wide services, ensured that options were properly and fairly defined, and correctly identified the most appropriate solution.

The VA Team recommended ways to save money that will be considered in the final design of the baseline project. These results were used to support and update the Township’s COMRIF funding application. Findings and recommendations of the VA

workshop will also be incorporated into the revised, final Class EA document that will be submitted for Ministry of Environment approval.

## **6.0 Wainfleet Township's COMRIF Application**

In January 2005, the Township submitted an application for funding under the Canada-Ontario Municipal Rural Infrastructure Fund (COMRIF) program. Based on the VA Team recommendations, the Township's COMRIF application was updated and resubmitted at an estimated cost of \$53 million. Under COMRIF, this cost would be equally shared by the federal, provincial and Township governments. About \$35 million (67%) would be provided by senior governments, leaving about \$17.7 million (33%) to be paid by benefiting property owners in the Lakeshore area.

In March 2005, Wainfleet Township's COMRIF application was updated and supplementary information from the VA workshop was submitted to the Ministry of Public Infrastructure Renewal (MPIR). Subsequently, Regional Councilors and senior staff met separately with the provincial Minister David Caplan and the federal Minister John Godfrey. During these meetings, the provincial and federal ministers were advised of the merits of the Township's COMRIF submission and apprised of public health risks related to adverse water quality and unabated environmental contamination threatening Wainfleet's Lakeshore community.

On April 25 2005, the Township received a standard confirmation letter from the Federal Management Committee that Wainfleet's project had not been recommended for COMRIF funding. No explanation for the decision was provided. The letter stated that projects not funded under Intake One could be resubmitted under Intake Two. Under Intake One, 120 projects were approved in Ontario, securing a Federal/Provincial contribution of approximately \$125,000,000. This constitutes approximately 40% of the announced COMRIF budget. Intake One projects mainly included bridge, culvert and road construction and water and wastewater system upgrades.

Township and Regional staff are currently attempting to ascertain the reasons for the COMRIF decision. Staff suspects that the currently incomplete Class EA may have contributed to the decision. In addition, unfavorable correspondence sent to Mr. Caplan and Mr. Godfrey from Township residents opposing the servicing initiative, irrespective of cost, may have been a prejudicial factor.

This adversarial and potentially detrimental position is not shared by the majority of the Wainfleet PAC and many area residents. Although they have been less overtly vocal in their support for the project, many area residents recognize the necessity of addressing local public health and environmental issues, particularly if an affordable solution can be achieved.

## **7.0 The Next Steps**

Staff proposes to carry out the following steps to finalize the Wainfleet Water and Sewer Servicing Class EA and secure a successful resolution to documented public health and environmental concerns:

### *7.1 Complete and File the Class EA Documentation*

For the most part, the findings, conclusions and recommendations of the Value Analysis Exercise confirmed the original Class EA conclusions presented to Wainfleet residents at the August 2004 Public Information Centre #3. The recommended design for the preferred solution (i.e. the “baseline”) involves constructing local water distribution and sewage collection systems in the vicinity of Lakeshore Road in Wainfleet Township and connecting to Regional treatment plants in Port Colborne.

Supporting information from the VA workshop will be incorporated into the Class EA Environmental Study Report, which is scheduled to be filed for public and agency review in June 2005. The Wainfleet PAC endorses this requisite step, and its potential importance as a factor for federal/provincial consideration in Intake Two of COMRIF in September 2005.

### *7.2 Refine Project Cost Estimates*

Affordability is a critical element in successfully implementing the preferred servicing solution. VA Team recommendations to increase the project budget were based on contingencies related to the extent of rock excavation, dewatering requirements and a greater contingency allowance for inflation. To refine capital cost estimates, staff proposes to undertake geotechnical investigations and a bedrock characterization to ascertain soil, groundwater and bedrock conditions in the study area and more clearly define design parameters and cost implications for the preferred servicing solution.

In addition, as supported by the Wainfleet PAC, staff proposes to investigate the advantages and disadvantages of various phasing and financing options to determine how the water and wastewater servicing components could proceed in light of affordability and funding considerations.

### *7.3 Prepare COMRIF Submission for Intake Two*

The deadline for infrastructure funding applications is expected to be announced soon for COMRIF's Intake Two. A date will likely be picked in September 2005. Regional staff will work with Wainfleet Township to critique the previous Intake One submission, discuss the matter with appropriate federal/provincial representatives and refine the application in advance of the deadline.

#### *7.4 Public Health Risks and Compliance Strategy*

The “Water Well and Septic System Survey”, MacViro, 2005 confirmed the significant and increasing risk to local drinking water supplies from malfunctioning private sewage disposal systems. In addition, the “Feasibility Study of On-site Sewage Disposal”, Amec, 2005 concluded that the majority of the septic systems could not operate effectively and physical conditions were unsustainable. This conclusion was based on the inability of existing lots to meet Ontario Building Code requirements and the unacceptable levels of groundwater contamination currently being generated.

Recognizing the continuing public health risks faced by Wainfleet’s Lakeshore residents, the Medical Officer of Health and Public Health Department encourage completion of the process currently underway and submission of the completed Class EA to the Ministry of the Environment. The department has consulted extensively with the Ministry of Health and Long-term Care and sought a legal opinion on the options that could be exercised in the event of failure to reach a community solution. It is believed that the on-going process, combined with the extensive educational activities of the Public Health Department in Wainfleet, currently provides reasonable liability protection for Niagara Region at this time.

#### **8.0 Additional Scope and Consulting Costs**

There have been additional costs incurred in the implementation of the Value Analysis Exercise and other activities undertaken since the Class Environmental Assessment process was suspended in August 2004. Costs associated with necessary, out-of-scope consulting services are summarized below:

- *Part II Well Water Quality and Septic System Survey and Related Activities:* During the implementation of the 2005 Phase 2 Water Well Survey, the consultant was requested to undertake additional water well sampling and laboratory testing. This was done to confirm the results of the 2002 Long Beach survey and respond to requests for water quality tests from those area residents who were not originally part of the more restricted, statistical sampling protocol.

In addition, because of their site-specific hydrogeological knowledge, it was considered prudent to actively involve MacViro in the Value Analysis Exercise. The total cost for these additional professional services is \$65,000.

- *Additional Consulting Costs Associated with the PIC #3, Wainfleet Public Advisory Committee, VA Workshop and the COMRIF Application:* In August 2004, an additional Public Information Centre was held in Wainfleet to advise the community of the recommended servicing solution and related matters. The Class EA project consultants, Earth Tech Canada, was requested to present technical information and, subsequently, prepare responses to information requests made by area residents during this exceptionally well-attended event. In addition, the consultant was requested to provide MacViro and Amec with supporting information related to their studies, attend PAC meetings, participate in the VA Workshop and assist in refining servicing

costs for the Township's COMRIF application. The total cost for these additional professional services is \$80,000.

Consequently, the total costs for additional and requested consulting work associated with the expanded Class EA process, Value Analysis Exercise, Wainfleet Public Advisory Committee and support for additional technical studies is \$145,000.

## **9.0 EA Completion Schedule for the Preferred Servicing Alternative**

The VA workshop confirmed and refined Earth Tech's water and wastewater servicing recommendations that were presented to the Lakeshore Community in August 2004. The preferred wastewater solution is a public collection system with conveyance of the collected flows to Port Colborne, where it would be treated in an expanded and upgraded Seaway WPCP.

The preferred solution for water is the extension of water service from Port Colborne to Lakeshore Community. No improvements or expansion to the water purification plant would be required since the existing Regional plant has excess capacity.

The following summarizes the estimated completion dates for the next steps in the Wainfleet Water and Wastewater Servicing Class EA Project and related activities:

<b>Steps in Approval Process</b>	<b>Schedule</b>
• Completion of Environmental Study Report	May 5 - June 6, 2005
• Staff Review of Draft ESR	June 6 - June 10, 2005
• ESR Filing, Posting and Notice of Completion (30 days)	June 13 - July 30, 2005
• Part II Order (30 day review)	Concurrent
• EAA Branch Review (45 days)	July 31 - Sept. 16, 2005
• Mediation & Issue Resolution	Supercedes 45-day review
• Geotechnical Study	May 17 - June 17, 2005
• Phasing, Funding and Financing Options	May 25, 2005
• COMRIF Application Submission	September 2005
• Design Phase Commencement	Late 2005

## FINANCIAL IMPLICATIONS

In PWP 67-2004, Council was advised that funding in the amount \$588,574 has been approved for the Wainfleet Water and Wastewater Servicing Class EA in Project ZSW0010 / SW0241. Additional costs totalling \$145,000 associated with undertaking the EA process, the Value Analysis Workshop, supporting studies, public consultation activities and necessary follow-up action should be charged to this project. Sufficient funds are available in the Parent Project ZSW0010 for the additional costs.

## SUMMARY

This report provides a summary of the steps taken since the preferred water and wastewater servicing solution for the Wainfleet Lakeshore Community was presented to affected residents at Public Information Centre #3 held in August 2004.

The report provides an overview of two supplementary technical studies, completed in February 2005, which examined water quality in private wells and the ability of lots to support septic systems. These investigations confirmed the results of previous studies that identified potentially serious health and environmental contamination risks.

The report summarizes the process, findings and recommendations of the Value Analysis Workshop, held to examine a broad range of water and wastewater servicing alternatives. The VA Workshop confirmed the preferred servicing solution previously identified in the Class EA process and resulted in proposed design refinements.

However, the cost of the recommended servicing solution was significantly higher than previously estimated. This was due to the need for higher contingency allowances to account for unforeseen future costs related to rock excavation, dewatering, inflation and possible changes in the contracting process.

The report also provides details on the project's financial implications, outcome of Wainfleet Township's COMRIF application and the next steps in the Class Environmental Assessment approval process.

Submitted by:

Approved by:

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Ian Neville, MPA, P.Eng.  
Commissioner of Public Works

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Mike Trojan  
Chief Administrative Officer

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