Presentation Overview

1. Vaughan Metropolitan Centre Project context
2. Edgeley Pond + Park
3. Black Creek Renewal
City of Vaughan

Lake Ontario

Vaughan Metropolitan Centre (VMC)
Vaughan Metropolitan Centre (VMC)

Approximately 190 ha
Vaughan Metropolitan Centre (VMC)

Full Build-out
Development Activity
Edgeley Pond + Park
• Regional floodplain based on Regional flow from the Humber River Hydrology update (Civica, 2015)

• Existing conditions - no pond and downstream conveyance improvements were considered.

• Spill over Jane St. and Hwy.7 will start to occur at the 25 year storm event.
This new open space will act as a **catalyst** for the VMC by supporting its dynamic and fast-paced transformation through innovative ecologically-sensitive stormwater management design, creation of unique spaces, and the seamlessly integration of parkland amenities where VMC residents and visitors can **interact**, **learn**, **play**, and **grow**.
The Edgeley Park and Pond design is a dynamic and flexible framework. The design is based on the following guiding principles:

1. Celebrate Stormwater
2. Establish Habitat and Enhance Ecology
3. Create New Connections
4. Activate and Create New Opportunities
5. Educate and Inform
6. Create an Iconic VMC Park
7. Design a Park for the Future
• Black Creek corridor renewed along west side, based on natural channel design

• Central island and established foliage to be preserved

• Mix of hard and soft edges to reshape basin for flood control

• New outlet structure to integrate with urban plaza at northeast corner of Jane + Hwy 7
Edgeley Pond + Park – Specific SWM Controls

• Quality Control: treatment train - oil-grit-separators (OGS) and hybrid wet pond/wetland at west and east pond inlets
• Erosion Control: extended detention within the hybrid wet pond/wetland at the west and east pond inlets
• Quantity control: a new outlet structure to attenuate post development flows for the 2-100 year storms to a level at or below existing conditions flow rates.
• The new outlet structure will maintain or improve the Regional flood elevations

Note, the proposed outlet structure will include a low flow cut out to allow fish passage during average annual conditions.
Current Conditions:
• No grading,
• No pond outlet structure replacement,
• No relief culvert under Hwy. 7

Interim Conditions:
• Natural channel design and grading of pond complete,
• New pond outlet structure,
• Existing Hwy. 7 culvert extended plus widening, but no relief culvert under Hwy. 7

Ultimate Conditions:
• Interim condition plus
• Relief culvert under Hwy. 7 constructed
Edgeley Pond + Park – 2 Year Storm Event

Peak Water Level 2hrs 48 min After Rain Storm Starts
Water Level 2 Hrs After Rain Storm Starts
Base Water Level
Edgeley Pond + Park – Safety and Education

Tell Black Creek Story

- Historical & Current Flooding Pylon
- Major Signage – Lit Pylon
- Minor Signage – Pylon
Edgeley Pond + Park – Bird’s Eye View

Looking north from future plaza north of Hwy. 7
Black Creek Renewal
Black Creek Renewal
Black Creek Renewal – Study Overview

Chronology Preceding Black Creek Renewal EA

August 2005
Major storm causing flooding in Black Creek within VMC

2008 to ongoing
VMC Secondary Plan

- Constitutes the Official Plan for the VMC and establishes the context, planning framework and policies that will guide development for the next 20 to 25 years.

- Renewal of Black Creek is critical for redevelopment within the VMC Secondary Plan area.

2009 to 2012
Black Creek Stormwater Optimization Study EA (Phases 1 and 2 of Municipal Class EA)

- Completed to address stormwater related issues in the broader Black Creek watershed within the City of Vaughan, including flooding in areas adjacent to the Black Creek channel.

- Preferred solution was to reduce flooding by the reconstruction and renewal of Black Creek in the VMC.

2009 to 2012
VMC Municipal Servicing Class EA Master Plan

- Completed to identify the required improvements and expansions to the City’s watermain, sanitary sewer and stormwater management systems to support planned growth in the VMC.
Black Creek Renewal – Background & Existing Conditions

Extent of Flooding under Regional Storm
Black Creek Renewal Class Environmental Assessment - Preferred Channel Alignment

Alternative #4 – Meander north of Peeler Road
Black Creek Renewal
Thank you & Questions?
Construction to begin in Spring 2019:
- Urban Plaza (Jane + Hwy 7)
- Iconic landforms
- Informal amphitheater
- Open water body
- Enhanced Black Creek
- Enhance ecology
- Two constructed hybrid wetlands
- Two valley bridges
- Skating loop / trail
- Splashpad / children’s play areas
- Flexible lawn area
- Public art
Edgeley Pond + Park – Design Concepts

Phase Two

- Main east-west bridge
- North bridge
- Community gardens
- Integrated shade structure with WC + community room facility
- Adult exercise equipment
- Public art
Edgeley Pond + Park – August 19, 2005 Storm Event

Understanding the Influence of SWM in the Park

47 min after rain storm start
Peak – 1.5 hrs
3.5 hrs after rain storm start
Understanding the Influence of SWM in the Park
Managing SWM in the Park

- Black Creek corridor renewed along west side
- Central island and established foliage to be preserved
- Mix of hard and soft edges to reshape basin for flood control
- Water quality to be provided at all inlets by OGS and LID treatment train approach
- New outlet structure to integrate with urban plaza at northeast corner of Jane + Hwy 7
Existing Natural Environment

- Field surveys indicate that existing aquatic and riparian areas provide low-quality, size-limited, and fragmented natural habitat opportunities
- No significant ecological features or functions present (i.e., no significant wetlands or environmentally sensitive areas)
- No presence of species at risk or their habitat