

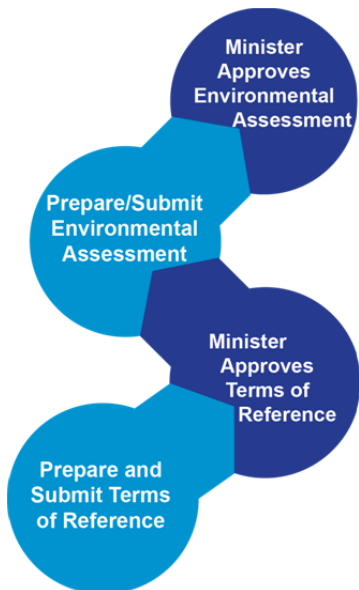
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Section 1.0 Introduction

This report documents the planning process followed and conclusions reached during the Upper York Sewage Solutions (UYSS) Environmental Assessment (EA). The environmental assessment is the second step of a two-step approval process outlined in the *Environmental Assessment Act (EA Act)* for proposed “undertakings” in the Province of Ontario. The first step of the UYSS EA was initiated in March 2009 when the Regional Municipality of York (York Region) began preparing the required Terms of Reference under the *EA Act*.

Two Step Approval Process



A Terms of Reference is a document prepared by a proponent that sets out the framework or work plan for the planning and decision making process to be followed during preparation of the environmental assessment. A Terms of Reference (ToR) is submitted to the Ontario Minister of the Environment¹ (Minister) for approval. If the Terms of Reference is approved by the Minister, then the environmental assessment must be prepared in accordance with it.

As part of the first step of the UYSS EA, the proposed ToR was submitted to the Minister for review and approval in November 2009. Following its submission the UYSS EA Terms of Reference was approved by the Minister on March 11, 2010 subject to the following amendments (see **Appendix A**):

- Section 6.1 of the ToR was amended to include consideration of innovative wastewater treatment technologies as an “Alternative To” the undertaking
- Section 6.1 of the ToR was amended to include the following subsection:
 - 6.1.5 Innovative Wastewater Treatment Technologies
Consideration of innovative wastewater treatment technologies will be considered in the UYSS EA. At a minimum, this will include but not be limited to consideration of the development and use of a wastewater purification system and water recycling facilities to be located in the Regional Municipality of York.

¹ As of July 3, 2014, the Ministry of the Environment was renamed the Ministry of Environment and Climate Change. As a result, all references to the “Ministry of the Environment”, “MOE” and “Minister (of the Environment)” in the UYSS EA Report and related documentation are references to the Ministry of Environment and Climate Change and the Minister thereof.

- Section 6.2 of the ToR was amended to add the following sentence to the end of the paragraph:
 - York Region is committed to considering and evaluating the incorporation of innovative wastewater treatment technologies in the consideration of “alternative methods” of carrying out the undertaking

1.1 Proponent

York Region is the sole proponent for the UYSS EA.

As part of initiating the UYSS EA, York Region retained the following multi-disciplinary team of experts to carry out the project on their behalf:

- **Conestoga Rovers & Associates (CRA):** lead consultant, responsible for the overall project management as well as the Hydrogeological, Geotechnical, Odour and Noise, and Vibration investigative studies.
- **AECOM** (formerly Earth Tech Canada Ltd. and Gartner Lee Ltd.): lead sub-consultant for the EA component including the interrelated agency/public/First Nations consultation process. AECOM is also responsible for the Natural Environment, Socio-Economic and Land Use disciplines.
- **Black & Veatch (B&V):** lead sub-consultant on issues relating to water supply, wastewater conveyance/treatment, and water reuse.
- **Archaeological Services Inc.:** responsible for Cultural Heritage and Archaeological investigative studies.
- **DBH Soil Services Inc.:** responsible for Agricultural investigative studies.
- **Cumming + Company:** responsible for facilitation of public meetings.
- **First Nations Engineering Ltd.:** responsible for coordinating First Nations consultation on behalf of York Region.

The UYSS EA Project Team includes York Region and the above team.

In addition, York Region provided funding to the Chippewas of Georgina Island First Nation for technical advisory support to review the studies listed in the Technical Review Communication Protocol that were generated during the UYSS EA process. FHL Ltd. (previously known as Northern Waterworks Inc.) was the Chippewas of Georgina Island First Nation’s Technical Advisor. The technical review was undertaken in accordance with the Technical Review Communication Protocol signed by York Region and the Chippewas of Georgina Island First Nation.

1.2 Ontario Environmental Assessment Act Requirements

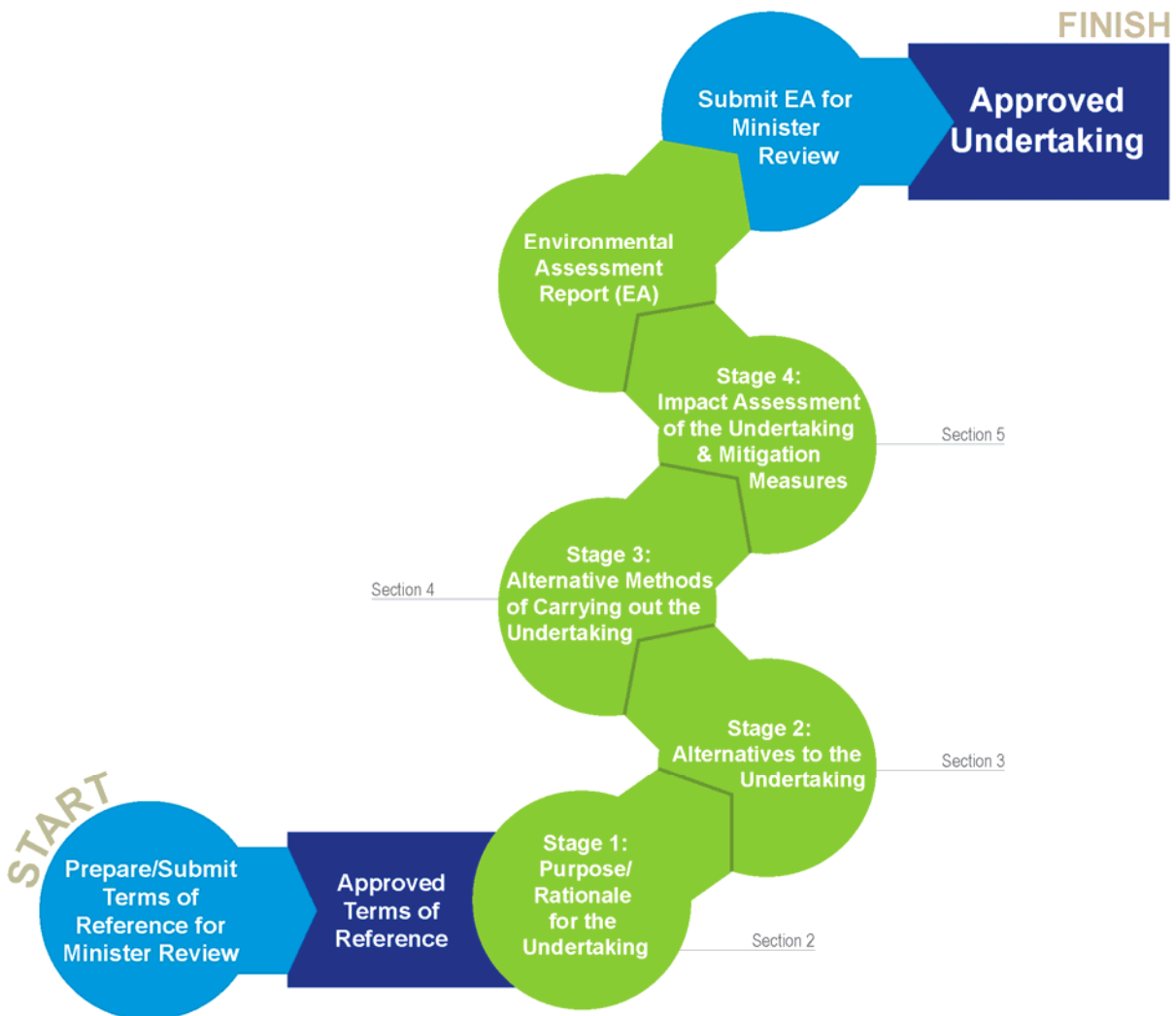
As required by subsection 6.1(1) of the *EA Act*, the UYSS EA was prepared in accordance with the Minister-approved (as amended) UYSS EA Terms of Reference and Section 2 of

Regulation 334 under the *EA Act*. With this in mind, **Appendix B** outlines where the requirements of the Minister-approved (as amended) UYSS EA Terms of Reference and Section 2 of *Regulation 334* are specifically addressed in this EA Report. **Appendix B** also lists the commitments set out in the Minister-approved (as amended) UYSS EA Terms of Reference and how they have been addressed during the UYSS EA.

1.3 Overview of the Upper York Sewage Solutions EA Process

Following Terms of Reference approval, the UYSS EA process was carried out through five successive stages to address the requirements of subsection 6.1(2) of the *EA Act* and Section 2 of *Regulation 334* (see **Figure 1.1**).

Figure 1.1: Overview of the UYSS EA Process



The following is a brief overview of each of these stages:

Stage 1: Purpose of/Rationale for the Undertaking

The purpose of the proposed undertaking is to develop a sustainable sewage servicing solution that can accommodate the growth forecasted to occur in the UYSS service area in accordance with both the provincial growth management policies outlined in the Growth Plan pursuant to the *Places to Grow Act, 2005* and applicable environmental statutes including but not limited to the *Lake Simcoe Protection Act, 2008*, the *Oak Ridges Moraine Conservation Act, 2001*, the *Greenbelt Act, 2005*, and the *Ontario Water Resources Act*. The UYSS service area consists of the growth portions on the Towns of Aurora, Newmarket and East Gwillimbury, including Holland Landing, Queensville and Sharon.

Stage 2: Alternatives To the Undertaking

Four Alternatives To the Undertaking were considered as part of the UYSS EA:

1. Do Nothing
2. Discharge to Lake Ontario
3. Discharge to Lake Simcoe
4. Innovative Wastewater Treatment Technologies, in this case a Water Reclamation Centre within the Lake Simcoe watershed in combination with modifications to the existing York Durham Sewage System (YDSS)

These alternatives present functionally different ways of addressing the purpose of the proposed undertaking.

These alternatives were assessed based on 15 screening criteria grouped around five topic areas:

- Purpose of the Undertaking (Problem/Opportunity Statement)
- Provincial Growth, Environmental Policies and Legislation
- York Region's Official Plan, Master Plans, Strategies and Programs
- Proven Technology/Feasibility
- Ability to Implement/Financial Viability

Discharging to Lake Ontario and Innovative Wastewater Treatment Technologies were found to be the most viable alternatives with the latter being recommended as offering a number of additional benefits.

Stage 3: Alternative Methods of Carrying out the Undertaking

A suitable site for the Water Reclamation Centre had to be identified as well as appropriate routing for all linear infrastructure associated with the facility and the YDSS Modifications.

A list of 22 potential sites for the Water Reclamation Centre was generated through a Geographic Information System model of the study area and a formal Willing Host Process. The generated sites were screened to a short list of five locations all situated within the Town of East Gwillimbury avoiding environmentally significant areas and sensitive land uses. With the five locations established, infrastructure routing for conveying wastewater to the Water Reclamation Centre and treated water from it to the East Holland River was developed. In parallel, three alternative routes for accommodating two new forcemains as modifications to the YDSS within the Town of Newmarket were generated as part of the Preferred Alternative To the Undertaking.

The five locations for the Water Reclamation Centre and three routes for the new forcemains were comparatively evaluated through 26 criteria representing the natural, built, social, economic, and cultural environments as well as the technical and financial aspects of the project. Application of the 26 criteria allowed for advantages and disadvantages to differentiate between the five locations and three routes resulting in Site WH1 West and YDSS Modifications Route A being recommended for detailed impact assessment during the next stage.

Stage 4: Impact Assessment of the Preferred Undertaking

The proposed Water Reclamation Centre (including the preferred WH1 West Site, conveyance infrastructure to/from the Water Reclamation Centre, the outfall location to the East Holland River, and Reclaimed Water), the proposed Project-Specific Phosphorus Off-Setting Program and the two new forcemains along YDSS Modifications Route A were thoroughly examined through nine discipline specific impact assessments (Agriculture, Archaeology, Cultural Heritage, Land Use, Natural Environment, Noise and Vibration, Odour, Traffic, and Visual). In each case, the impact assessments relied upon both existing information sources as well as site specific field investigations.

With this knowledge, avoidance, mitigation, and compensation measures were proposed to minimize or eliminate potential adverse environmental effects while accentuating potential positive environmental effects. In general, the mitigation measures focus on managing short-term construction related activities, controlling surface water run-off, addressing the potential loss of ice formation in the East Holland River near and downstream of the proposed Outfall, and effectively integrating the proposed Water Reclamation Centre into the surrounding landscape.

Several positive effects were also noted within the Lake Simcoe Watershed. The proposed Water Reclamation Centre has the potential to improve water quality and augment baseflow in the East Holland River, which flows into Lake Simcoe by way of Cook's Bay. The building and operation of the proposed Water Reclamation Centre complies with both the spirit and intent of the Lake Simcoe Protection Plan by reducing total phosphorus loading in the East Holland River, supplementing river baseflow especially during low-flow summer months, and increasing water clarity.

Stage 5: Prepare/Submit EA Report

Following completion of the impact assessment stage, the draft EA Report was prepared documenting the planning process followed and conclusions reached during the UYSS EA. The draft EA was made available to review agencies, First Nations and Métis organizations, and the public for a six week comment period.

The final UYSS EA report will be submitted to the Minister of the Environment for review and approval, having taken into consideration input received on the draft EA Report. In concert with the submission of the final EA report, it will again be made available to review agencies, First Nations and Métis organizations, and the public for comment.

Consultation with Review Agencies, First Nations and Métis organizations and the Public

During all stages of the UYSS EA process, in accordance with the consultation plan included in the Minister-approved (as amended) Terms of Reference, consultation was undertaken with review agencies, First Nations and Métis organizations, and the public through a variety of methods including newspaper advertisements, the project website, public workshops and information forums, monthly “Tuesday Talks” during evening hours at the UYSS project office, and direct correspondence. Comments received through these various consultation methods were considered as part of the decision making process.

1.4 Overview of the UYSS EA Report

In documenting the UYSS EA planning and decision making process, this EA Report has been structured into three volumes reflecting the Ministry’s *Code of Practice for Preparing and Reviewing Environmental Assessments in Ontario*, January 2014

Volume One is the main document, which lays out the results of the planning and decision making process in sufficient detail so as to stand on its own. Volume Two consists of a number of appendices that support the information provided in the main document. Since there are a number of appendices associated with the Consultation Summary, they have been provided as a separate Volume 3.

In accordance with *Regulation 334*, the UYSS EA contains the following items (see **Appendix C**):

- A list of studies and reports under the control of York Region done in connection with the undertaking
- A list of studies and reports not under the control of York Region on matters related to the undertaking

The following provides a brief overview of the contents found in each Volume for reference purposes:

Volume One: EA Report

The UYSS EA Report consists of an Executive Summary plus the following nine sections:

- **Executive Summary:** as per *Regulation 334*, the main points of Volume 1 are briefly summarized mirroring the organization of the UYSS EA Report.
- **Section 1 – Introduction:** outlines the purpose of the report, provides a brief project background; identifies the Proponent and Project Team; describes the *Environmental Assessment Act* and Section 2 of *Regulation 334* requirements; summarizes the UYSS EA process followed; and provides an overview of the UYSS EA documentation.
- **Section 2 – Stage One: Purpose of/Rationale for the Undertaking:** identifies the purpose of the undertaking and summarizes the rationale for it, including the anticipated demand for sewage capacity to meet the growth forecasted for the UYSS service area.
- **Section 3 – Stage Two: Alternatives To the Undertaking:** identifies and describes the four Alternatives To the Undertaking considered in the UYSS EA; evaluates the advantages and disadvantages to the environment of the Alternatives To the Undertaking leading to a Recommended Alternative for consideration by review agencies, First Nations and Métis organizations and the public; and provides the rationale for selecting the Preferred Alternative To the Undertaking.
- **Section 4 – Stage Three: Alternative Methods of Carrying Out the Undertaking:** identifies and describes the Alternative Methods (or ways) of implementing the Preferred Alternative To including how these were generated, evaluates the advantages and disadvantages to the environment of the Alternatives Methods of Carrying Out the Undertaking leading to the Recommended Methods for consideration by review agencies, First Nations and Métis organizations and the public and provides the rationale for selecting the Preferred Methods of Carrying Out the Undertaking.
- **Section 5 – Stage Four: Impact Assessment of the Preferred Undertaking:** provides a detailed description of the Preferred Undertaking and potentially affected environment associated with it; summarizes the potential environmental effects, recommended mitigation measures, and resultant net environmental effects associated with the Undertaking; and lists the advantages and disadvantages of the Undertaking.
- **Section 6 – Commitments and Monitoring:** describes the proposed monitoring strategy and schedule to be followed during construction and operation of the Preferred Undertaking for both environmental effects as well as EA compliance. This will ensure that the predicted net negative effects of implementing the Preferred Undertaking are not exceeded; any unexpected negative effects are addressed; and the predicted benefits are realized. EA compliance monitoring will ensure that the commitments made by York Region during the UYSS EA are fulfilled.
- **Section 7 – Consultation Summary:** Lists the participants involved in the UYSS EA (review agencies, First Nations, Métis organizations and the public); outlines how they were consulted through the various activities held during the UYSS EA; and provides an

overview of the input/comments/feedback received from them and how they were considered by York Region during the UYSS EA.

- **Section 8 – Approvals Required for the Undertaking:** outlines the additional anticipated approvals required for implementing the Preferred Undertaking beyond *EA Act* approval, including other Federal, Provincial and Municipal approvals.
- **Section 9 – Amending the EA:** describes the process for carrying out potential EA amendments, if necessary, during implementation of the Preferred Undertaking following its approval by the Minister and the Lieutenant Governor in Council.

Volume Two: Appendices to Sections 1 to 6, 8 and 9

The information provided in the UYSS EA Report is supported by the following appendices making up Volume Two:

- Appendix A Approved (As Amended) Terms of Reference
- Appendix B Terms of Reference Requirements Table
- Appendix C List of Studies and Reports
- Appendix D Water and Wastewater Unit Rates and Projected Flows for UYSS Service Area
- Appendix E Summary of Previous Studies and Class EAs for Servicing the Upper York Area
- Appendix F Screening Criteria and Assessment of Alternatives to the Undertaking
- Appendix G Application of Mandatory Site Generation Criteria
- Appendix H Application of Avoidance and Site Suitability Criteria
- Appendix I Request for Expression of Interest Process
- Appendix J Map Book: Final Long List of Potential Alternative Water Reclamation Centre Sites
- Appendix K Site Screening Criteria and Results
- Appendix L Rationale for Selection of the Short List of Water Reclamation Centre Sites
- Appendix M Results of Application of Assessment Criteria to the Potential Outfall Locations
- Appendix N Plan and Profile Drawings of the Conveyance Infrastructure to/from the Water Reclamation Centre
- Appendix O Net Effects Assessment for the Short List of Alternative Water Reclamation Centre Sites
- Appendix P Reasoned Argument (or Trade-Off) Method Description and Detailed Results of Comparative Evaluation of the Short Listed Water

- Appendix Q Plan and Profile Drawings for the Alternative York Durham Sewage System Modifications
- Appendix R Net Effects Assessment and Comparative Evaluation of the York Durham Sewage System Modifications Alternative Routes

Volume Three: Appendices to Section 7 - Consultation Summary

The information provided in Section 7 of the UYSS EA Report is supported by the following appendices making up Volume Three:

- Appendix A Protocol for First Nations Consultation
- Appendix B Métis Consultation and Accommodation: A Guide for Government and Industry on Engaging Métis in Ontario
- Appendix C List of Public Participants Involved in the UYSS EA
- Appendix D Review Agency Advisory Committee Roles and Responsibilities and Meeting Summaries
- Appendix E Government Review Team Meeting Summaries
- Appendix F Review Agency Meeting Summaries
- Appendix G York Regional Council, Local Area Municipal Council and Lake Simcoe Region Conservation Authority Board Meeting Minutes
- Appendix H Written Correspondence from Review Agencies and Responses
- Appendix I Written Correspondence to First Nations Regarding Joint Meetings and Meeting Summaries
- Appendix J Written Correspondence to Kawartha-Nishnawbe of Burleigh Falls First Nation
- Appendix K Written Correspondence from Chippewas of Georgina Island First Nation and Meeting Summaries
- Appendix L Chippewas of Georgina Island First Nation Technical Review Communications Protocol
- Appendix M Written Correspondence to and from Métis organizations
- Appendix N Community Liaison Forum Roles and Responsibilities and Meeting Summaries
- Appendix O Written Correspondence to Land Owners
- Appendix P Public Meeting Summary Reports
- Appendix Q Community Meeting Summary Reports
- Appendix R River Drive Park Community Recreation Centre Advisory Committee and Holland Landing Snowmobile Club Meeting Summaries
- Appendix S Summary of Meetings on Alternatives To the Undertaking

- Appendix T Written Correspondence from Members of the Public and Responses
- Appendix U Notification to Property Owners Adjacent to Proposed Total Phosphorus Off-Sets
- Appendix V Summary of Interviews on Innovative Wastewater Treatment Technologies
- Appendix W Notification of Presubmission of the Draft UYSS EA Report
- Appendix X Written Correspondence on the Draft UYSS EA Report and Responses
- Appendix Y Summary of Meetings on the Draft UYSS EA Report
- Appendix Z Notification of Formal Submission of the UYSS EA Report to the Ministry of the Environment