



# Halifax Harbour Solutions Project

May 24, 2006



## Halifax Harbour Quick Stats

- ❖ Cargo volume = 13.9 million metric tonnes(2004)
- ❖ 122 cruise vessels, over 210,000 cruise ship passengers(2004)
- ❖ One of the deepest/largest natural harbours in the world
- ❖ Ice free with minimal tides
- ❖ Economic impact of almost \$700 million
- ❖ Economic impact of over 9,000 direct and indirect jobs
- ❖ 1752 - North America's oldest operating salt water ferry began
- ❖ 1758 - North America's first naval dockyard opened



# Moving Forward

## 4 Key Components of Harbour Solutions Project:

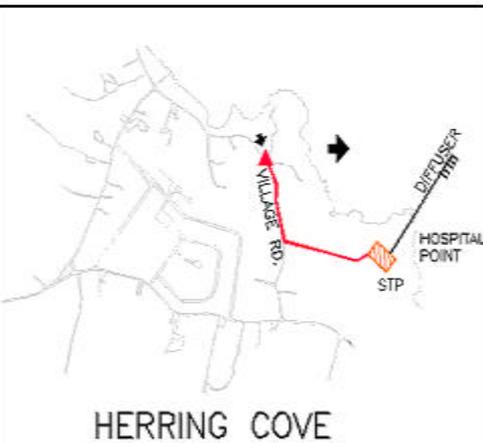
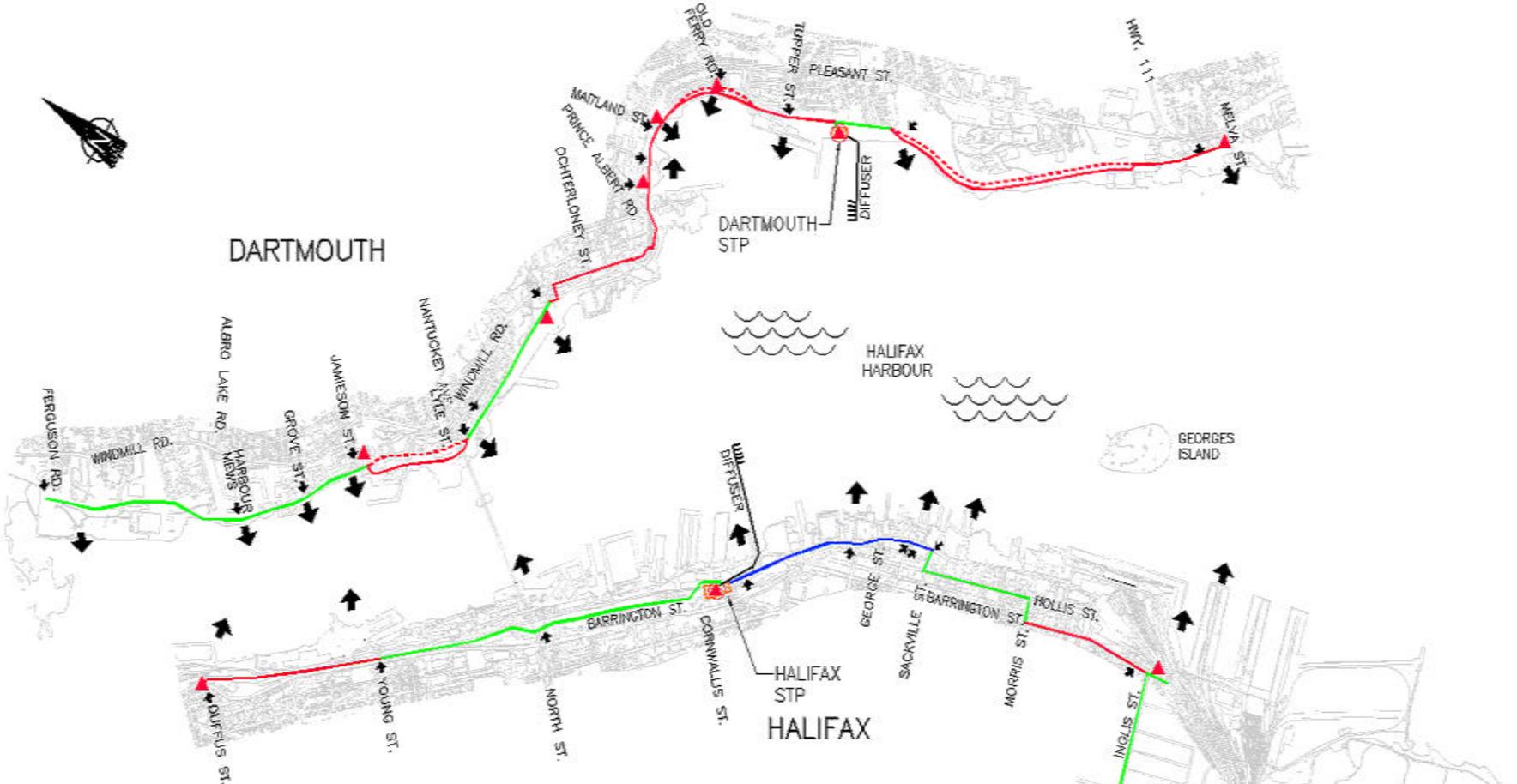
- Sewage Collection System, including piping, outfalls, diffusers, pumping stations & access roads
- Waste Water Treatment Plants design and construction
- Operation of Waste Water Treatment Plants
- Biosolids (sludge) management



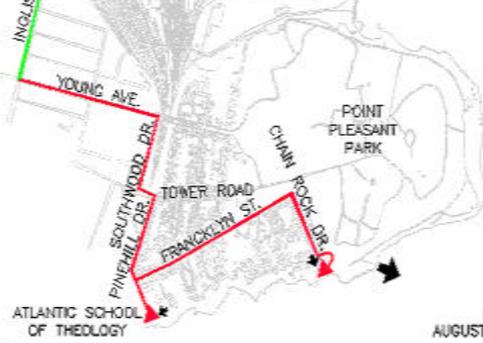
## Sewage Collection System

Dexter Harbour Solutions to build, HRM owns & operates

- Collects sewage and carries to WTP's
- Groundbreaking November 12, 2003
- Expected completion by September 2007
- Consists of all piping, pumping stations, outfalls and diffusers, 1Km underground tunnel



LEGEND	
	SEWAGE TREATMENT PLANT
	FORCEMAIN/PRESSURE SEWER
	OPTIONAL ROUTE
	GRAVITY SEWER
	OPTIONAL ROUTE
	TUNNEL
	OUTFALL
	INTERCEPTION LOCATION
	COMBINED SEWER OVERFLOW
	COLLECTION SYSTEM PUMPING STATION
	STP PUMPING STATION



REVISION 0  
AUGUST 27, 2003

## DEXTER SEWAGE COLLECTION SYSTEM



# Waste Water Treatment Plants Design & Construction

## 3 waste water treatment plant sites

- downtown Halifax at Cornwallis and Lower Water St.
- Dartmouth on land from the Coast Guard base
- Hospital Point in Herring Cove
- all are designed to blend in visually, all received input from community
- all are designed for no impact from noise or odour

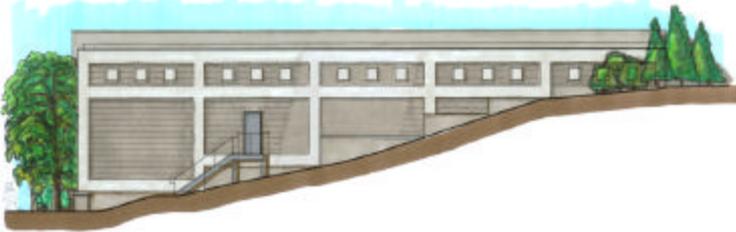
# Halifax WTP



PROPOSED EAST ELEVATION - OPTION 1



PROPOSED WEST ELEVATION



PROPOSED NORTH ELEVATION



PROPOSED SOUTH ELEVATION

## Operational Spring 2007



# Dartmouth

Operational Summer 2007

# Herring Cove

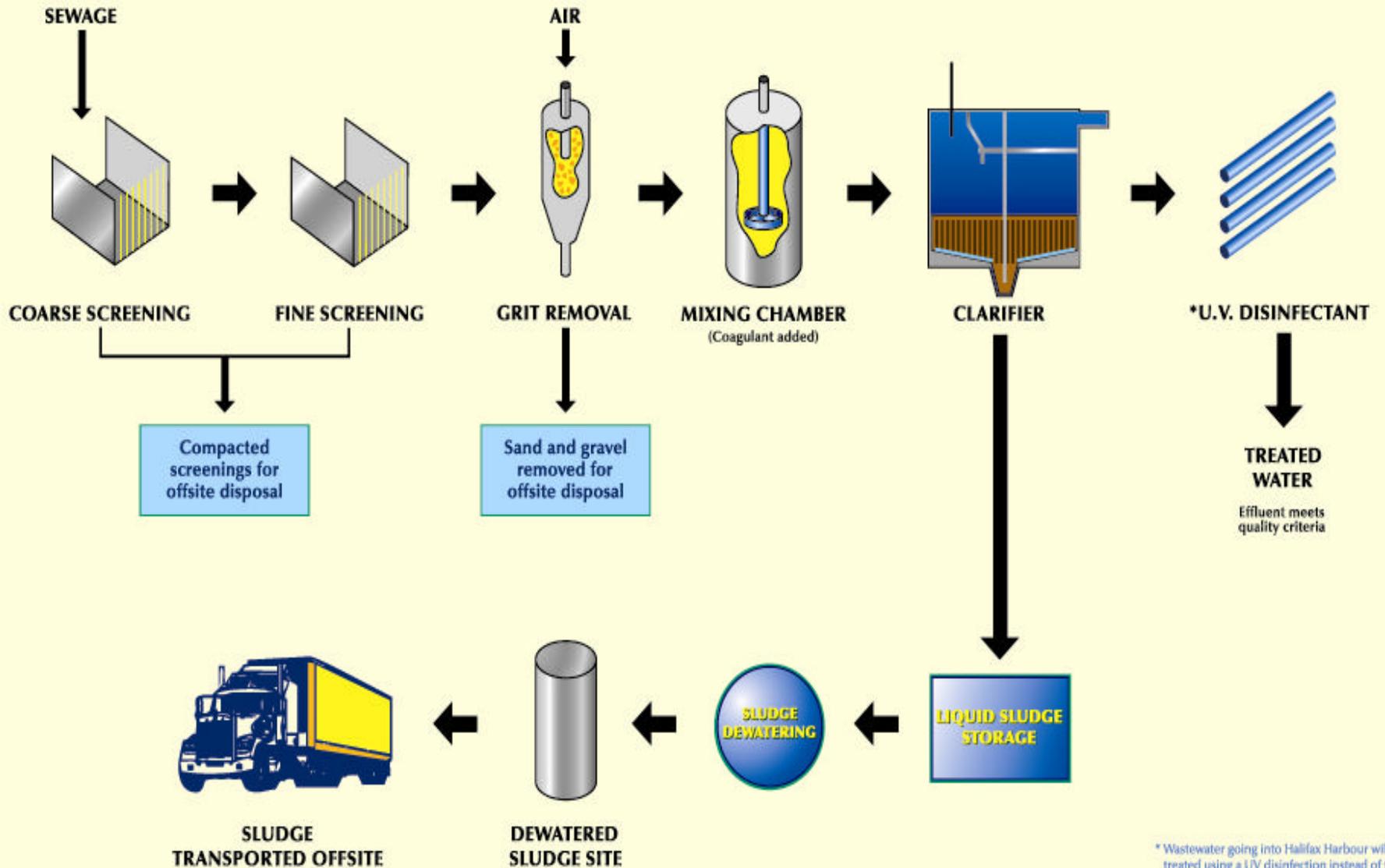
Operational Summer 2008



# Operation of Waste Water Treatment Plants

- HRM will own and operate
- Advanced primary treatment of sewage
  - Removes 70% of suspended solids in the wastewater
  - High-intensity ultra-violet lights are used to kill bacteria (UV disinfection) meeting or exceeding all regulatory water quality targets

# SEWAGE TREATMENT PROCESS



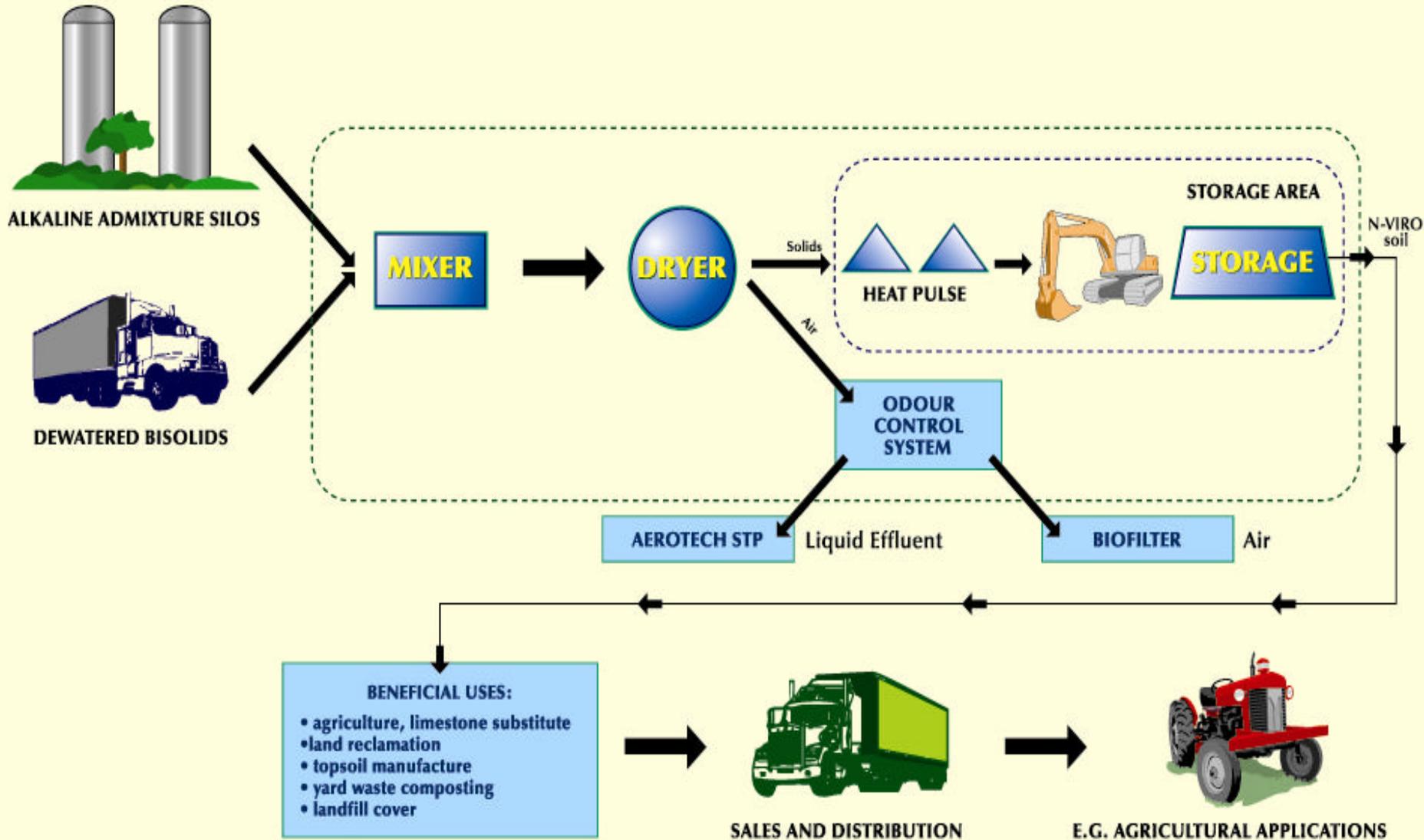
\* Wastewater going into Halifax Harbour will be treated using a UV disinfection instead of the more traditional chlorination process

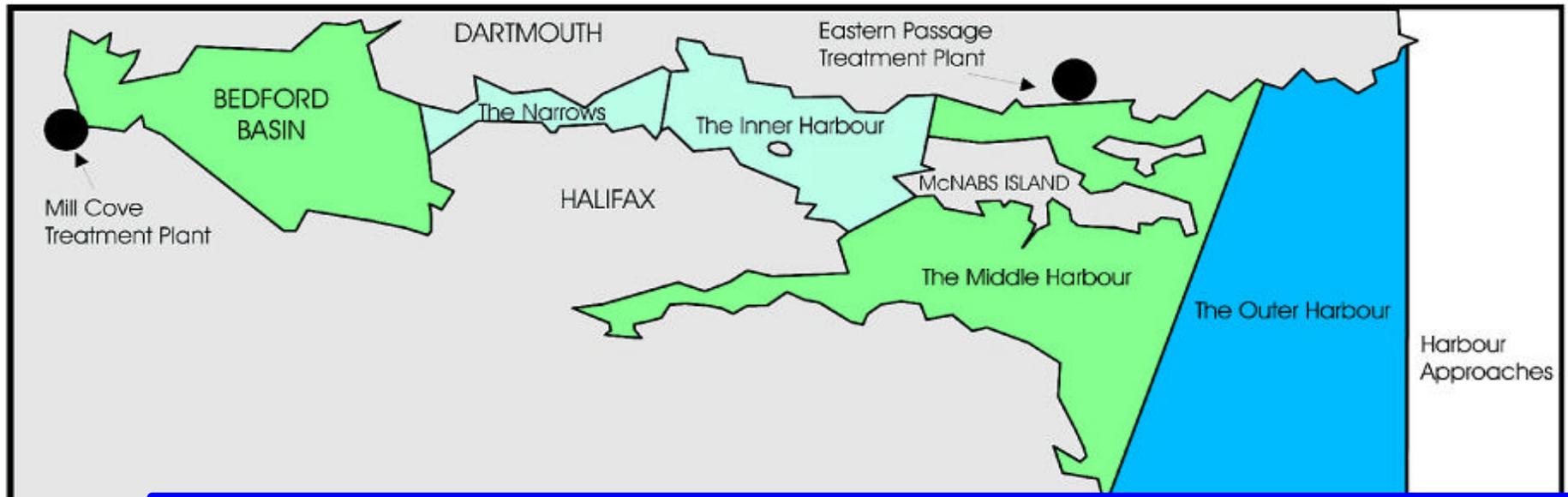


# Biosolids Management

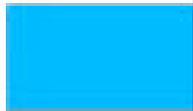
- October, 2004, Council agrees to enter into an agreement with SGE Acres Ltd.
- By product of the sewage treatment process
- Dewatered sludge removed from settling tanks and transported to sludge processing facility
- Construction underway - operational spring 2007

# BIO-SOLID PROCESSING PLANT



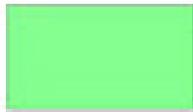


### CLASS SA



- bathing and contact recreation
- shellfish harvesting for direct human consumption
- fish and wildlife habitat

### CLASS SB



- shellfish harvesting for human consumption after depuration
- 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



**Harbour Solutions Project - Water Sampling In Halifax Harbour**



# Responsibilities of HRM Citizens

- Reducing and/or eliminating the use of household hazardous products
- Not pouring leftover cleaning products, paints, solvents and pesticides down kitchen drains
- Encouraging responsible disposal practices at your place of business
- Being aware of and supporting programs and facilities HRM has undertaken to reduce pollution sources
- Conserve water



# Source Control Program

- Wastewater Discharge By-law
- Working with businesses to identify harmful waste materials and limit their use or disposal
- Household Hazardous Waste Depots
- Support efforts of Federal Government to curtail dumping of ship wastewater in the Harbour
- Pesticide By-law
- Extensive public education/stewardship program underway



**Pollution Prevention Program – Water Sampling**



# How Can You Stay Informed?

- Naturally Green Newsletter
- HRM Website ([www.halifax.ca/harboursol](http://www.halifax.ca/harboursol))
- E-mail ([contactHRM@halifax.ca](mailto:contactHRM@halifax.ca))
- HRM Call Centre (490-4000)
- Harbour Solutions Project Office (490-4756)
- News Releases
- Public Meetings



**Tunnel - September 2004**



**Tunnel - April 2005**



**Halifax Treatment Plant – January 2005**



**Halifax Treatment Plant – April 2005**



**Halifax Treatment Plant – April 2005**



**Halifax Treatment Plant – April 2006**



**Dartmouth Treatment Plant – May 2006**



**Halifax Pipe Bridge – December 2004**



**Halifax Pipe Bridge - December 2004**



**Halifax Outfall Pipe - December 2004**



**650m Dartmouth Outfall Pipe - April 2006**

SOUTH-WEST ELEVATION

SCALE: 1:75

SOUTH-EAST ELEVATION

SCALE: 1:75



*Atlantic School of Theology – Pumping Station*

