

Chapter 12

Conclusion

The Regional Municipality of York
The Regional Municipality of Durham

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Population is predicted to increase in York Region and Durham Region over the coming decades. In response, the Ontario government passed legislation in 2022 to increase the housing supply. As part of this legislation, the *Supporting Growth and Housing in York and Durham Regions Act* (the Act) requires York Region and Durham Region to provide wastewater service through the York Region Sewage Works Project. This will require major expansions of the York Durham Sewage System (YDSS), twinning of the primary sanitary trunk sewer and the Markham collector sewer, and expansion of the Duffin Creek Water Pollution Control Plant (WPCP), including a new outfall. The work should begin immediately.

The Act requires York Region and Durham Region to submit a draft Project Report to the Ministry of the Environment, Conservation and Parks no later than September 30, 2023, and a final Project Report no later than October 31, 2023, that outlines:

- Work required to meet flow requirements of the Act
- Cost of work
- Approvals required
- Any impacts on the environment and the mitigation of those impacts.

As part of the Project Report, York Region and Durham Region are conducting desktop studies to identify potential environmental impacts, mitigation and monitoring measures. York Region and Durham Region updated population projections affecting wastewater collection systems and sewershed areas serviced by the Duffin Creek WPCP. Flow projections were used to define infrastructure required to convey flows to Duffin Creek WPCP. This report further developed conceptual designs and identified anticipated approvals needed, potential impacts and mitigations. Potential impacts identified could be suitably mitigated through approaches commonly accepted on Ontario wastewater conveyance projects and treatment plant upgrades.

Construction of the projects will meet the following population growth projections for York Region and Durham Region:

- Service to an additional 558,000 people to 2031
- Service to an additional 245,320 people to 2041
- Service to an additional 411,330 people to 2051.

The timeline proposed for the Project's execution might be influenced by outside forces. Implementation of the projects will rely heavily on:

- Actual realization of predicted flows:
 - The implementation schedule for projects may vary if actual development is slower or faster than estimated.
- The capacity of the local construction marketplace:
 - The local market's ability to manufacture and install needed infrastructure according to phasing timelines may be limited.

As part of the preliminary design, York Region and Durham Region will evaluate delivery alternatives to meet the anticipated flows. These alternatives would include:

- Identifying opportunities to accelerate the design schedule
- Preparing a short-term operating approach
- Engaging with local construction marketplace during design to assess capacity.

York Region and Durham Region recognize adaptability is essential to match changing market demands and ensure the plan's successful implementation. Infrastructure concepts described in this report are based on desktop information that existed during report development, as directed by the Minister of the Environment, Conservation and Parks. Design information was limited. As the program advances and further engineering efforts and investigations provide more detail, concepts will be enhanced or modified.

The next steps to further defining the conceptual designs are:

- Property:
 - Designs in the Project Report are works in progress, based on currently available information and intended to convey only the preliminary concept of designs. Designs will be updated as new information is obtained.
 - Study area boundaries and locations of utilities and infrastructure are approximate and will be refined through design phases as more information becomes available.
 - Consultation with property owners to confirm the feasibility of property acquisition still needs to be completed.
 - Conceptual designs contained in the Project Report identify proposed solutions; however, geotechnical and hydrogeological field investigations and subsurface utility engineering investigations should be completed in tandem to confirm or adjust alignments as needed to reduce impacts. These field investigations may change property needs. Property needs shown on conceptual design drawings should not be considered final. Property may be required anywhere along the corridor or in the study area.
- Geotechnical and hydrogeological conditions:
 - Field drilling for confirmation of geotechnical and hydrogeological conditions needs to be completed.
 - Infrastructure construction is proposed along alignments and at depths for which there is minimal existing information. Confirmation of geotechnical and hydrogeological conditions is needed and may impact depth of infrastructure and shaft locations.
 - Identification of water supply wells and development of a well monitoring program, where applicable, based on dewatering requirements to the extent of the potential zone of influence.
- Other field investigations:
 - Commence topographic survey and subsurface utility engineering.
- Permits and Approvals:
 - Pre-consultation meetings.
- Value engineering workshops, if required.
- Drawing preparation:
 - Refining design based on above-noted field investigations and consultation with property owners and agencies.

In accordance with the Act, York Region and Durham Region consulted with Indigenous communities and other interested persons as the Project Report was developed, as documented in the Indigenous Nations Consultation Summary Report and the Interested Persons Consultation Summary Report. These reports contain:

- Consultation descriptions
- A summary of discussions
- Lists of Indigenous communities or interested persons who participated
- Summaries of comments submitted
- Copies of all written comments submitted by Indigenous communities or other interested persons
- York Region and Durham Region's responses to concerns expressed
- Any commitments York Region and Durham Region made to Indigenous communities or other interested persons related to the York Region Sewage Works Project.

Comments from Indigenous communities and interested persons were considered as part of developing this report.

The York Sewage Works Project is a long-term solution requiring a cohesive approach, with all components approved to achieve the program's continuing viability over time. It is crucial that all York Sewage Works Project components must be approved to ensure success of York Region and Durham Region's decision to discharge treated sewage into Lake Ontario. Deferring the approval of any one component of this Project jeopardizes York Region and Durham Region's ability to provide a solution in accordance with Ontario government timelines and population-servicing objectives.

As part of improving, enlarging and extending the York Durham Sewage System as required by the Supporting Growth and Housing in York and Durham Regions Act, 2022, the York Region Sewage Works Project Report provides concepts for the required infrastructure, develops an implementation plan and identifies potential impacts and mitigation measures associated with wastewater conveyance to the Duffin Creek Water Pollution Control Plant for treatment and discharge through a new outfall. The York Region Sewage Works Project and its individual project components are currently in the conceptual design phase as described in the Project Report. The Project and project components will be refined through the preliminary design, detailed design and construction phases of the Project.

As the Project design progresses, the primary goal remains to provide effective wastewater servicing while minimizing environmental impacts and complying with regulatory requirements. An iterative process of impact evaluation will be carried out in response to the evolution of project components, and mitigation measures will be adjusted as needed to maintain or, where possible lower, the level of potential impact identified in the Project Report.

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