



City of Mississauga
Stormwater Master Plan

“Build Beautiful”

Environmental Action Committee

June 1, 2021

Presentation Overview

1. Stormwater Master Plan Overview
2. Consultation To-date & Feedback
3. Stormwater Master Plan Framework & Actions
4. Next Steps

1. Stormwater Master Plan Overview



Stormwater Master Plan

5.1

- Task 1: Review Background Material
- Task 2: Establish/Document Legislative Framework
- Task 3: Consult with Stakeholders
- Task 4: Establish Details on Actions/Programs
- Task 5: Establish Planning & Implementation Requirements
- Task 6: Final Reporting



Stormwater Master Plan Vision

5.1

Vision Statement:

Build value in water resources through collaboration, to protect and enhance the quality of our built and natural environment. *Build Beautiful* to connect to nature and our communities.



buildbeautiful
Stormwater Master Plan

Stormwater Master Plan Framework

5.1

Framework

- Four Theme Areas
- Reflect the Asset Management Cycle and Adaptive Management Cycle

**Protect Quality
Monitoring &
Maintenance**

**Understand Its
Nature
Studies**

**Celebrate Its
Value
Engagement &
Partnerships**

**Create Solutions
Design &
Implementation**



2. Consultation To-date & Feedback

Community & Stakeholder Consultation

5.1

Consultation Completed To-Date

- Initial EAC engagement
- EAC Background Memo
- Online Survey #1
- EAC Update on Precedents & Legislation
- Stakeholder Meetings with:
 - Peel Region
 - Credit Valley Conservation
 - Conservation Halton
 - Toronto Region Conservation Authority
- Virtual Public Information Centre
- Online Survey #2

Timing

November 2019

July 2020

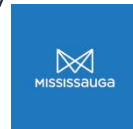
November 2020

February 2021

June 2020

April 2021

April 2021



Community & Stakeholder Consultation

5.1

Ongoing Consultation

- Indigenous Peoples & Nations Engagement
- Environmental Action Committee
 - Meeting #2

Timing

Ongoing

June 2021

Upcoming Consultation

- Present to Council

Fall 2021



What We Heard – Results of Online Survey #1

5.1

Public Interest and Need for Stormwater Management



89% think stormwater is either extremely or very important for the City to manage



90% are concerned about the environmental quality of the streams and rivers located within the City



Total Survey Participants: 111

Where to Manage Stormwater in Creative Ways



Public Parks (22%)



City Facilities (20%)



Parking lots (20%)



On my street (15%)



Private businesses (13%)



On my property (8%)

Signage along creeks (28%)



Info on City's website (24%)



Communication through social media (23%)



Decorative manhole covers (20%)

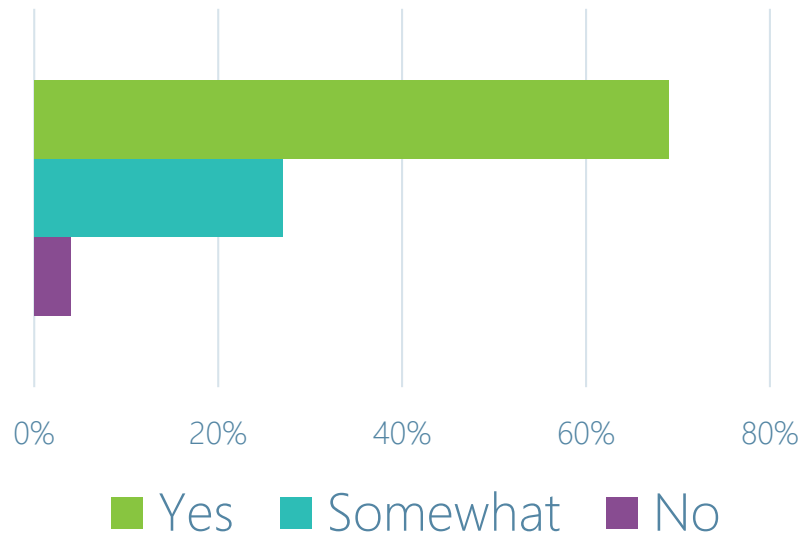


MISSISSAUGA

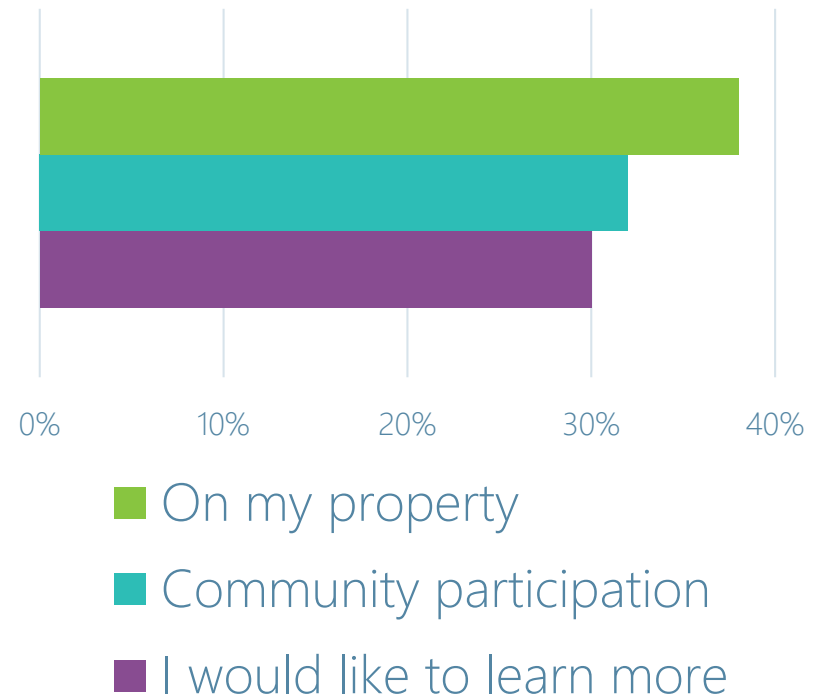
What We Heard – Results of Online Survey #2

5.1

Does the Vision Statement capture your expectations for the City's Stormwater Master Plan?



How do you think you can best support stormwater management in the City?

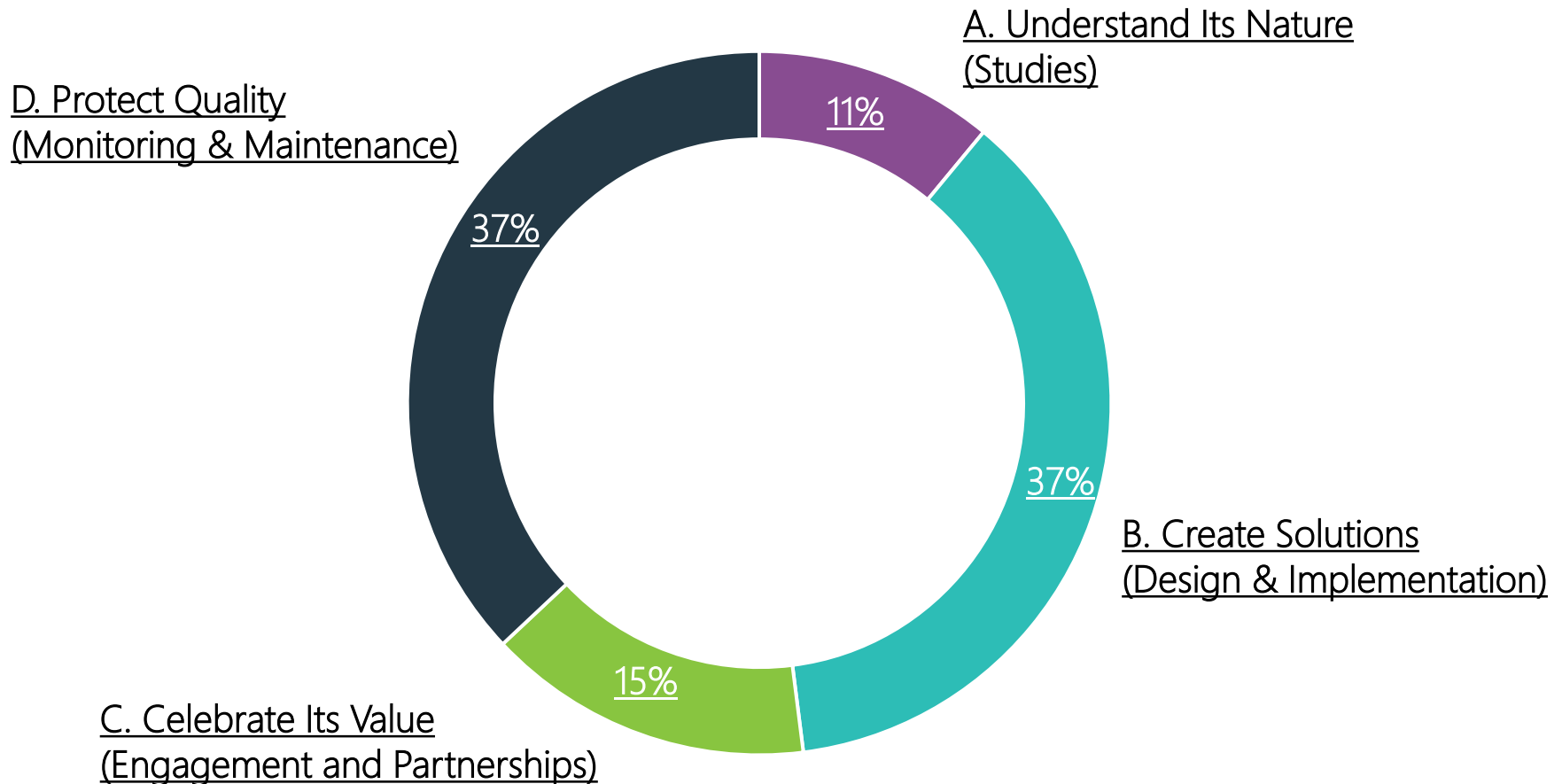


Total Survey Participants: 41

What We Heard – Results of Online Survey #2

5.1

Which of the four theme areas do you think is most important?



3. Stormwater Master Plan Framework & Actions



Four Theme Areas:

**A. Understand Its
Nature
(Studies)**

**C. Celebrate Its Value
(Engagement &
Partnerships)**

**B. Create Solutions
(Design &
Implementation)**

**D. Protect Quality
(Monitoring &
Maintenance)**

Stormwater Master Plan Framework

5.1

Action Type:

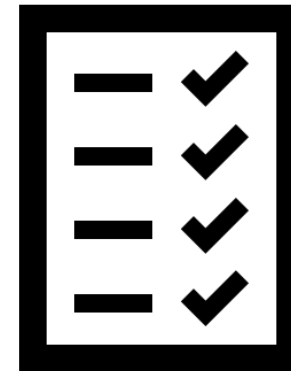
1. Existing Actions (Refine/Maintain)
2. Future Actions (New)

Core Service Lines:

1. Policies, Guidelines, Regulations
2. Development Review
3. Capital Program
4. City Operating Procedures

Service Delivery Form:

1. Plan
2. Program
3. Policy
4. Partnership
5. Procedure
6. Project



Process of Program Development:

- Interviews with City Staff
- Establish Understanding of Actions/Rationale
- Develop Recommendations based on:
 - *Best Practices*
 - *Legislative Requirements*
 - *City Staff Commentary*
 - *Emerging Requirements & Changes*
- Consultation (Stakeholders, Public, EAC, City)
- Finalize Existing and Future Actions



Stormwater Master Plan Actions

5.1

A. Understand Its Nature (Studies)

1. Prepare Dual Drainage Models in Older Neighborhoods – Existing Action
2. *Map Groundwater (City-wide) – Future Action*
3. *Economic Consideration for Environmental Decision-Making Process – Future Action*
4. *Pursue System-wide ECA – Future Action*
5. *Water Sustainability Plan – Future Action (New to Fill Gap from Checklist)*
 - a. Policies, Guidelines, Regulations
 - b. Development Review

B. Create Solutions (Design & Implementation)

1. *Strategic land acquisition of flood vulnerable lands (riverine) – Future Action*
2. *Low Impact Development for Roads Program – Existing Action*
3. *City-Wide Flood Control Retrofit Project – Future Action*
4. *Open Ditch Management Strategy – Future Action*
5. *Groundwater Management – Existing Action*
6. *Cooling BMPs – Future Action*
 - a. Policies, Guidelines, Regulations
 - b. Development Review
 - c. Capital Works Program
 - d. City Operating Procedures

Stormwater Master Plan Actions

5.1

C. Celebrate Its Value (Engagement & Partnerships)

1. *Artist in Residence program – Future Action*
2. Stormwater Outreach (Contemporary/Effective/Innovative – Existing Action)

D. Protect Quality (Monitoring & Maintenance)

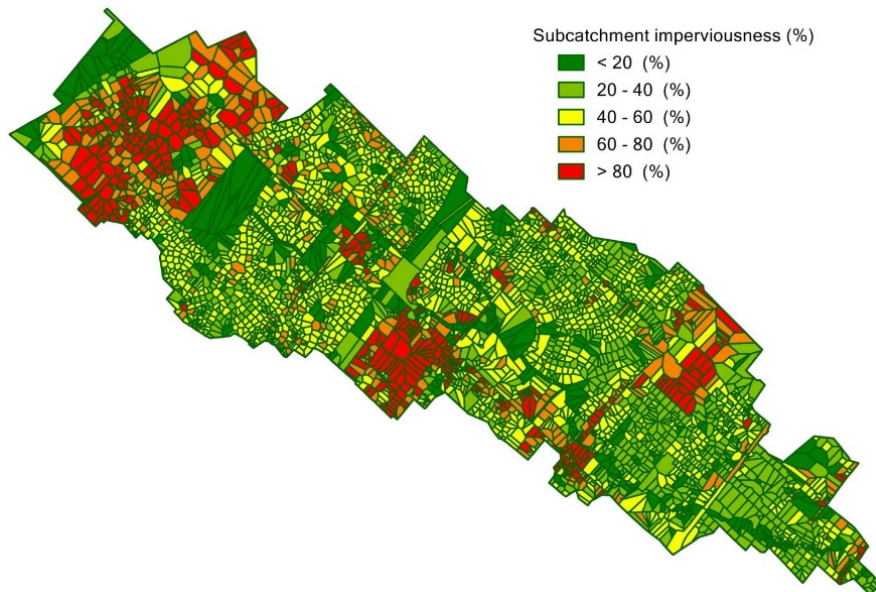
1. Outfall Monitoring (Water Quality) – Existing Action
2. Pollution Prevention Plans – Existing Action
3. Asset Management: Watercourses – Existing Action
4. Asset Management: Pipes – Existing Action
5. Asset Management: SWMF's – Existing Action
6. *Culvert/Bridge Assessments – Future Action*
7. Integrated Rainfall Monitoring Program (with CAs) – Existing Action
8. *Shoreline Management – Future Action (New to Fill Gap from Checklist)*
 - a. Policies, Guidelines, Regulations
 - b. Development Review
 - c. Capital Works Program
 - d. City Operating Procedures

A. Understand Its Nature (Studies)

5.1

Prepare Dual Drainage Models in Older Neighborhoods

- Map flood risks for older residential neighbourhoods
- Identify priority areas for mitigation measures



Map Groundwater (City-wide)

- Improve groundwater level data to inform land use decisions
- Work with municipal partners to share data



B. Create Solutions (Design & Implementation)

5.1

Low Impact Development (LID) for Roads Program

- Implement LID Best Management Practices (BMPs) as part of the road rehabilitation program
- Develop tool to evaluate LID BMP opportunities



C. Celebrate Its Value (Engagement & Partnerships)^{5.1}

Artist in Residence Program

- Raise awareness of stormwater management projects and processes
- Improve public realm by building beautiful spaces
- Provide opportunities to local artists



Stormwater Outreach

- Digital Engagement (YouTube, Ask the Expert Events, City Webpage)
- Youth Education Programs
- Business Education (Workshops, Flyers)



D. Protect Quality (Monitoring & Maintenance)

5.1

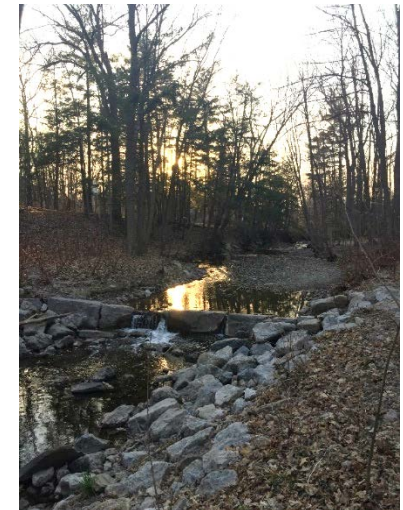
Pollution Prevention (P2) Plans

- Require P2 Plans for businesses with recurring contaminant issues to minimize risks
- Develop checklist option to improve businesses and promote pollution prevention planning



Asset Management: Watercourses

- Inspect watercourses regularly for erosion (every 1-5 years)
- Identify risk areas to be addressed through capital works (planned projects) or maintenance (restoration)



Partnership Opportunities:

- Over 60 partnership opportunities identified with the following agencies:
 - Federal
 - Conservation Authority
 - Provincial
 - Municipal
 - Regional
 - Other (e.g. Colleges)
- Partnership Roles include the City as either the Lead or Supporting role

Core Service Line Enhancements:

- Over 20 Core Service Line Enhancements identified, including:
 - Policy Refinements
 - New Guidelines
 - City Operating Procedures

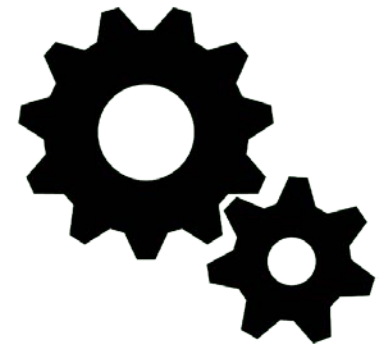


4. Next Steps



Implementation:

1. Set Timelines for Actions:
 - *Short-term (1 to 3 years)*
 - *Medium-term (3 to 5 years)*
 - *Long-term (5 to 10 years)*
2. Establish Priorities for Actions
3. Determine Action Process & Lead
 - Partnership Opportunities
 - Implementation Details
 - “Road Show” with City Staff and Stakeholders



Timelines:

1. Indigenous Engagement
2. Implementation Requirements
3. EAC Presentation
4. Draft Stormwater Master Plan Development
5. Final Stormwater Master Plan
 - Present to Council

Ongoing

May-June 2021

June 2021

July – August 2021

Fall 2021

