

## Stormwater Management - Key Findings



- The review of existing stormwater conditions included identification of watersheds overlapped by the Project Footprint and existing Stormwater Management (SWM) ponds within 500 metres from the perimeter of the Project Footprint.
- The Assessment Area intersects nine watersheds:
  - Corbett Creek, Oshawa Creek, Harmony Creek and Farewell Creek in the City of Oshawa
  - McLaughlin Bay, Robinson Creek, Tooley Creek, Darlington Creek and West Side Creek in the Municipality of Clarington
- Within the City of Oshawa, there is an existing flood hazard condition along Oshawa and Goodman Creeks upstream of the Canadian Pacific (CP) Railway crossing due to the existing CP Railway Bridge and embankment. This is independent of the proposed Bowmanville Extension scope of work.
  - Approximately 712 buildings or structures are at risk of flooding with 326 of the buildings/structures being vulnerable to flooding due to the existing Oshawa Creek CP Rail bridge and embankment.
- The Robinson Creek watershed (located in the Farewell Creek watershed), drains into Lake Ontario through the McLaughlin Bay Wetland Complex.
- The Tooley Creek watershed (located in the Farewell Creek watershed), drains into Lake Ontario through the Tooley Creek Coastal Wetland.
- The Darlington Creek watershed (located in the Farewell Creek watershed), drains into Lake Ontario at the Darlington Nuclear Generating Station.
- Seven stormwater management ponds were identified within the Natural Environment Assessment Area but are outside of the Project Footprint:
  1. 680 Laval Drive, Oshawa
  2. Adjacent to the intersection of Southport Drive and Townline Road South, Oshawa
  3. 1350 Durham Regional Road 34, Courtice
  4. 1100 Hancock Road, Courtice
  5. 570 Rundle Road, Bowmanville
  6. 2021 Baseline Road, Courtice
  7. 1 McKnight Road, Courtice

## Stormwater Management - Key Findings



| Watersheds  | Proposed Watercourse Crossing Structures*   |
|---|---|
| Oshawa Creek  | <ul style="list-style-type: none"><li>Oshawa Creek - New single track rail bridge</li></ul>   |
| Farewell Creek  | <ul style="list-style-type: none"><li>Harmony Creek - New double track rail bridge</li><li>Farewell Creek - New double track rail bridge</li></ul>      |
| Robinson Creek  | <ul style="list-style-type: none"><li>Robinson Creek - Existing culvert to be extended or replaced</li></ul>  |
| Tooley Creek  | <ul style="list-style-type: none"><li>Tooley Creek &amp; two unnamed tributaries - Existing culverts to be retained, extended or replaced</li></ul>     |
| Darlington Creek  | <ul style="list-style-type: none"><li>Darlington Creek &amp; four unnamed tributaries - Existing culverts to be removed, extended or replaced</li></ul> |
| Lake Ontario (through McLaughlin Bay Coastal PSW Complex) | <ul style="list-style-type: none"><li>Unnamed Tributary (west of Prestonvale Rd) - Existing culvert to be extended or replaced</li></ul>                |

## Stormwater Management - Potential Effects



- New and modified watercourse crossing structures (bridges and culverts) have the potential to affect currently impacted floodplain areas.
- There is a potential to impact flooding conditions in the Central Lake Ontario Conservation Authority (CLOCA) Regulatory Floodplain.
- Potential for flooding impacts on-site during construction.
- Sediment transport into adjacent natural areas including watercourses, wetlands and municipal drainage infrastructure.
- Increase in impervious areas, with potential effects to water quantity and quality.
- Alterations to the local drainage system, both overland (major drainage system) and storm sewers (minor drainage system).



## Stormwater Management - Mitigation Measures



- A detailed assessment of proposed ditches along the rail corridor is required to provide adequate drainage conveyance.
- Infiltration requirements will be determined as per the applicable municipal, provincial, and CLOCA design guidelines and standards.
- Any proposed bridges and culvert modifications and replacements will be sized to maintain or improve local flood levels and supported by hydrologic/hydraulic calculations and/or models. Creek bed and banks design will include geomorphological input for scour and erosion prevention, and creation of appropriate fish habitat.
- A floodplain impact assessment will be conducted during detailed design following CLOCA guidelines, and Metrolinx will continue to consult with CLOCA.
- Monitor CLOCA's Flood Warning and Forecasting messages to prepare construction sites in advance of possible flood events.
- The Project will be designed and constructed within hydraulic assessment recommendations to minimize impacts on existing flood hazards and risks.
- Plans to be developed and implemented include:
  - Stormwater Management & Drainage Design Report
  - Erosion and Sediment Control Plan
  - Spill Prevention and Response Plan
  - Flood Contingency Plan

# Oshawa to Bowmanville Rail Service Extension

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## Thank You for Attending!

We appreciate the time you have taken to learn about the EPR Addendum, and we value your opinions. Please provide input online from **June 8 to June 21, 2023** via slido or by emailing [DurhamRegion@metrolinx.com](mailto:DurhamRegion@metrolinx.com).

Let us know if you have questions or comments regarding:

- Project Assessment Area
- Existing conditions or potential environmental effects
- EPR Addendum and TPAP process
- A Notice of EPR Addendum is anticipated to be issued in Fall of 2023 where:
  - Final EPR Addendum and supporting technical documents will be made available for a 30-day review period
  - Following 30-day public review period, the Minister of Environment, Conservation and Parks (MECP) has 35 days to review
  - MECP will issue a notice allowing the proposed Project to proceed or a notice requiring further work to address concerns
  - Statement of Completion will be posted on the Metrolinx website

**Stay involved with the Bowmanville Extension by reaching out to the Durham Community Engagement Team below:**

- Email us at [DurhamRegion@metrolinx.com](mailto:DurhamRegion@metrolinx.com)
- Call us at (416) 202-3900
- Visit our website [www.metrolinx.com/bowmanville](http://www.metrolinx.com/bowmanville)

# Oshawa to Bowmanville Rail Service Extension

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