


# Welcome to the Public Information Centre for the Municipal Class Environmental Assessment:

# Flood Assessment and Crossing Upgrades between New Street and Spruce Avenue

View displays and discuss the study with project staff

Feel free to ask questions and fill out a comment sheet

CITY OF Burlington

Aquafor Beech Limited

# Background

## August 4, 2014 Storm

Heavy rainfall during the afternoon and evening of August 4, 2014 caused significant flooding in the City of Burlington. Lands within the Tuck Creek, Shoreacres Creek, Roseland Creek, and Appleby Creek watersheds were hardest hit.

Summary of Storm

- 190 mm of rain
- Road and highway flooding and closures
- 3,000+ homes flooded
- Debris build up in creeks

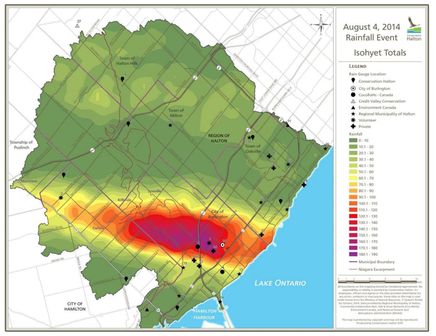
Impacts within Tuck Creek Watershed

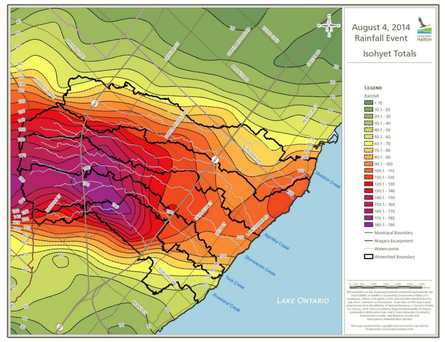
- Approximately 65 buildings reported flooding
- 13 culverts overtopped including New Street, Regal Road, and Spruce Avenue

Following the flood, the City undertook an assessment and analysis of its storm water management system. Findings of this study identified 75 riverine flood-vulnerable areas and 132 flood-vulnerable roads. Flood mitigation opportunities were identified on Tuck Creek between New Street and Regal Road.

The study findings led the City to undertake the current Municipal Class Environmental Assessment for flooding and crossing upgrades from the Hydro right-of-way north of New Street to Lake Ontario.

## Rainfall Totals from August 4, 2015




Source: Conservation Halton and Environmental Water Resources Group Ltd. (2015) August 4th, 2014 Storm Event, Burlington


Tuck Creek


407 south of Dundas Street


Tuck Creek upstream of Regal Road

# Problem Identification

## Study Area

The study area for the current flood EA extends from the Hydro right-of-way north of New Street to Lake Ontario.




## Problems in the Study Area

### Flooding/Channel Capacity

Number of buildings in the floodplain

- Regional storm – 99+
- 100 year storm – 56+

As water is predicted to spill from the channel onto the roads for these events, the exact number of houses within the floodplain is not known.

Building flooding reported from the August 4, 2014 storm

- New Street and Elwood Road – 11 residences
- Rubens Court and Swinburne Road – 20 residences
- Regal Road and Abbott Road – 28 residences

### Bridge Capacity

Under currently available modeling, bridge overtopping is as follows

- New Street – 10 year storm
- Regal Road – 10 year storm
- Spruce Avenue – 25 year storm
- Lakeshore Road – Regional storm

Bridge overtopping during the August 4, 2014 storm

- New Street
- Regal Road
- Spruce Avenue

## Opportunities

All or some of the following opportunities exist to reduce flooding in the study area:

- Increase bridge capacity
- Increase channel capacity
- Reduce flow entering the watercourse

The 3 alternatives explored as part of this EA addressed the first 2 opportunities. These are opportunities that exist within the study area. The third opportunity extends throughout the watershed. It may be addressed subsequently.



Tuck Creek at Elwood Drive

# Existing Conditions - Flooding

Number of buildings in the floodplain

- Regional storm – 99+
- 100 year storm – 56+



Tuck Creek – Aug 4, 2014



Tuck Creek at Elwood Drive
Aug 4, 2014

Existing Floodplain

# Existing Conditions – Environmental Constraints

## Environmental Constraints within the Study Area

Butternut trees

- Two (2) of these trees were identified in the study area and are protected under the *Endangered Species Act*, administered by the Ministry of Natural Resources and Forestry.

Woodlands

- The Tuck Creek corridor consists of a Key Feature in Halton's Regional Natural Heritage System. Mature trees would be impacted by alterations to the channel.

Property ownership

- Residential development abuts the creek corridor and may be impacted by alterations to the channel. Downstream of the Hydro ROW, the creek traverses private property.

