City of Kitchener
Integrated Stormwater Management Master Plan (ISWM-MP)

Public Open House No. 1
June 24, 2015
Open House Format

• 15 min presentation
• Facilitated questions and answer session following the presentation
• Open viewing format – discussion with City staff and the project team
  – Two (2) zones:
    1. Information Zone
    2. Interactive Zone
Information Zone

What is it?

• The INFORMATION ZONE provides an opportunity for you to review the current environmental, stormwater, and municipal infrastructure assets within the city’s boundary

Learn about Kitchener’s:
• Land use
• Geology and soils
• Streams and fisheries
• Water quality
• Stormwater infrastructure
• Drinking water resources
• SWM alternatives
Interactive Zone

What is it?

• The INTERACTIVE ZONE provides an opportunity for you to:
  – Share your knowledge and experience
  – Provide your personal vision for the city, and
  – Identify any stormwater issues within your neighbourhood

Share with us:

• Flooding issues in your neighborhood
• Stormwater impact on local streams
• Stream erosion or flooding concerns
Where are we in the study process and when will you see us next?

WE ARE HERE

STAGE 1
- Review background information & identify data gaps
- Define existing conditions
- Identify the problem and opportunity
- Identify study goals and objectives
- Develop long list of alternatives

STAGE 2
- Fulfill data gaps (field work)
- Complete social marketing research
- Develop and evaluate alternative management strategies
- Develop short list
- Selection of preferred alternatives

STAGE 3
- Describe preferred stormwater management strategy
- Develop implementation plan

NEXT OPEN HOUSE Fall 2015
STUDY COMPLETION Early 2016
Study Purpose

• Municipal Class Environmental Assessment Process for Master plans to update the existing 2001 Stormwater Management (SWM) Policy

• Enables the City to identify opportunities and be proactive in addressing stormwater issues before they become a problem

• Establish SWM guidelines and policies for the next 15 years
Study Goals & Objectives

- An Integrated SWM Master Plan considers flood and erosion control, groundwater and surface water quality management, environment management and infrastructure, all in an integrated manner.
Goals & Objectives established for:
- Water Quality
- Water Quantity
- Erosion Control
- Natural Environment
- Water Resource Sustainability
- Infrastructure
- Policy & Implementation
- Community
Existing Conditions Highlights

• City is expected to increase by 70,000 residents by 2031
• Water quality ranges from good to poor
• City Streams are:
  – 23% channelized or concrete-lined
  – 70% natural
  – 7% rehabilitated
Existing Conditions Highlights

- Kitchener has:
  - 140 SWM facilities
  - 120km of watercourses
  - 700km of storm sewers
  - 12,000 catch basins
Existing Conditions Highlights

- Only 30% of the City has some form of stormwater treatment
- The 30% corresponds to newer development areas
Existing Conditions Highlights

• Key Objective – implement SWM Controls into areas developed without SWM:
  – Older neighborhoods
  – The existing urban core

King Street retrofit
Existing Conditions Highlights

- 4000+ credits have been issued to Kitchener residents for rain gardens, rain barrels, cisterns, and permeable pavements

This treats the equivalent of 19 Olympic size swimming pools every time it rains!
Existing Conditions Highlights

Water Supply & Groundwater
• Kitchener is served by:
  – 24 groundwater wells
  – Grand River (Hidden Valley Intake)
Looking Forward

- Stream and erosion assessment - Summer 2015

- Comprehensive sewer model – under development. Will be used to better understand:
  - Urban flooding risks
  - Sewer capacity
  - Climate Change Impacts
Alternatives

• Source Controls
  – Retain runoff & encourage infiltration

[Images of rain garden and green roof]
Alternatives

• Conveyance Controls
  – Linear systems, typically next to roadways
Alternatives

• End-of-Pipe Controls
  – Erosion, water quality & flood control
Alternatives

• Environmental Restoration
  – Improve water quality, reduce erosion & improve habitat
Alternatives

• Pollution Prevention
  – Reduce pollution generation
Alternatives

- Operation & maintenance
  - Infrastructure optimization

Street sweeping

Construction sediment & erosion control

Leaf build-up & public education
Example Evaluation Criteria

- Physical & Natural Environment
  - Water Quality
  - Stream Geomorphology
  - Aquatic Habitat
  - Fisheries
  - Wildlife
  - Groundwater Resources
Example Evaluation Criteria

- Social/Cultural Environment
  - Visual Aesthetics
  - Recreational Opportunities
  - Cultural/Heritage Resources
  - Health & Safety
Example Evaluation Criteria

• Economic
  – Capital Costs
  – Operations & Maintenance Cost
  – Lifecycle Costs
  – Ability to coordinate with other projects
Example Evaluation Criteria

• Technical & Engineering
  – Flood Control
  – Erosion Control
  – Ease of Implementation
  – Operations & Maintenance
Research with Homeowners
Research with Businesses

1. Extensive research and strategic interviews with Kitchener businesses
2. Opportunities and barriers for improved stormwater management by Kitchener businesses
3. Screening options for better stormwater management by Kitchener businesses
4. Preferred options
Contacts & Information

Study reports can be viewed at:
www.kitchener.ca/stormwatermasterplan

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Questions?

We will be happy to take any questions.

To ensure everyone can hear both your question and the answer we ask that you:
1. Please raise your hand
2. State your name & address
3. Ask your question