

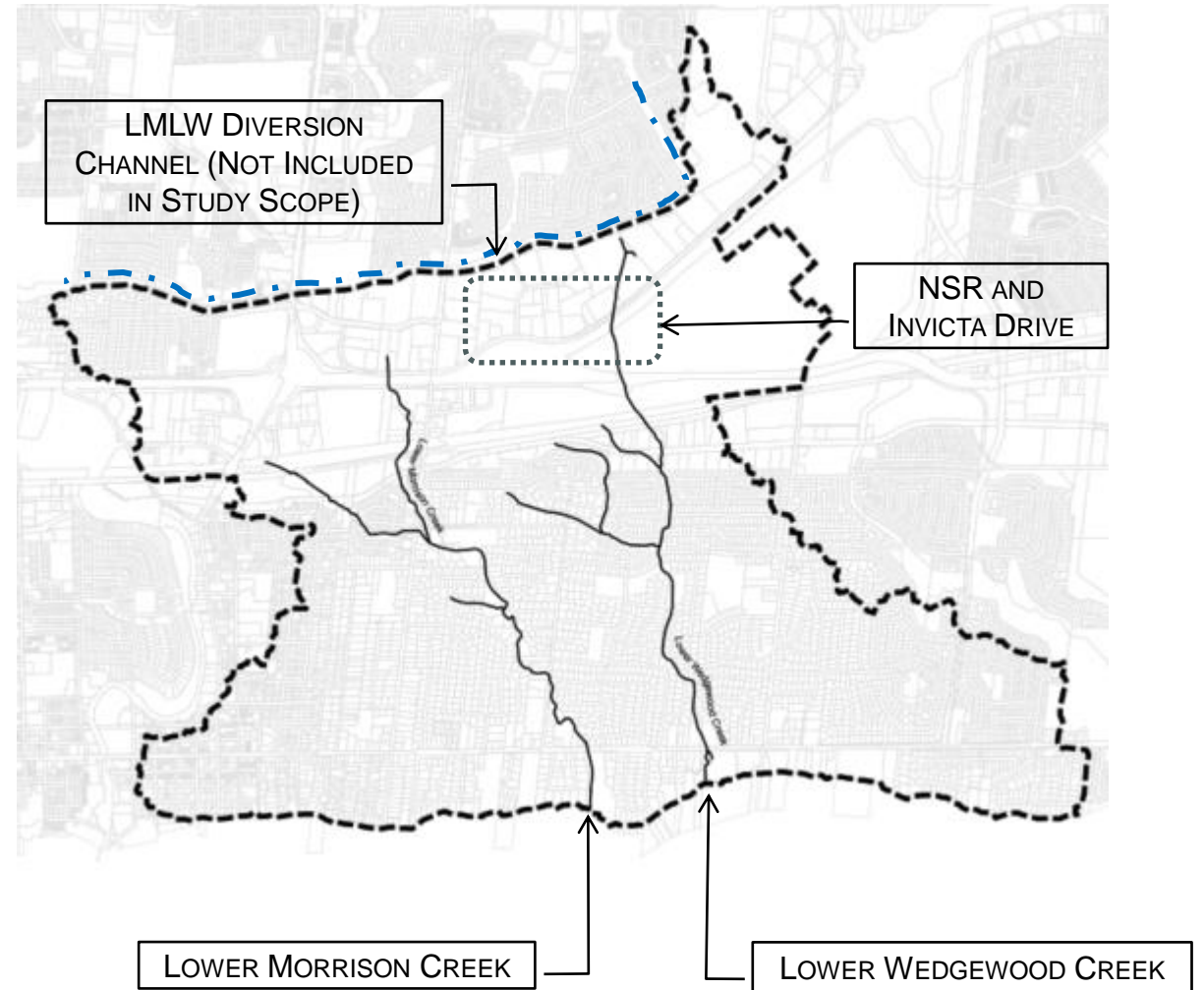
Lower Morrison and Lower Wedgewood Creeks Flood Mitigation Opportunities Study

(Riverine Study)

Council Meeting – August 13, 2024

Study Purpose

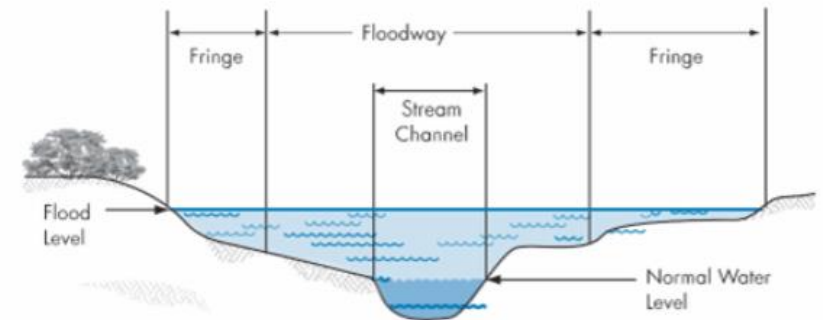
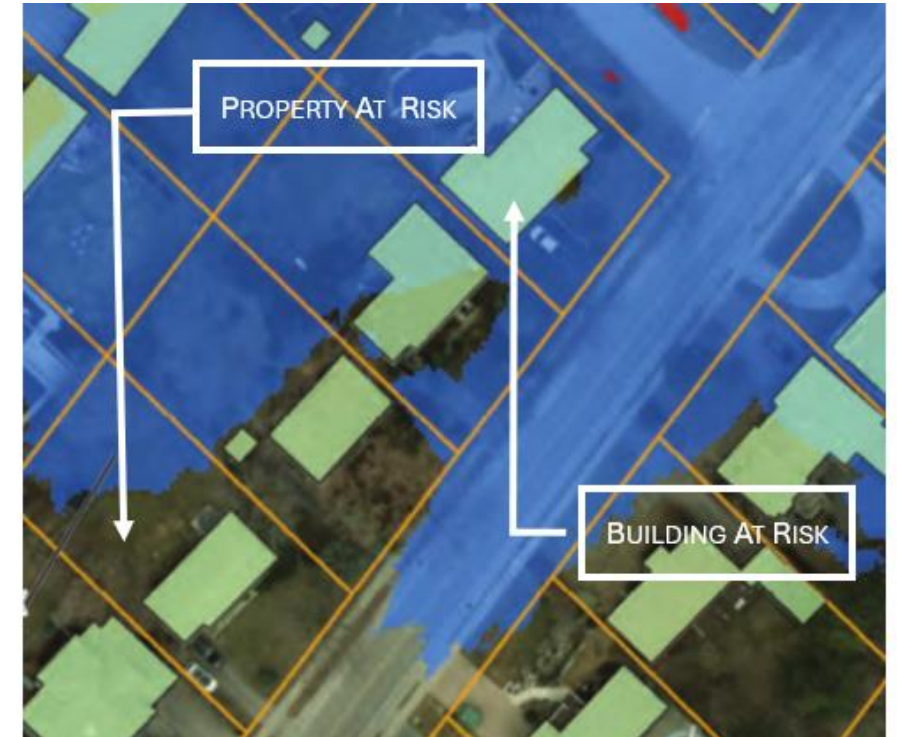
- The Lower Morrison and Lower Wedgewood Creeks Flood Mitigation Opportunities Study (LMLW Study) builds upon the 2008 Town-Wide Prioritization Study which quantified the magnitude of creek flood exposure in Oakville
- The LMLW Study assesses flood risks for properties along the creek to recommend municipality-led capital works to reduce flood risks
- LMLW Study further explores drainage improvements at North Service Road (NSR) and Invicta Drive.
- Study was carried out as a Schedule B Municipal Class Environmental Assessment



Study Results

- Results indicate that flood risk is possible during the more frequent flooding events along the creek (i.e. less than a 10-year flood event); however flooding risks are greatest during the 100 year storm event
- Flood risks occur when waters spill beyond creek banks and extend into property and/or enter buildings
- Flood risk is quantified into two categories for properties (image to the right)
 - **Property at Risk**
 - Flooding risk on property, no flooding in the building
 - Flooding risk on property, no buildings (vacant property)
 - **Building at Risk**
 - Flooding risk on property, flooding risk in the building.

266 PROPERTIES AND 119 BUILDINGS
AT FLOOD RISK -100 YEAR STORM



Study Results

The preferred alternative to reduce flood risk along the creeks is a combination green infrastructure (LID), culvert upgrades, and offline storage in the amount of approximately \$15 million.

- Low impact development (LID) measures to promote infiltration, evaporation, harvesting, filtration, and detention of stormwater are recommended as part of the Town's preferred approach to rainwater management
- LIDs such as tree conservation, soil improvements, and infiltration measures will be incorporated.

Green Infrastructure



- Increase capacity and help reduce upstream flooding and/or the overtopping of roadways.
- Eight (8) culverts recommended for upgrade at various locations

Culvert Upgrades



- Offline storage (underground storage tank), is recommended at Cornwall Road Sports Park
- The facility will store the creek flows above a 5-year storm event, and slowly release the water back into the creek
- Park form and function to be preserved.
- Public Engagement

Offline Flood Storage



Study Results

- The implementation of the preferred alternatives will benefit 116 properties

	Property At Risk (100 Year Storm)	Reduced Flood Risk	Removed from Floodplain	Remaining Properties
Property at Risk	266	60	13	193
Building at Risk	119	25	18	76

- After implementation of the preferred alternatives, there will be properties that will continue to experience flood risks, as there are limited engineering solutions on public owned lands that can assist in the mitigation of the risks.



Stay safe and informed!



Rainwater Management Financial Plan (RWMP)

- The RMFP takes comprehensive approach to integrate the state of good repair and increase resiliency of the town's stormwater network based on various studies and assessments completed to date.
- The multi-phase RMFP will deliver a financing plan that provides an all-inclusive approach to planning and implementing stormwater-related infrastructure renewal and improvement projects into the future.
- Study recommendations will be assessed through the lens of the Rainwater Management Financial Plan (RMWP) to prioritize recommendations along with all other stormwater town initiatives.

North Service Road/Invicta Drive

- Alternatives to improve drainage and to reduce the potential for flooding were also reviewed for the North Service Road and Invicta Drive area.
- Recommendations include implementation of a green infrastructure via a new stormwater management pond at Eighth Line.
- Construction will be carried out as part of the future NSR Reconstruction project which is currently scheduled to commence in 2026.



Conclusion

- The Lower Morrison and Lower Wedgewood Creek Flood Mitigation Opportunities Study has been compiled documenting the selection of recommended preferred alternatives.

STAFF RECOMMENDATION

- That the Notice of Completion for the Lower Morrison and Lower Wedgewood Creeks Flood Mitigation Opportunities Study, Municipal Class Environmental Assessment Study be published, commencing a 30-day public review period from September 1, 2024, to September 30, 2024.

