



Edgeley Pond + Park

VMC Sub-Committee

February 13, 2018

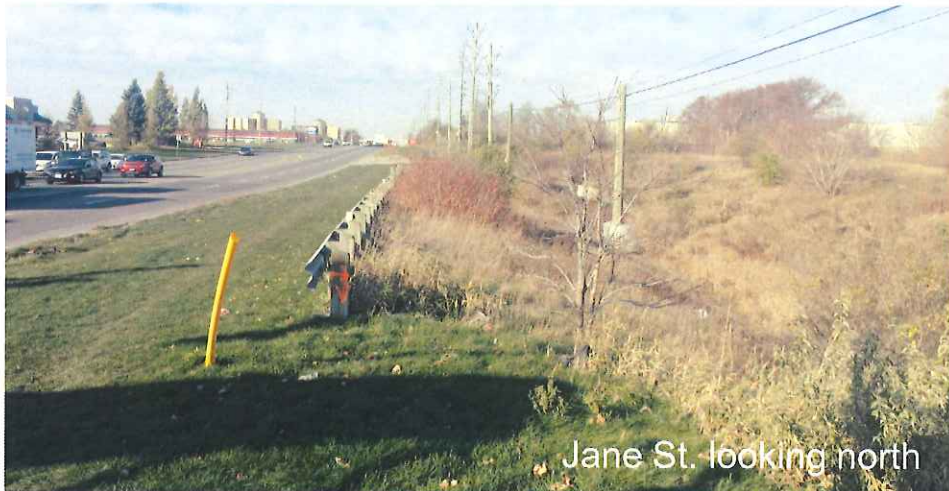
Presentation Overview

1. Site context and background
2. Design evolution
3. Funding allocation and Phase 1 construction cost
4. Next steps





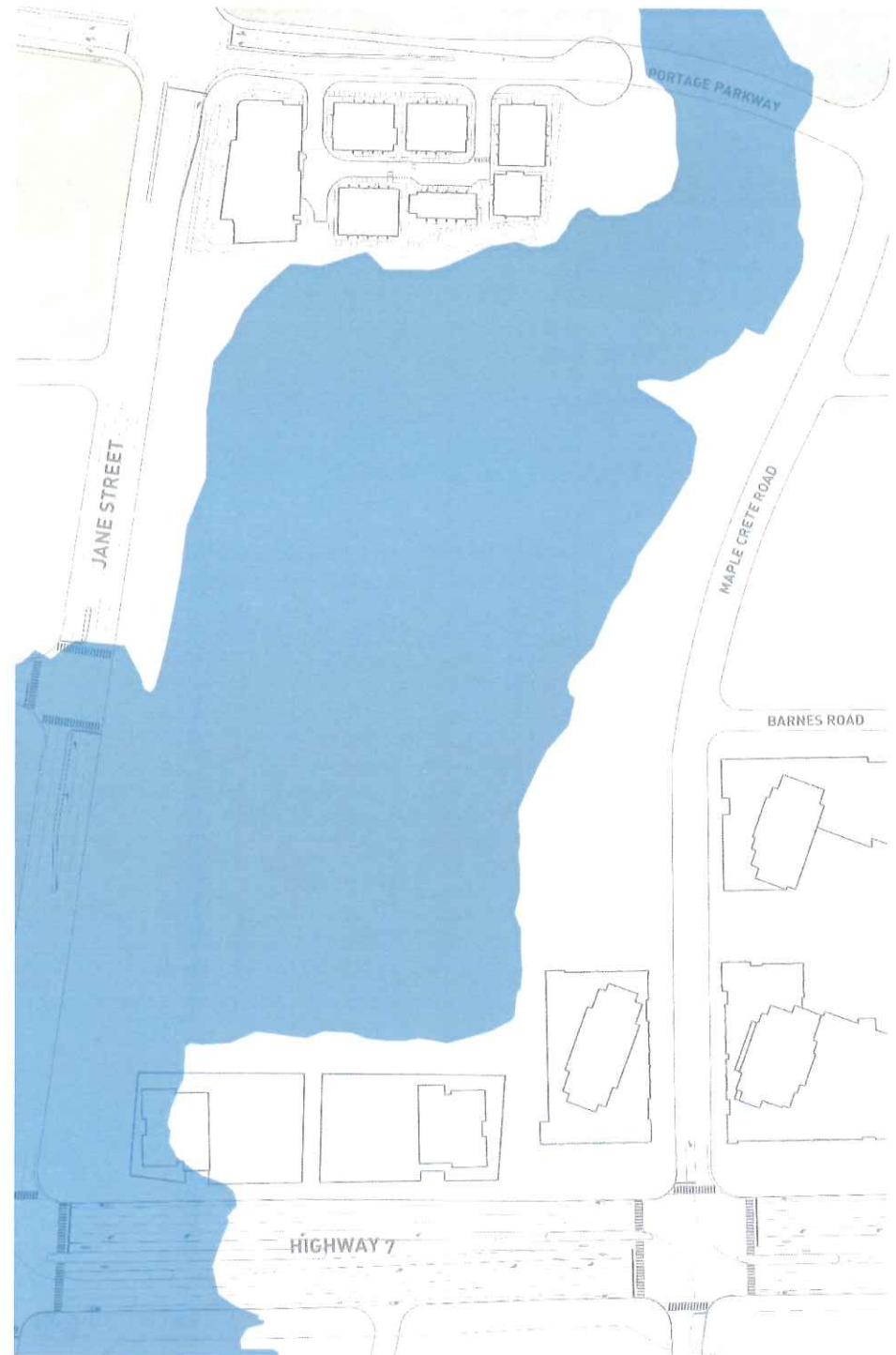
Site Photos

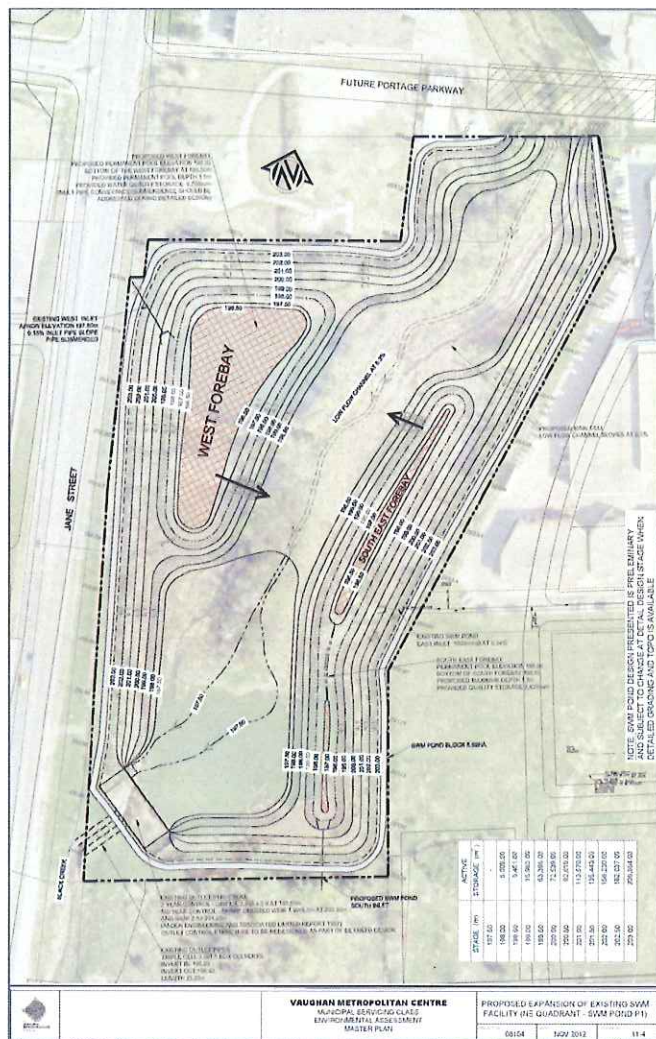


Storm water Functionality

Current limits of Regulatory Floodplain

- Hydrologic and hydraulic simulations based on current Humber River watershed models for existing and future land use
- Additional consideration for future climate variability simulated by increasing flow rates by 20%





Municipal Class EA
November 2012



BCFS Preliminary Design
January 2015



BCFS Preliminary Design
January 2015



Black Creek Financial Strategy
May 2016



BCFS Preliminary Design
January 2015



Edgeley Pond and Park
June 2017

EPP Master Plan

June, 2017

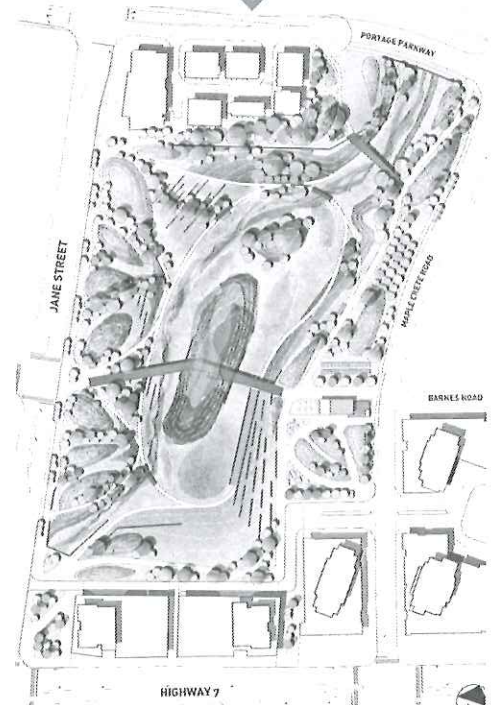
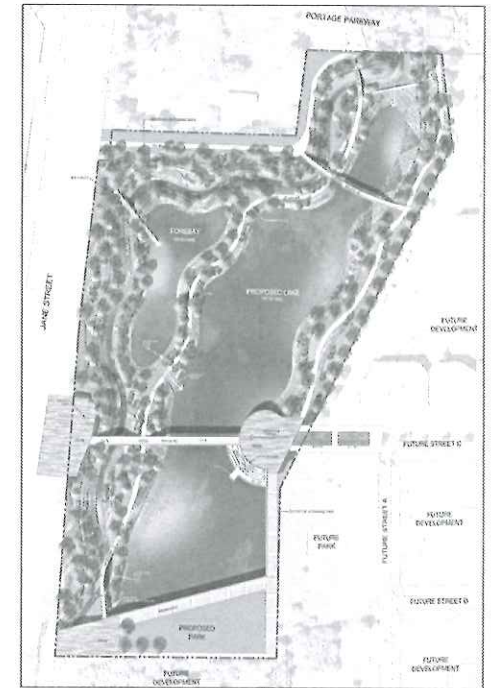
Design elements:

- Reduce flood risk with a comprehensive and balanced SWM system
- Re-establish Black Creek watercourse
- Celebrate innovative SWM by creating a functional, recreational and natural pond
- Preserve natural heritage
- Increase ecological net benefit
- Create iconic landforms and a memorable space
- Integrate site edges with proposed residential development
- Activate Jane Street frontage
- Expand passive recreation trail network
- Integrate informal amphitheater
- Include a flexible lawn area at south edge



Design Process and Site Investigations

	BCFS Preliminary Design (2015)	EPP Detailed Design (2017)
Conceptual Design	✓	✓
3rd Party Costing		✓
Public & Stakeholder Process		✓
Stormwater Modeling		✓
Natural Heritage Systems Report		✓
Site Investigation - Geotechnical		✓
ESA Studies		✓





Stormwater

- Traditional use of forebay on the west and settlement tank and polishing pond on the east

Black Creek Restoration

- No geomorphological studies
- Creek varies from 2.5 - 4.5m wide

Ecological Enhancements

- Design was completed with out site investigation

Public Space

- SWM 'lake' was the focus of the site (30cm deep)
- East and west sides of park connected through table land bridges, not in the valley

Maintenance + Lifecycle Cost

- Restricted maintenance access with size of waterbody - challenging post flood cleanup
- Large settlement tank and polishing pond maintenance
- Traditional forebay maintenance

Construction + Costing

- High level costing done by TMIG + Schollen
- Construction period unknown

BCFS Preliminary Design

January 2015



Stormwater

- OGS's and bioswales

Black Creek Restoration

- Geomorphological studies included
- Creek varies from 7.2 - 8.4m wide

Ecological Enhancements

- Natural Heritage Systems Report identified value in the island and informed the planting plan

Public Space

- Looped valley and table land pathways are accessible from multiple points

Maintenance + Lifecycle Cost

- Street side OGS's
- Bioswales will require maintenance similar to forebay's (reduced footprint)
- Large control structure wall

Construction + Costing

- Class C costing done by third party cost consultant
- Geotechnical investigation informed drawings and cost estimate.
- 2-year construction period anticipated

Edgeley Pond and Park

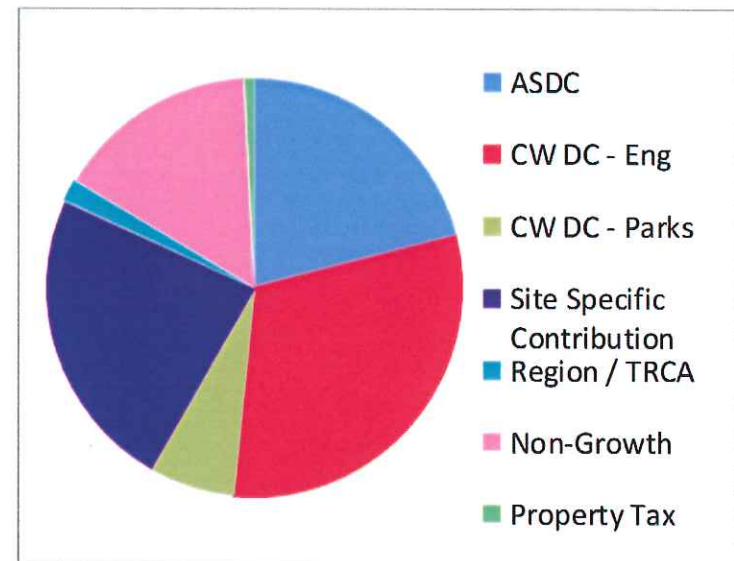
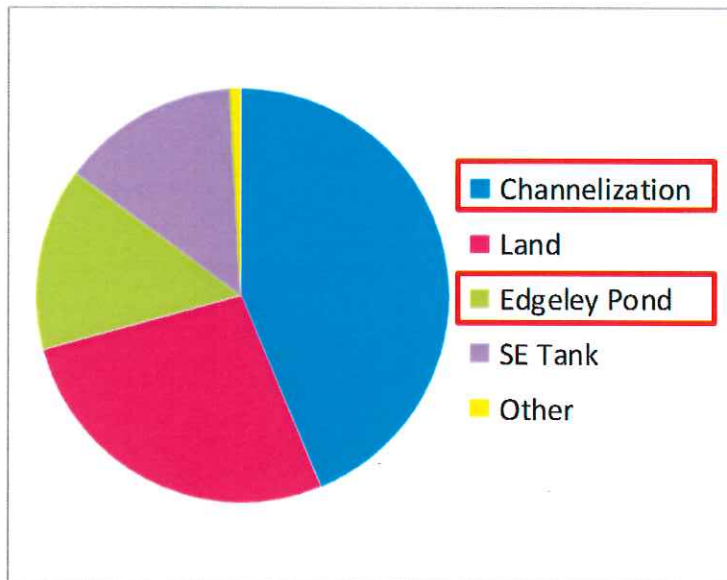
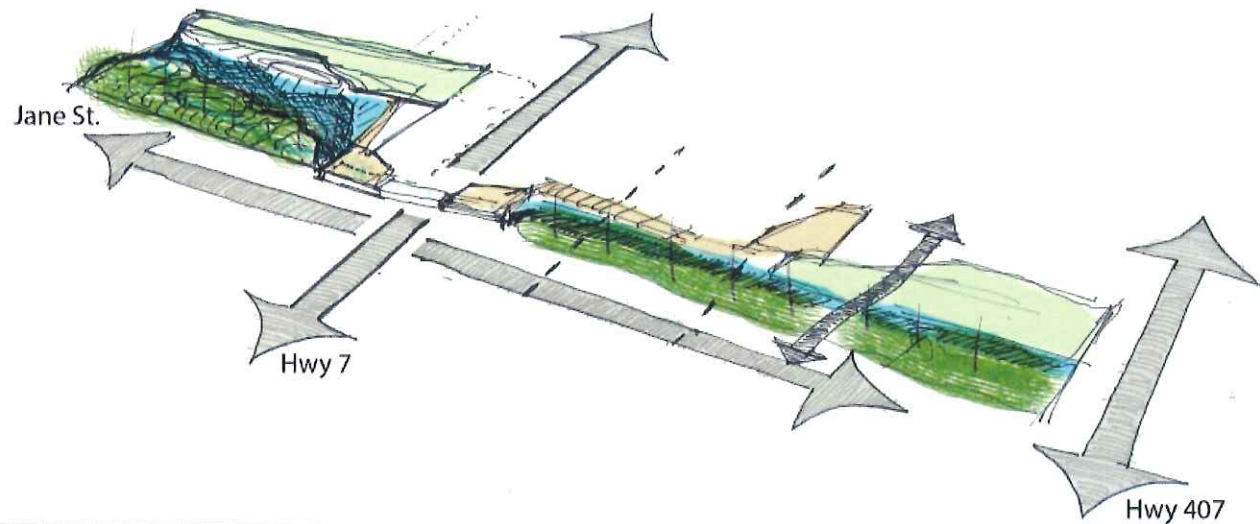
June 2017

Preliminary Overall Budget Comparison

Project Main Components	Project Budget based on BCFS	EPP 60% Cost Estimate (after Value Engineering)	Difference Between Estimates
Culvert Works (N-E Corner of Hwy 7 and Jane	\$5.3M	\$4.97M	\$0.33M
Edgeley Pond Civil Works	\$9.0M	\$15.6M	-\$6.6M
Edgeley Pond Enhanced Design Components	\$6.1M	\$3.2M	\$3.1M
Overall Budget Comparison	\$20.4M	\$23.8M	\$3.4M
LESS CWWF GRANT			\$2.5M
TOTAL ADDITIONAL FUNDING REQUIRED			Approx. \$1.0 M

**Black Creek
Financial
Strategy
Leverages seven
funding sources**

Total Funding = \$97M



**Black Creek Financial Strategy
Funding Allocation**

Black Creek Financial Strategy

Road crossing / creek / culvert

Depending on the Functional Benefits of each component of the project, a relevant funding source(s) was assigned:

For Example, a road crossing would benefit:

- Flood Control
- Transportation
- Open Space Network

Costs were apportioned over the funding sources



Preliminary Budget Comparison Based on BCFS

Project Main Components	BCFS Allocated Funds	EPP 60% Cost Estimate (after Value Engineering)	Difference Between Estimates	Cost Increase on a Component Basis
Culvert Works (N-E Corner of Hwy 7 and Jane	\$5.3M	\$4.97M	\$0.33M	\$--
Edgeley Pond Civil Works	\$9.0M	\$15.6M	-\$6.6M	-\$6.6M
Edgeley Pond Enhanced Design Components	\$6.1M	\$3.2M	\$3.1M	\$--
	\$20.4M	\$23.8M		\$6.6M
LESS CWWF GRANT				\$2.5M
TOTAL ADDITIONAL FUNDING REQUIRED (\$6.6M – \$2.5M)				Approx. \$4.1M

Edgeley Pond and Park - Civil Works Components

COMPONENTS	BCFS 2015	EPP 60% DD	Cost Increase	
Culvert Works (north of Hwy 7)	\$5,314,000	\$4,970,000	--	
Earthworks, Erosion, Sediment Control, Site Prep	\$3,414,000	\$3,710,000	- \$296,000	
Natural Channel Realignment and Restoration	\$1,038,000	\$1,560,000	- \$522,000	
Plant Material	\$1,490,000	\$2,345,000	- \$855,000	
Main Control Structure	\$844,000	\$1,865,000	- \$1,020,000	Essential flood control works
Oil Grit Separators, East Inlet Wall, Flow Disperser, Concrete Pipes	\$754,000	\$2,195,000	- \$1,440,000	
Pond & Creek Edge Treatments	\$1,332,000	\$3,190,000	- \$1,860,000	
Urban Design Features	\$127,000	\$127,000	--	
Other works including electrical	--	\$650,000	- \$650,000	

Total Estimated cost Increase - \$6,640,000

Next Steps

- Advance detailed design to 90%
- Complete the contractor pre-qualification process in March
- Report to the FAA Committee in April 2018 with the project budget assessment and amendment request with consideration for the Clean Water and Wastewater Fund (CWWF) grant funding of \$2.47 million awarded to this project
- Continue to pursue the necessary permits and approvals
- Prepare tender documentation by the end of May 2018
- Report to VMC Sub-Committee in June 2018 with a project update and details on the final project design, tendering and construction schedule

EDGELEY POND AND PARK PROJECT - VMC

