

PW20083  
ITEM 7.3



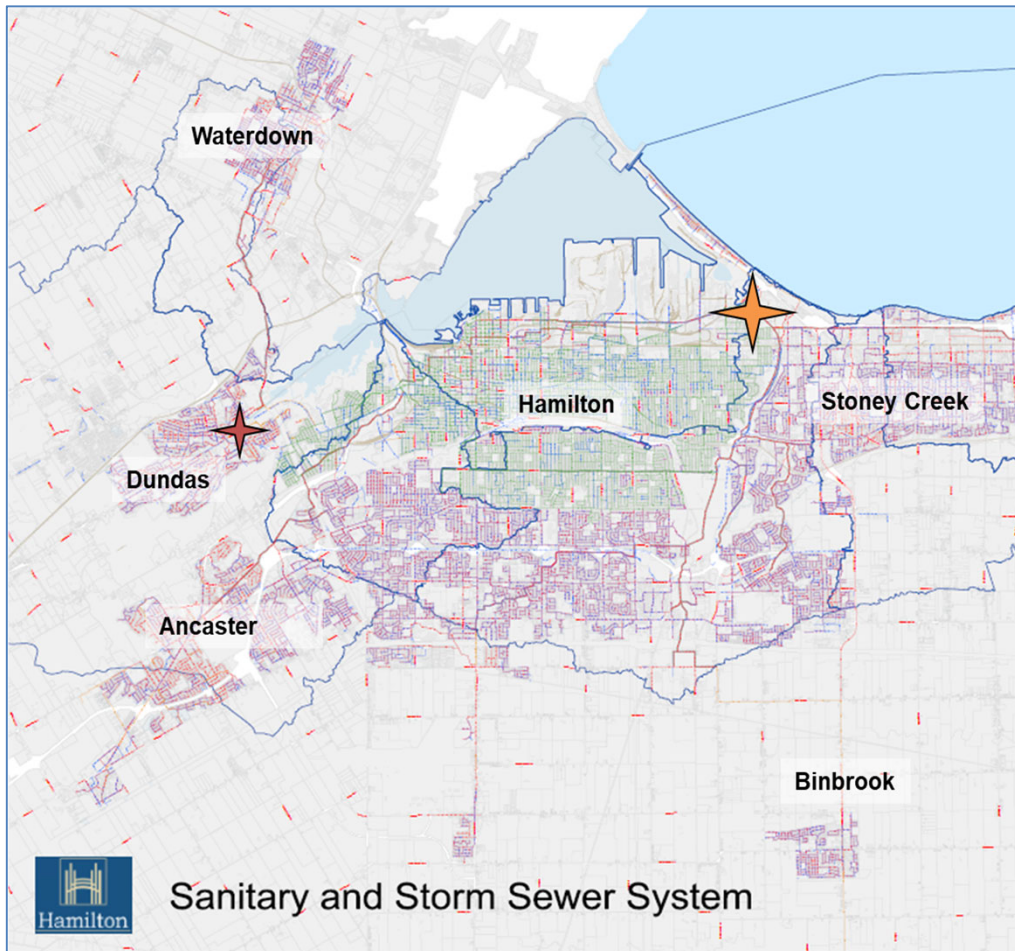
Hamilton

# CHEDOKE WATERSHED IMPROVEMENT EVALUATION

December 7, 2020

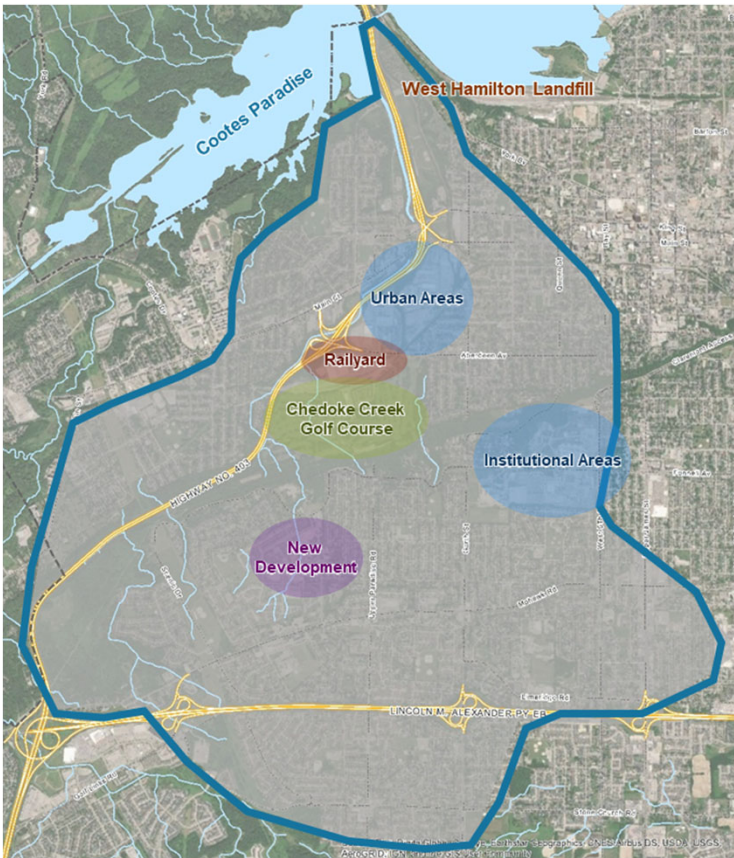
Public Works Department  
Hamilton Water Division

# City of Hamilton – A Long Term HHRAP Partner



- CSO Tank Program 1988-2010
  - 9 locations \$90M
- Real Time Control
  - Phase 1&2 \$16M
- Wastewater Treatment Upgrades
- Public Outreach & Education
- CSO Monitoring and Feasibility Study
- Academic and other agency support
- Cross Connection Program
- Chedoke Watershed Evaluation

# Project Context & Objectives



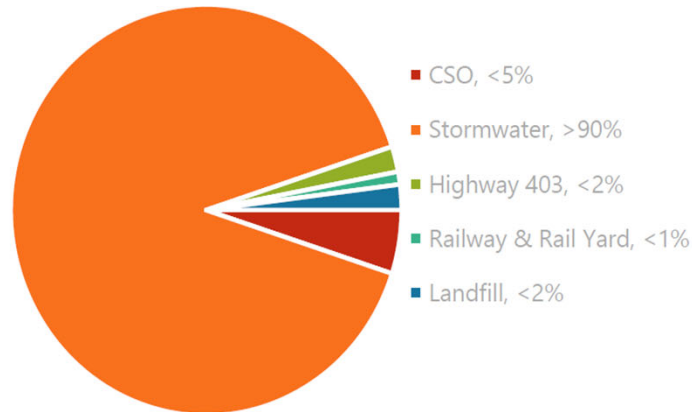
- February 2020 – Council direction to meet with Royal Botanical Gardens (RBG).
- The Chedoke Water Quality Improvement Study is focused at a watershed level and includes:
  - Develop a series of short to longer term solutions for improving water quality
  - Engage internal and external stakeholders to facilitate solution development
  - Technically evaluate solutions to determine feasibility and implementation strategies



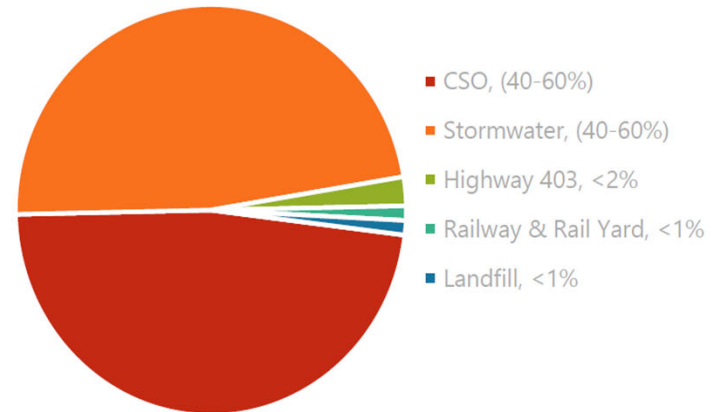
# Project Context & Objectives

- Complements ongoing Hamilton Harbour Remedial Action Plan work and City's investments of \$52M to mitigate environmental impacts to Chedoke Creek and/or Cootes Paradise
- Study looks at both point and non-point sources of contaminants entering Chedoke Creek
- Non-point pollution sources (i.e. stormwater runoff) are becoming a higher priority due to recognized relative contribution to watersheds

TP Loading - Average Year



TP Loading - Peak Event



# Project Timeline



# Stakeholder Engagement



## Project Team

- Public Works
  - Hamilton Water
  - Environmental Services
- Consultant Team
  - GM BluePlan
  - Jemma Consultants
  - Wood Canada Ltd.

## External Stakeholders

- Bay Area Restoration Council
- Conservation Halton
- Environment Hamilton
- Fisheries and Oceans Canada
- Hamilton Conservation Authority
- Hamilton Harbour Remedial Action Plan
- Indigenous Water Walker representatives
- Ontario Ministry of Transportation
- Royal Botanical Gardens (with MT Planners, Consultant)

# Engagement Milestones to Date

- **Project Kick-off** - with the Project Team
- **Site visit** – with Royal Botanical Gardens and Project Team
- **Background review** - including a set of over 80 documents
- **External Stakeholder Workshop #1** - project objectives introduced and initial ideas & feedback were discussed. Discussion of ultimate vision of Chedoke/Cootes
- **Internal Stakeholder Workshop #1** - a first draft of potential solutions introduced based on background review and results of External Workshop #1
- **External Stakeholder Workshop #2** – Held December 2<sup>nd</sup> and preliminary solutions, evaluations and recommendations discussed

# Evaluation of Solutions



- All potential solutions from first two workshops compiled
- Any solutions with potential net benefit carried forward to evaluation
- Each solution evaluated on:
  - Cost
  - Timing
  - Implementation
  - Land ownership
  - Benefits
  - Effectiveness
- Best value solutions categorized and prioritized



# Preliminary Prioritization – Capital Works

## Near-Term Capital Projects (<3 Years)

1. Hwy 403 trunk sewer twinning (ongoing)
2. Rehabilitate Hwy 403 storm pipe from Kay Drage Park
3. Treat runoff from Chedoke Golf Course
4. Hwy 403 water quality improvements

## Long-Term Capital Projects (>3 Years)

1. Class EA Study for Lower Chedoke
2. Sewer separation and inlet controls (ongoing)
3. Class EA Study for Upper Chedoke
4. Expand storage and conveyance capacity
5. Expand leachate collection system

# Preliminary Prioritization - Operations

## Near-Term O&M Programs (<2 Years)

1. CSO monitoring and Real Time Control Phase implementation (ongoing)
2. Inspection & repair – tanks, trunk sewers
3. Continue cross-connection program
4. Enhanced street sweeping

## Long-Term O&M Programs (>2 Years)

1. Inflow & infiltration monitoring
2. Enhance inflow & infiltration program management
3. Improve snow management program
4. Enhance Hwy 403 and City roads salt management programs

# Preliminary Prioritization – Policy & Engagement

## Policy and Engagement

1. Engage residents, stakeholders, City
  2. Enhance stormwater management policies for development
  3. Develop Low Impact Development (LID) policy for road reconstruction projects
  4. General LID policy / stormwater user rate
  5. Wet weather flow policy for separated sewer areas
- Next steps include refinement of proposed solutions based on External Workshop #2 feedback, preparation of summary report and presentation of final suite of recommendations during the final Internal Workshop #2.



THANK YOU