



REPORT TO: Chair and Members of the
Planning and Public Works Committee

SUBJECT: Update on the Technical Review Workshop Conducted for the
Wainfleet Servicing Project and Proposed Next Steps

RECOMMENDATION(S)

That the Committee receive this report for information.

EXECUTIVE SUMMARY

This report briefly summarizes the presentations and group discussions that took place during the five-day Technical Review Workshop for the Wainfleet Servicing Project. The workshop was conducted from April 23 to 27, 2007 at the Four Points Sheraton Hotel in Thorold. This technical workshop was implemented in accordance with Council's adoption of PWA 46-2007, directing staff to undertake a review of alternative water and wastewater technologies for consideration in addressing public health and environmental contamination issues in Wainfleet's Lakeshore area.

FINANCIAL IMPLICATIONS

Sufficient funds are available in Parent Projects ZSW0404 and ZCW0403 to accommodate costs associated with the Wainfleet Technical Review Workshop. Cost details will be provided through normal reporting procedures prior to the commencement of related work.

PURPOSE

This report provides members of the Planning and Public Works Committee with an update on the Wainfleet Servicing Project, particularly matters considered at the workshop held to assess alternative technologies for servicing Wainfleet's Lakeshore area. A follow-up report will be presented to the Committee in August 2007 that will contain details on the workshop, refine project costs, summarize financing options and address the issue of homeowner affordability.

BACKGROUND

In December 2006, enquiries were received from 22 technology vendors, consultants and consortia teams seeking copies of technical information and background data for the Expression of Interest issued by the Region for the Wainfleet Servicing Project. Subsequently, 8 submissions were received.

Where different technological information or new data was provided (i.e. from the February 2005 Wainfleet Value Analysis Exercise and the Environmental Assessment process), submitters were contacted to determine their interest in making presentations at the Technical Review Workshop. Six presenters requested an audience before the Technical Review Team.

REPORT

Composition of the Technical Review Team

Participants at the Technical Review Workshop represented three groups; namely, background information presenters, community representatives and members of the Technical Review Team. The Technical Review Team that was assembled was primarily comprised of technical experts and Regional/Township staff. A summary of participants is provided in Attachment 2.

Workshop Sessions

The Technical Review Workshop was conducted over a five-day period, as summarized below. Sessions were facilitated by The Fletcher Group, a certified Value Management Specialist firm that has been engaged in similar technical analysis processes for more than 15 years. A copy of the workshop agenda is appended as Attachment 3.

Day One - April 23, 2007

The Technical Review Workshop began with a site visit to the Lakeshore area conducted by a Public Health Department representative. Those involved in the bus tour included Wainfleet councillors and staff, a Regional councillor, Public Health and Public Works representatives and Technical Review Team members.

In the afternoon, an information session was conducted to give the Technical Review Team (TRT) an opportunity to become familiar with previous studies undertaken as part of the Wainfleet Servicing Project. Included were presentations summarizing the purpose of workshop, the Class Environmental Assessment (EA) process and approved solution, and Wainfleet's secondary planning process that will guide future growth in the Lakeshore

area. The Township's Mayor, Barbara Henderson, advised participants of the Township's expectations for the session.

Day One concluded with a technical review of site conditions. This included presentations on current groundwater conditions, water well testing results, geotechnical circumstances and waste system constructability. Public Health Department staff advised the TRT on the background and status of the Boil Water Advisory. Additional supplementary information included the results of a land value/appraisal study commissioned for the project and a presentation of the Town of Georgina's parallel experience in servicing a community located on the south shore of Lake Simcoe.

Day Two - April 24, 2007

The first half of the Day 2 was devoted to discussing the methodology and evaluation criteria to be used to analyze alternative solutions. This involved the development of a technical specification that describes the functions to be performed by each solution (i.e. Functional Performance Specification or FPS). Members of both Township and Regional Councils and the press were in attendance over the first two days.

The Technical Review Team developed and scored these functional requirements, which became the basis for comparing alternative technologies, including those proffered by water and wastewater technology vendors during the Expression of Interest process. At the end of this session, Wainfleet community observers expressed support for the evaluation approach, and lauded its comprehensiveness and understandability.

In the afternoon session, the Technical Review Team heard from the five alternative technology vendors who sought the opportunity to make presentations. During each presentation and ensuing question and answer period, the Technical Review Team used the FPS to evaluate each alternative technology in terms of its ability satisfy the project's functional needs (e.g. supply potable water, treat wastewater, address public health concerns, mitigate ground water contamination, etc.). Vendors that spoke to the Technical Review Team are listed below:

- Clearford Systems and Zenon - Small bore wastewater collection, communal wastewater treatment system, local water treatment plant and water distribution system.
- John Brooks Company – E/One grinder pumps and pressurized wastewater collection systems
- Avalon Engineering - Proponent of reduced pipe diameter water and wastewater systems with suggestions for cost reduction
- RH₂O North America - Private, on-site wastewater treatment technology
- Make-Way Plastics - Private, on-site wastewater treatment technology

A sixth presenter, Mrs. Betty Konc representing the "Wainfleet Water and Sewer Committee", presented the group's proposal to the Technical Review Team. This included

support for on-site water and wastewater systems (e.g. R_{H2}O and Make-way Plastics noted above) and suggestions related to area-wide testing, monitoring, enforcement and private system approvals.

Day Three - April 25, 2007

On Day Three, the Technical Review Team undertook an assessment of alternative technologies using the Functional Performance Specification technique. Both technical and social functions of the servicing project were examined. During the day, life cycle costs of these options were calculated.

Day Four - April 26, 2007

On the fourth day of the workshop, using the FPS matrix, the Technical Review Team completed a group scoring exercise for each alternative technology presented on Day Two and other alternatives identified by the team. Graphs were developed, comparing the scores derived for each alternative and their respective costs.

Day Five – April 27, 2007

On Day Five, the Technical Review Team publicly presented a summary of the alternatives developed and refined during the workshop. The advantages and disadvantages, life expectancy and estimated life cycle costs of each alternative and combinations of alternatives were presented. In attendance were Township and Regional Councillors and staff, public observers, and the members of the local press. Members of the Technical Review Team presented details on each of the alternative water and wastewater technologies considered during the workshop.

Attachment 1 provides a list of alternatives, as well as water/wastewater combinations. Those wastewater systems that showed the most promise of satisfying functional needs at the least cost included the following:

- Small bore gravity collection system connected to the Region's Seaway WWTP in Port Colborne
- Small bore pressure collection system connected to the Region's Seaway WWTP in Port Colborne
- Conventional collection system connected to the Region's Seaway WWTP in Port Colborne (i.e. the wastewater system approved by the Minister of the Environment)

The water system that was determined to best satisfy functional needs at the lowest cost was the provision of potable water from the Port Colborne WTP to the Lakeshore area. Details on each system, FPS scoring results and estimated costs will be provided in reports to Regional and Township Councils in August 2007.

The Next Steps

A joint report involving Regional Public Health, Public Works and Corporate Services departments will be prepared and submitted to respective Regional Committees in August 2007. This report will provide the following:

- A summary of the deliberations and recommendations set out in the final report on the Technical Alternatives Review Workshop for the Wainfleet Servicing Project
- Estimated costs associated with the recommended water and wastewater solutions identified during the workshop, based on a separate cost refinement process.
- Financial options for the preferred solution(s) and affordability implications to benefiting property owners
- An update on studies undertaken to satisfy the requirements of the Ministry of the Environment regarding the following:
 - Cost Evaluation and Sharing Plan
 - Social Impact Assessment
 - Archaeological Assessment
 - Natural Resource Impact Assessment (on the proposed right-of-way)
- Recommendations on the next steps, should Council wish to proceed in the process. This will include public consultation, Environmental Assessment Act approval implications, options for carrying out a competitive design/construction process, potential funding and implementation requirements.

Following the presentation to Regional Council in August 2007, a copy of the report will be forwarded to Wainfleet Township.

Submitted by:

Approved by:

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

Mike Trojan
Chief Administrative Officer

This report was prepared by Bob Steele, MA, MCIP, RPP, Project Manager/Environmental Coordinator.

Attachment 1
Summary of Alternatives Technologies Considered

Alternatives for Water, Wastewater and Combined Systems

Waste Water Alternatives:

- Conventional collection system connected to the Seaway WWTP in Port Colborne (i.e. the approved EA “baseline” project)
- Small bore gravity collection system connected to the Seaway WWTP in Port Colborne
- Small bore pressure collection system connected to the Seaway WWTP in Port Colborne
- Conventional collection system connected to a new, local communal WWTP located in the Lakeshore area
- Small bore gravity connected to a new, local communal WWTP located in the Lakeshore area
- On-site traditional septic treatment (septic tank and leaching bed)
- On-site alternative treatment (e.g. RH20 and Make-way Plastics proprietary systems)
- Holding tanks and trucking to the Seaway WWTP in Port Colborne
- Cluster collection systems with sub-surface discharge.

Potable Water Alternatives:

- Municipal water piped from the Port Colborne WTP
- Municipal water piped from a new, local communal WTP located in the Lakeshore area
- On site treatment on site cisterns
- Municipal water piped from the Port Colborne WTP with fire flows

Combinations For Wastewater And Potable Water Alternatives:

- Conventional wastewater collection system connected to the Seaway WWTP, with municipal water piped from the Port Colborne WTP.
- Conventional wastewater collection system connected to the Seaway WWTP, with on-site water treatment and cisterns
- Conventional wastewater collection system connected to the Seaway WWTP, with municipal water piped from the Port Colborne WTP and fire flows
- Small bore gravity collection system connected to the Seaway WWTP, with municipal water piped from the Port Colborne WTP.
- Small bore gravity collection system connected to the Seaway WWTP, with on-site water treatment and cisterns
- Small bore gravity collection system connected to the Seaway WWTP, with municipal water and fire flows
- Small bore pressure collection system connected to the Seaway WWTP, with municipal water piped from Port Colborne
- Small bore pressure collection system connected to the Seaway WWTP, with on-site water treatment and cisterns
- On-site combination of wastewater treatment technologies with on-site treatment and cisterns for potable water
- Same as above, but including clusters

Attachment 2
Workshop Participants - Wainfleet Servicing Project

Name	Title	Representing
Technical Team and Information Presenters		
Tom Fletcher	President	The Fletcher Group
Lucie Parrot M.Ing., CVS	Certified Value Engineering Specialist	The Fletcher Group
Vaino Raun, P.Eng.	Principal, Regional Manager	R.V. Anderson Associates Ltd.
Lisa Campbell	Appraiser	Ridley & Associates Appraisal Services Limited
Tony Mellegers CET CST	Associate & Manager, Field Services	KMK
Doug Ingram P.Eng.	Municipal Engineer	Kerry T. Howe Engineering Ltd.
Mark Swan	Municipal Engineer	Earth Tech
John Haanstra	Cost Estimator	ICC
Peter McGlone	Principal Engineer	AMEC Earth & Environmental
Muin Husain, PhD P. Geo	Practice Leader, Environmental Management	MacViro Consultants Inc.
Michael Benner	Manager of Planning	Township of Wainfleet
Lisa Campbell	Real Estate Appraiser	Ridley & Associates Appraisal Services
Dean Ostryhon	Director of Operations	Township of Wainfleet
Mike Janas	Manager of Water Operations	Public Works Dept. Niagara Region
Bryan Kent	Manager of Wastewater Operations	Public Works Dept. Niagara Region
Andy Valickis, P.Eng.	Project Manager, Engineering Services	Ontario Clean Water Agency
Peter Baker, P.Eng.	Associate Director, W & WW Engineering	Public Works Dept. Niagara Region
Bill Hunter	Manager, Health Hazard Investigation	Public Health Department
Bjorn Christensen, Med, BAA, CPHI(C)	Director, Health Protection & Promotion	Public Health Department
Bob Steele	Project Mgr./Environmental Coordinator	Public Works Dept. Niagara Region
Jeff Mullin	Senior Engineer	Hydromantis Consulting
Joe Stephenson	Principal	Hydromantis Consulting
Brian Hughes, P.Eng.	Associate Director, Transportation	Public Works Department

Community Observers		
Betty Konc	10151 Lakeshore Rd, Wainfleet	Appointed by Wainfleet Council
Andrew Watts	10810 Rathfon Road RR 2, Port Colborne	Appointed by Wainfleet Council
David Steuernagel	1025 Castlebar Dr., North Tonawanda, USA (21L95 Lakeshore Rd.)	Appointed by Wainfleet Council
Peter Flaxy	15L61 Beach Road, RR 2, Wainfleet	Appointed by Wainfleet Council
Cynthia & William Ross	13L64 Neff St., RR 2, Port Colborne	Appointed by Wainfleet Council
Helen Hoskins	12154 Gallinger Rd., RR 2, PO Box 56, Wainfleet	Appointed by Wainfleet Council
Township and Regional Staff and Councillors		
Barbara Henderson	Mayor	Township of Wainfleet
Rudy Warkentin	Township Councillor	Township of Wainfleet
Ted Hessels	Township Councillor	Township of Wainfleet
Evan Main	Township Councillor	Township of Wainfleet
Ron Kramer	Township Councillor	Township of Wainfleet
Scott Luey	Financial Officer and Treasurer	Township of Wainfleet
Kim Lambe	Communications Officer	Public Works Dept. Niagara Region
Corwin Cambray, MCIP, RPP	Commissioner of Planning and Development	Planning and Development Dept., Niagara Region
George Nicholson, MCIP, RPP	Senior Policy Coordinator Planner	Planning and Development Dept., Niagara Region
Others Present During the Wainfleet Servicing Workshop		
Bob Slattery	Niagara District Office	Ministry of the Environment
Barb Ryter	Environmental Assessment Branch	Ministry of the Environment
Tiffany Mayer	Press representative	St. Catharines Standard
Matthew VanDongen	Press representative	St. Catharines Standard