



Integrated Resource Plan

Technical Conference 1

March 24, 2011





Agenda

- **Integrated Resource Plan (IRP) Overview**
- **Halifax Water Systems Overview**
- **Current Ongoing Halifax Water Initiatives**
- **BREAK**
- **Review DRAFT Terms of Reference for the IRP**
- **Expectations for the IRP**
- **Questions**
- **Next Steps**

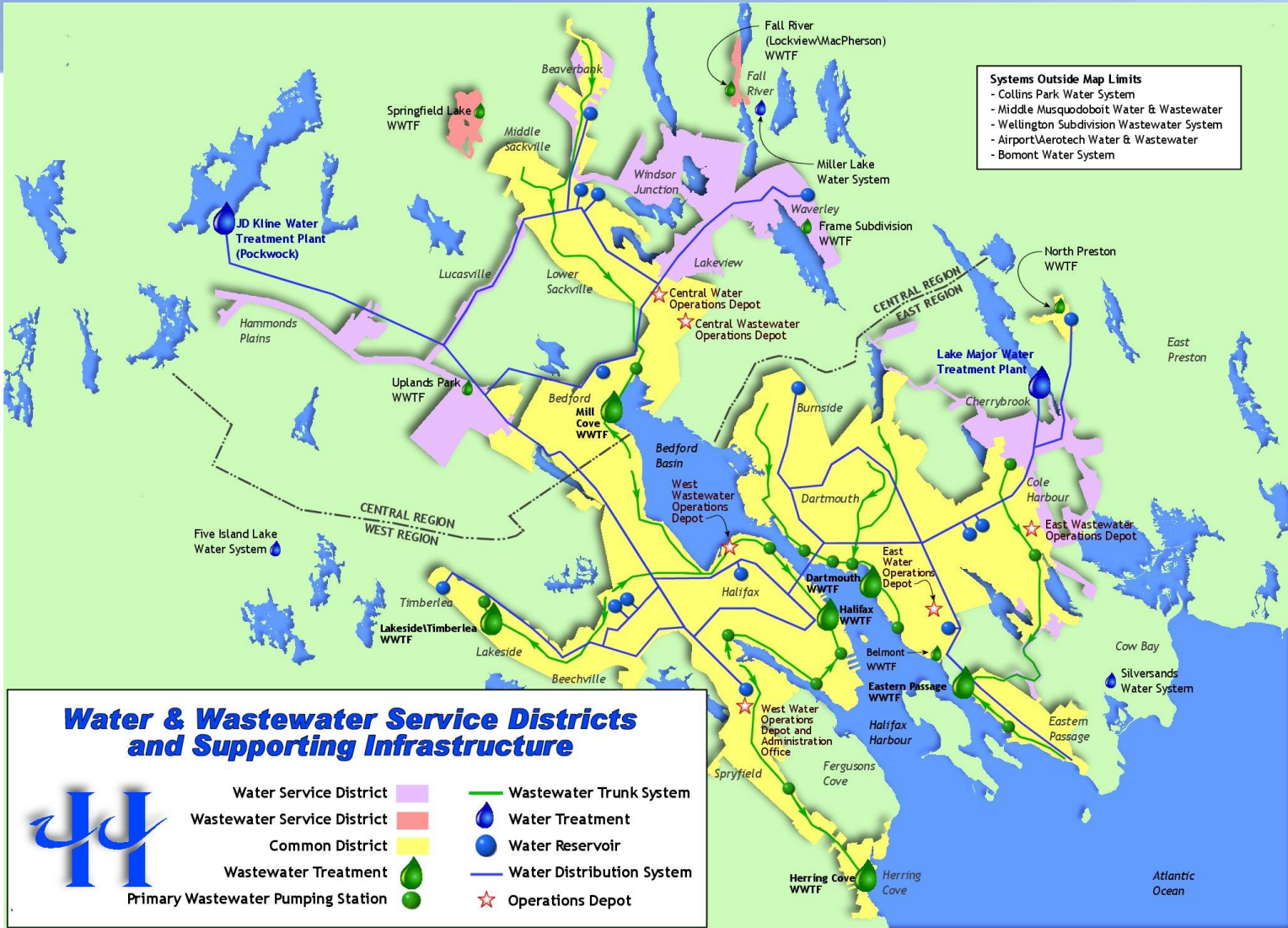
Integrated Resource Plan (IRP) Overview

- **An IRP is a comprehensive planning method that:**
 - Uses a long-term planning horizon (typically 25+ years)
 - Recognizes environmental constraints
 - Includes stakeholder participation
 - Assesses supply-side & demand-side management options
 - Uses scenario analysis
 - Conducts least cost financial analysis on scenarios that fulfill the performance requirements
 - Recommends a preferred plan

Integrated Resource Plan (IRP) Overview

- **The purpose of the IRP is to create:**
 - Method for evaluating alternative servicing scenarios
 - Long-term direction for Halifax Water
 - Comprehensive assessment of system & investment options
 - Framework for detailed capital investment analysis
 - Risk management plans for issues facing Halifax Water
 - Confidence in financial analysis in support of future rate applications to the NSUARB

Halifax Water – Systems Overview



Halifax Water – Systems Overview

- **Water**

- 2 large water supply systems
 - ✓ Pockwock Lake (~91,800 cubic metres/day)
 - ✓ Lake Major (~43,700 cubic metres/day)
- 6 small water supply systems
 - ✓ combined provide ~3,500 cubic metres/day
- 18 storage reservoirs (total storage ~259,000 cubic metres)
- More than 1300 kilometres of mains and appurtenances
- 20 distribution pumping stations
- 107 pressure control/flow meter chambers

Halifax Water – Systems Overview

• Wastewater

- 3 harbour wastewater treatment facilities
 - ✓ Dartmouth WWTF (~83,800 cubic metres/day)
 - ✓ Halifax WWTF (~139,900 cubic metres/day)
 - ✓ Herring Cove WWTF (~28,500 cubic metres/day)
- 12 additional wastewater sewersheds
 - ✓ Combined treat ~53,700 cubic metres/day
- > 1000 kilometres of sanitary sewers & appurtenances
- > 300 kilometres of combined sewers & appurtenances
- 175 pumping stations and holding tanks

Halifax Water – Systems Overview

- **Stormwater**
 - Undefined number of storm / surface watersheds
 - ~28 stormwater retention structures / facilities (~700,000 cubic metres of storage)
 - > 700 kilometres of storm sewer pipe
 - ~1600 kilometres of ditched systems
 - 1000s of cross and driveway culverts



Current Ongoing Halifax Water Initiatives – Regional Wastewater Functional Plan (RWWFP)

- **Comprehensive capacity review of existing wastewater infrastructure including:**
 - Review baseline conditions under dry weather flows and a range of rainfall events
 - Layer on growth areas as provided by HRM
 - Layer on requirements from federal regulations
 - Identify system ‘bottlenecks’ under the various conditions & scenarios (baseline, growth, compliance)
 - Develop recommendations for overcoming constraints including financial analysis & long term (25 yr) capital program



Current Ongoing Halifax Water Initiatives – SCADA Master Plan Implementation

- **Provides for enhanced communications and reporting throughout our water / wastewater systems including:**
 - System-Wide Communications Subsystem (LAN)
 - Upgrade water distribution & wastewater collection SCADA systems
 - Replace treatment plant HMI systems
 - Expand PI data collection system
 - Develop standards for various SCADA system components
 - Establish SCADA governance



Current Ongoing Halifax Water Initiatives – Debt Study

- **Comprehensive study that examines:**
 - Efficient capital structure for water, wastewater, and stormwater utilities
 - Policies of other utilities
 - Halifax Water's long-term capital investment needs
 - Options for a funding mechanism that is fair to present & future ratepayers
 - Integration of the above components in the municipal finance & governance framework in Nova Scotia



Current Ongoing Halifax Water Initiatives – Asset Management Assessment (AMA)

- **Strategic review of Halifax Water's current asset management program against best in industry practices that includes:**
 - Review of current AM practices, systems, tools, & data
 - Compare current situation to industry best practices for AM & identify gaps
 - Itemize steps to reach industry best practices levels
 - Identify high level timeline & costs to achieve the recommended plan
 - Report findings & recommendations to Halifax Water.



Current Ongoing Halifax Water Initiatives – Stormwater Management Functional Plan (SWMFP)

- **HRM project in consultation with the Province & with Halifax Water participation to investigate practices:**
 - To reduce / manage increases in development-driven stormwater flows & associated impacts
 - To incorporate natural streams in SWM strategy
 - To reduce site disturbance & impervious surfaces in new developments
 - Related to water quality (discharge of sediments / contaminants into watercourses, use of native soils / plants)
 - Best management practices / criteria for quality & quantity of stormwater discharges & improved SWM performance

Current Ongoing Halifax Water Initiatives – Other...

- **Capital project delivery**
- **Corporate Data Plan Review**
- **Work Management System Needs Assessment**



BREAK – 15 minutes

Review DRAFT Terms of Reference for IRP

- **Objective**
- **IRP Approach**
- **Scope**
- **IRP Framework**
 - Process
 - Deliverables
 - Stakeholder consultation
 - Confidentiality
 - Timeline

Expectations for the IRP

- **What do you expect from the IRP?**
 - Topics to be included
 - Level of involvement
 - Communications needs



**Questions or
Comments?**