

# Improvements in Stormwater Management Inspection and Maintenance

Board of Directors

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**Lake Simcoe Region**  
conservation authority



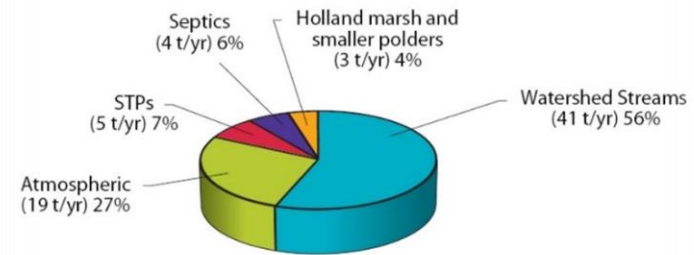
Member of Conservation Ontario

# Why is effective Stormwater Management so important

- Reduced flooding & associated impacts, liability...
- Reduce phosphorus loads.
- Tributary health.
- Adapting to climate change.
- Increased growth: cumulative effects.



Lake Simcoe Phosphorus Sources



# Evolution of Stormwater Management

## Prior to 1980s

- No / minimal SWM required
- Direct discharge to rivers and creeks



## Early 1980's

- Quantity control
- Rapid conveyance to receiver or facility



## Early 1990's

- Quality and quantity control
- Rapid conveyance to wet ponds

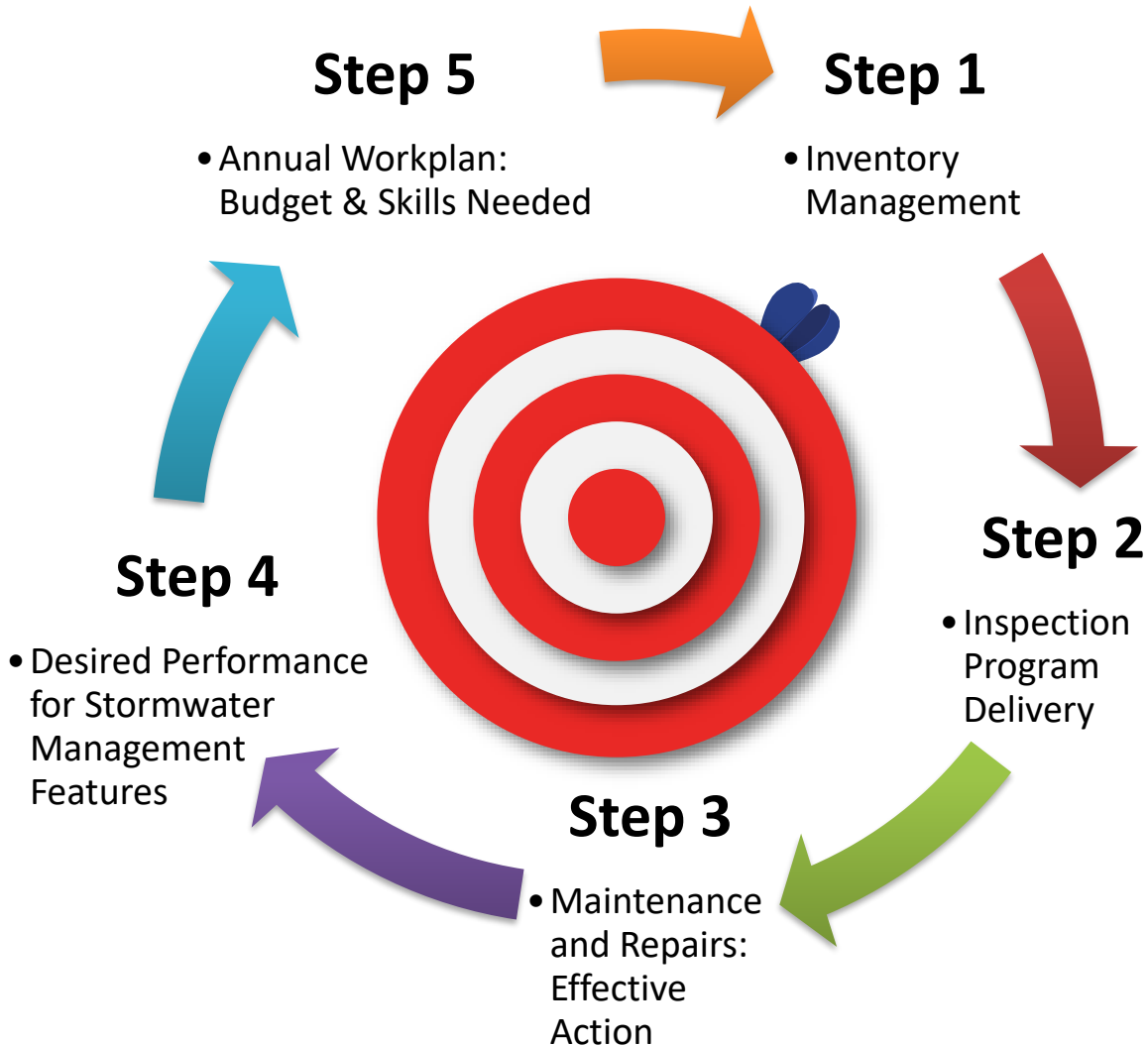


## 2020s...

- Integrated grey and green solutions to achieve required performance



# Effective Stormwater Management Performance is Achieved by...





# What does this mean from a municipal perspective?

- Determining who is responsible for what aspects of stormwater management maintenance.
- Do municipal staff have the appropriate knowledge and skills.
- Funding – costly and changing from large capital to blend routine/capital.
- Asset inventory for all types of stormwater management facilities (ponds, Low Impact Development features) needs resources for upkeep and action.



# Supporting the evolution of Municipal Stormwater Management Inspection and Maintenance

## Our goals

- Assist municipalities achieve cost effective, prioritized, quality inspection and maintenance.
- Help prepare for system-wide compliance.

## How

- Technical advisory support
- Applied training
- Resources and tools
- Professional services
- Applied research



# LID Municipal Inspect. & Maintenance Working Group

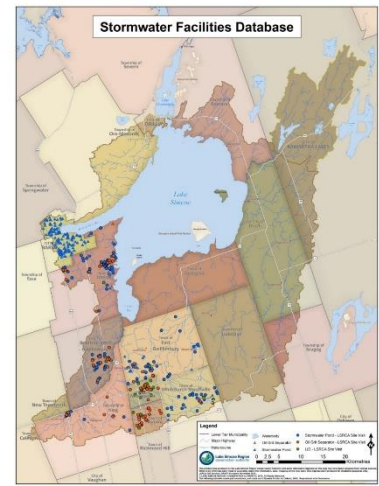
- **LSRCA with funding partnership support from MECP established this group in 2019.**
- Comprised of municipal managers overseeing inspection & maintenance programs.
- Identify challenges and develop solutions to support all municipalities.
- Dissemination of successful best practices shared between municipalities.





# Resources and Tools

- ‘Lake Simcoe Watershed Municipal Stormwater Management Database’ in Citywide – resourcing and upkeep.
- Applied inspection and maintenance municipal training (ponds, LIDs).
- Guide for prioritization methodology, inspection forms via database, procurement templates, costing tools for annual planning.



# Town of Aurora Inspection & Maintenance Prioritization Services

- Partnership with Aurora with services scoped to understand the status and maintenance needs of ponds and Low Impact Development features.
- First-hand experience applying methods and tools we have developed.
- Lessons learned will benefit other Lake Simcoe Watershed municipalities and beyond.



# Significant benefits...

- Many benefits of improved inspection and maintenance include...
  - extending service life of ponds & LIDs,
  - asset management improvements,
  - alignment with new MECP Linear Infrastructure Permissions Regulation,
  - Compliance also addressed insurance risk, climate change.
  - Multiple environmental benefits including Phosphorus reduction.
  - Broader uptake throughout Ontario.



# A STEP Partnership...

STEP is a multi-agency initiative developed to support broader implementation of sustainable technologies and practices within a Canadian context.

The water component of STEP is a conservation authority collaborative. Current partners are:



## Key Focus Areas:

- Low Impact Development
- Erosion and Sediment Control
- Road Salt Management
- Natural Features Restoration

# Thank You! Questions...

