

The word "HALIFAX" is written in a bold, white, sans-serif font against a dark blue background. The background of the entire slide features a geometric design with diagonal lines in various shades of blue and white, creating a modern, angular aesthetic.

HALIFAX

Stormwater Management By-Law Development

Prepared for the Regional
Watershed Advisory Board

November 14, 2018

Stormwater Responsibilities

Province of Nova Scotia

- Regulatory authority
- Owner of watercourses and some wetlands

Halifax Water

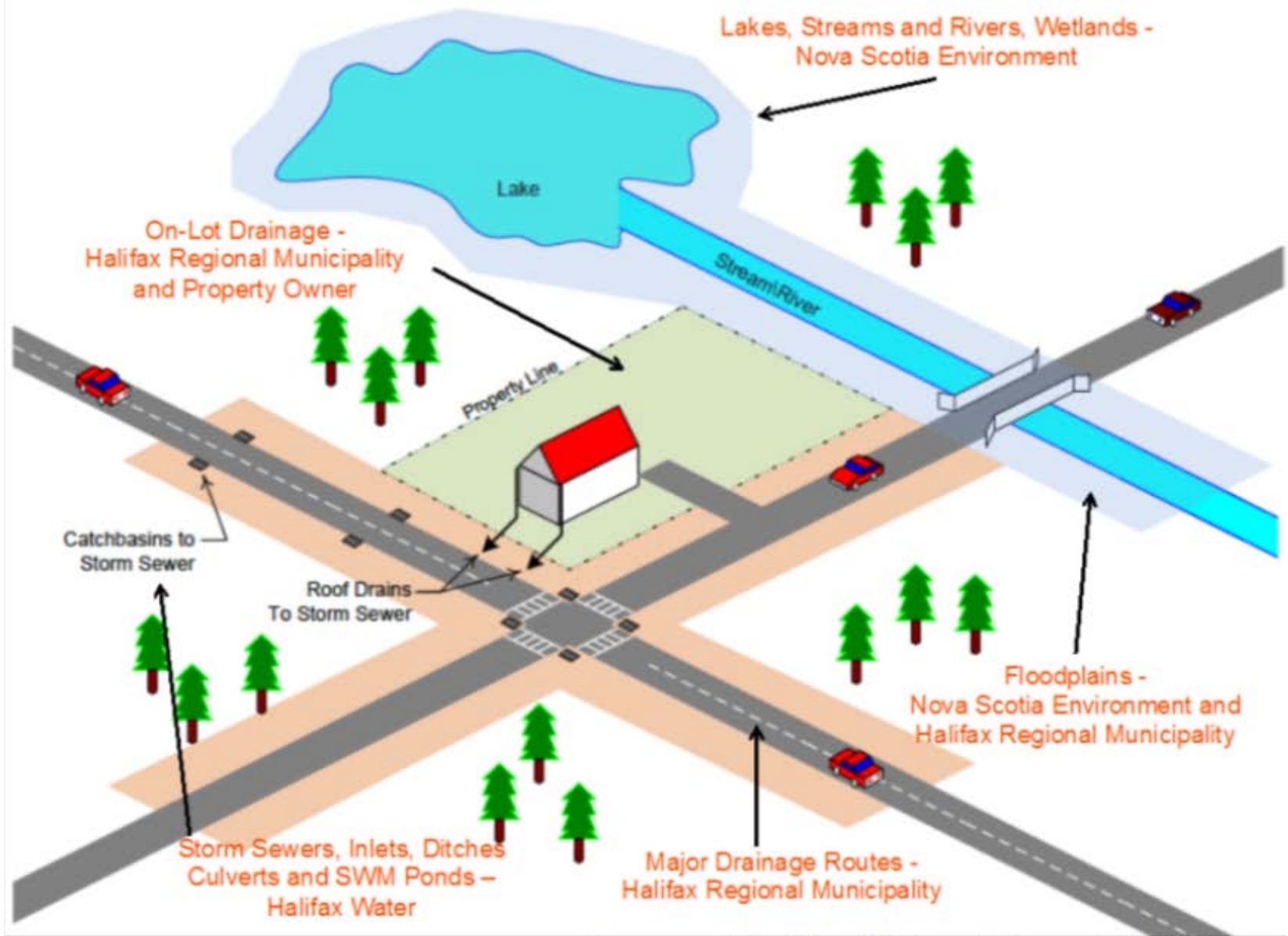
- Owner of pipes and ditches
- Governed by Utility and Review Board

Halifax Regional Municipality

- Manage overland flow from development and municipal lands

Private Property Owner

- Maintain private infrastructure and site generated flow



Source: Halifax Water Integrated Resource Plan

Stormwater Impacts

Quantity:

- Flooding of private property and street
- Sewer backups
- More stormwater in wastewater system, higher treatment costs

Quality:

- Pollutants in runoff
- Eutrophication of lakes
- Degradation of water bodies

Integrated Stormwater Policy Framework

- Joint effort between Halifax Water and HRM
- Initiated in 2013, adopted in 2017 by Council and Halifax Water Board

Objectives:

- Prevent loss of life, property damage from major storms
- Safe and convenient use of streets and other land areas before, during, and after storm events
- Mitigate long-term impacts of development downstream

ISP Action Items

- ✓ Lot Grading By-Law
- ✓ Flood Risk Assessment (NDMP)
- Changes to Land Use By-Laws
- Joint SW Design and Construction Standards
- Stormwater Management By-Law
- Green Infrastructure / Community Design Standards

Joint Stormwater Design and Construction Standards

- With Halifax Water, develop combined standards for SWM
- Will apply to Multi-unit residential, Industrial, Commercial, Institutional sites, private property
- Remove 80% TSS
- Capture and retain first 25mm (1 inch) on-site
- Remainder: balance pre-and post for runoff
- Guidelines of acceptable BMPs
- Focus on green infrastructure

Focus on Green Infrastructure

- *Green infrastructure* uses vegetation, soils, and other elements and practices to restore some of the natural processes required to manage water and create healthier urban environments



Favoured BMPs

- Downspout Disconnection
- Rainwater Harvesting
- Rain Garden
- Planter Boxes / Infiltration Basins
- Bioswales
- Permeable Pavers
- Green Roof
- Urban Tree Canopy
- Naturalized Stormwater Ponds
- Land Conservation

Favoured BMPs



Downspout Disconnection



Rainwater Harvesting

Favoured BMPs



Rain Garden



Planter Box

Favoured BMPs



Bioswales



Permeable Pavers

Favoured BMPs



Green Roof



Urban Tree Canopy

Favoured BMPs



Naturalized Stormwater Ponds



Land Conservation

Stormwater Management By-Law

- Will reinforce Joint Construction Standards
- Will capture items missed in joint construction standards
- Will also apply to public right-of-way and community design



Future SWM Plans

- Tracking pilot projects
- Incentives for existing sites to upgrade
- Incentives for “above and beyond”
- Public ROW and Community Design Standards
- Green Streets (Part of Complete Streets)

