Re: Item No. 11.3.1



Halifax Harbour Solutions Project; In Review





Harbour Solutions Project Achievements

- One of Canada's Top 10 Infrastructure Projects, National/International Recognition
- Within Budget [\$3 million below Original Budget]
- Economic Driver for the Region
- Catalyst for Numerous Municipal Upgrades
- Catalyst for Community Development
 - Herring Cove Water and Sewer, Trails, Park Improvements
 - Dartmouth Waterfront Trails
 - Halifax Community Investment Fund/Micro-Loan Program



Harbour Solutions Project Achievements

- Enabler for Natural Gas
- Beaches Reopened
- Excellent Safety Record
- Significant Environmental and Recreational Benefits





- 1996: HRM Amalgamation
- 1996: HRM Hosts Harbour Solutions Symposium
- 1997: HRM Council Appoints Harbour Solutions Advisory Committee (HSAC)
- 1998: The HSAC Recommended a Plan, now known as the Harbour Solutions Plan
- 2002: HRM Selected the Halifax Regional Environmental Partnership [HREP] to Implement Project (Design/Build/Operate)
- Timelines on the Project:

 http://www.halifax.ca/harboursol/HSPTimeline-1749toPresent.html



Harbour Solutions Project Components

- Sewage Collection System, Including Outfalls,
 Pumping Stations, Tunnel, Diffusers & Access Roads
- Wastewater Treatment Facilities (3) Design and Construction
- Biosolids Processing Facility
- Biosolids Transportation
- Operation of Wastewater Treatment Facilities
- Source Control (Pollution Prevention) and Inflow/Infiltration Reduction Programs





Contractual Arrangements

- June, 2003: HRM terminated Harbour Solutions Project relationship with HREP due to fundamental differences over quality control of the wastewater treatment facility discharge
- PROJECT DE-BUNDLED: HRM to operate plants
- October, 2003: Agreement with Dexter Harbour Solutions to design & build sewage collection system (SCS) (\$112M)
- November, 2003: SCS groundbreaking





Contractual Arrangements

- June 2004: Agreement with D&D Water Solutions Inc. for the design, construction and commissioning of 3 wastewater treatment facilities (\$137M)
- November 2004: Agreement with SGE Acres Ltd to design and build biosolids processing facility (BPF) at AeroTech Park (\$12.5M)
- November 2004: 5-year (renewable) agreement with N-Viro to operate & maintain BPF
- May 2006: 10-year agreement with Seaboard Liquid Carriers for biosolids transportation from new wastewater treatment facilities



Collection System Facts

- 16.8 Kilometres of Mainline Pipe
- 23 Major Outfalls Intercepted
- 1075 Metre Underground Tunnel
- 7 New Pumping Stations, 17 Combined Sewer Overflows [CSOs]
- Minimum of 10,000 Tonnes of Contaminated Soil Moved
- 50:1 Outfall Diffusion
- Private Outfall Elimination Program has curtailed direct raw sewage discharges equivalent to a population of 6,600



Wastewater Treatment Facility [WWTF] Facts

- Treatment to advanced primary level [screening, grit removal, coagulation, settlement and UV disinfection]
- Plants designed to treat up to 4 X Average Dry Weather Flow
- Average Dry Weather Flows;
 - Halifax 20 MGD [90 MLD]
 - Dartmouth 12 MGD [42 MLD]
 - Herring Cove 6MGD [27 MLD]
- Flows greater than 4 X Average Dry Weather Flows are directed through waterfront CSO Chambers [screened]

www halifaxwater ca

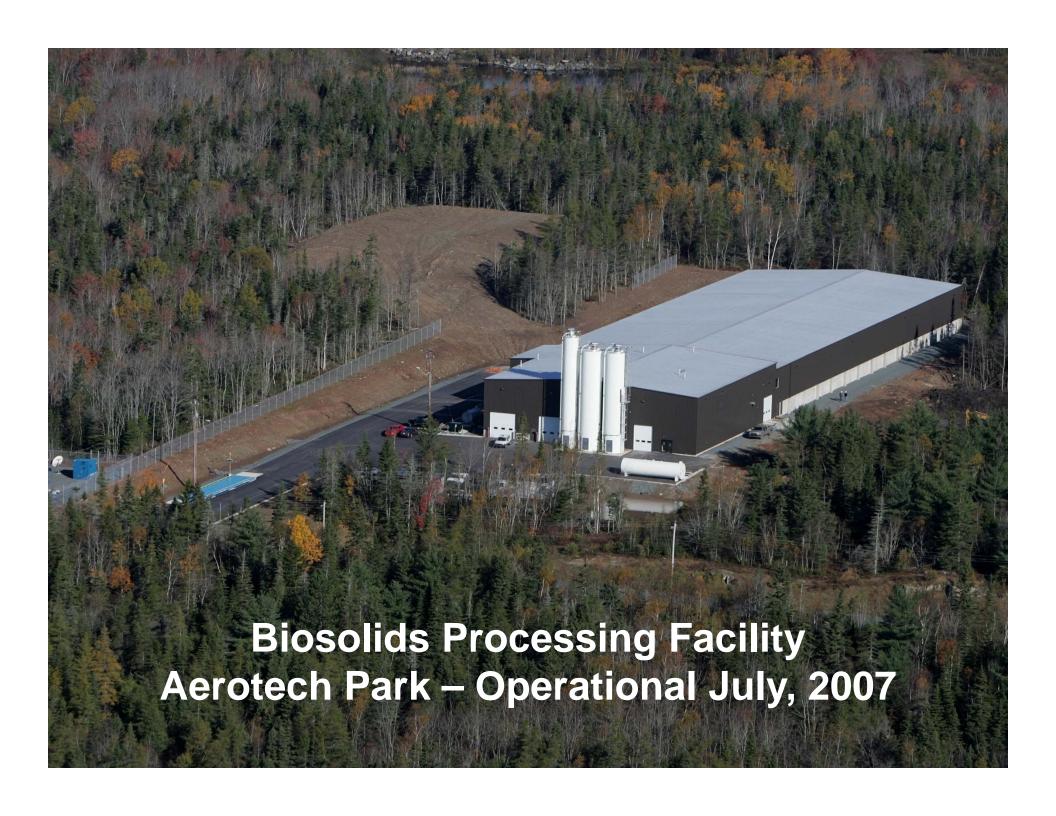


Project Status/Milestones

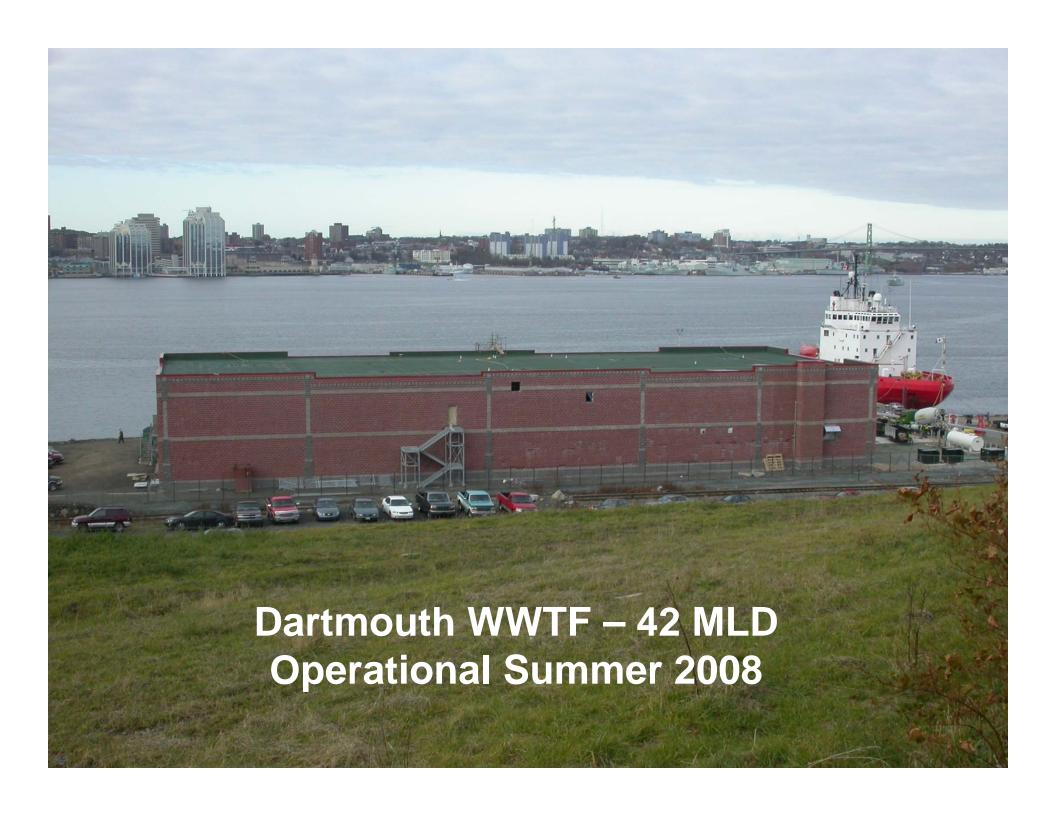
Biosolids Processing Facility [BPF]:

- Plant is in operation by N-Viro since July 2007
- Biosolids product meets all regulations, with product meeting NS Environment Class A standards
- Labeled by Canadian Food Inspection Agency as a soil amendment
- HRM transferred ownership to Halifax Water on June 1, 2009 [consistent with 2007 Transfer Agreement]
- Contract in place with N-Viro to operate BPF until 2019
- Biosolids transportation contract with Seaboard expires
 December 31, 2016

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Project Milestones

Halifax WWTF & SCS

- Substantial completion on December 19, 2008 [except excluded assets – Pier A PS/CSO & waterfront CSOs]
- WWTF experienced a flood on January 14, 2009
- HRM transferred ownership to Halifax Water on June
 1, 2009 [consistent with 2007 Transfer Agreement]





Project Milestones

Halifax WWTF & SCS

- Phase One recovery of WWTF completed in September 2009 [flow screened and odour control system operational]
- Phase Two recovery of WWTF completed in June 2010 [plant returned to full operation] - Black Rock and Dingle Beaches open for supervised swimming
- Total completion on March 25, 2011 [except excluded assets – anticipated completion by end of 2011]



Project Milestones

Dartmouth WWTF & SCS

- SCS reached substantial completion on April 21, 2010
- WWTF reached substantial completion on June 28, 2010
- WWTF & SCS reached total completion on March 25, 2011

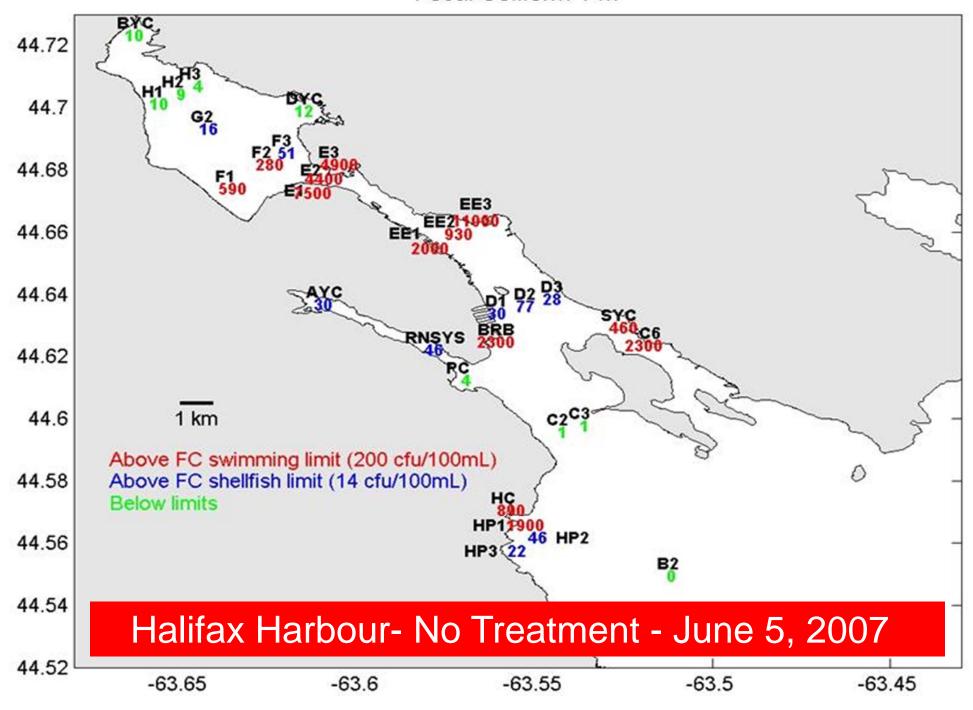
Herring Cove WWTF & SCS

- WWTF & SCS reached substantial completion on June 28, 2010
- WWTF & SCS reached total completion on March 25, 2011

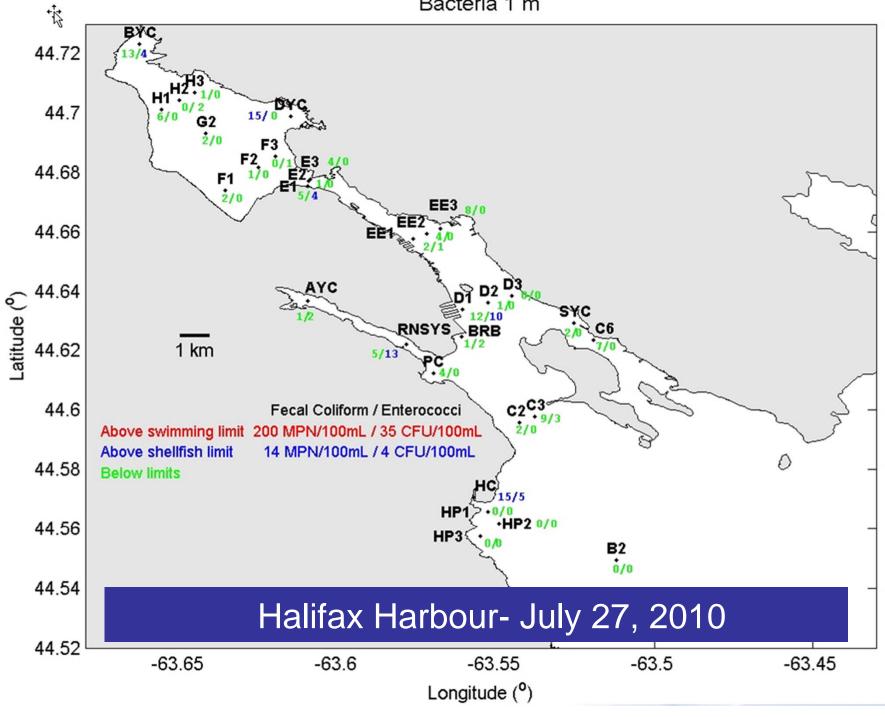
HHSP Project Management and Dartmouth and Herring Cove assets transferred to Halifax Water on August 1, 2010



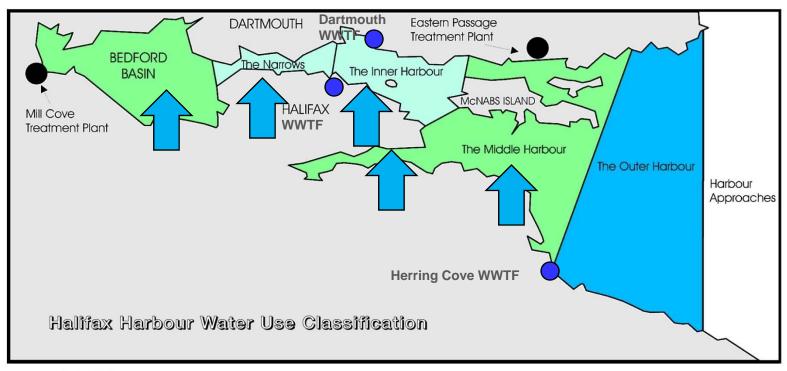
Fecal Coliform 1 m







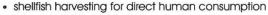
HSAC Harbour Water Use Guidelines



CLASS SA



bathing and contact recreation



· fish and wildlife habitat





- bathing and other primary contact recreational activities
- · fish and wildlife habitat

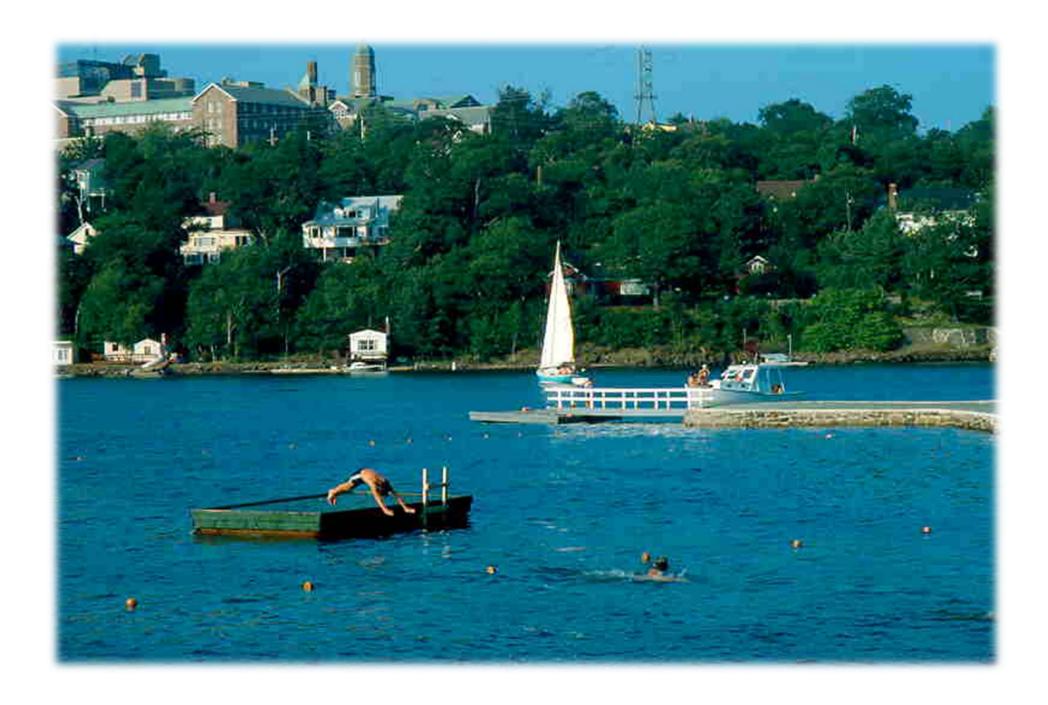
CLASS SC

- boating and other secondary contact recreational activities
- industrial cooling
- good aesthetic value
- · fish and wildlife habitat

Existing WWTF









Project Costs

- Original budget established at \$332.7 million
- Project completed for \$329.8 million
- Halifax WWTF recovery costs at \$10.9 million [\$10.4 million recovered through insurance]
- Settlement agreement reached with D&D Water Solutions Inc. on WWTFs concurrent with total completion [Halifax Water received \$3.0 million as an all inclusive settlement for all contractual matters including post commissioning costs and Halifax plant recovery]



Thank Yous and Acknowledgements

- Too many to put on one slide
- Three levels of government involved in funding
- Several councils deliberated on the project
- A multitude of Stakeholders including our citizens who pushed for this project to be done
- The many contractors, subcontractors and consultants
- The tremendous effort of HRM and Halifax Water staff







To Provide World Class Services for Our Customers and Our Environment

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