

Waterfront Toronto's Soil Recycling Facility



March 11, 2010
Public Meeting
955 Queen Street East, Toronto

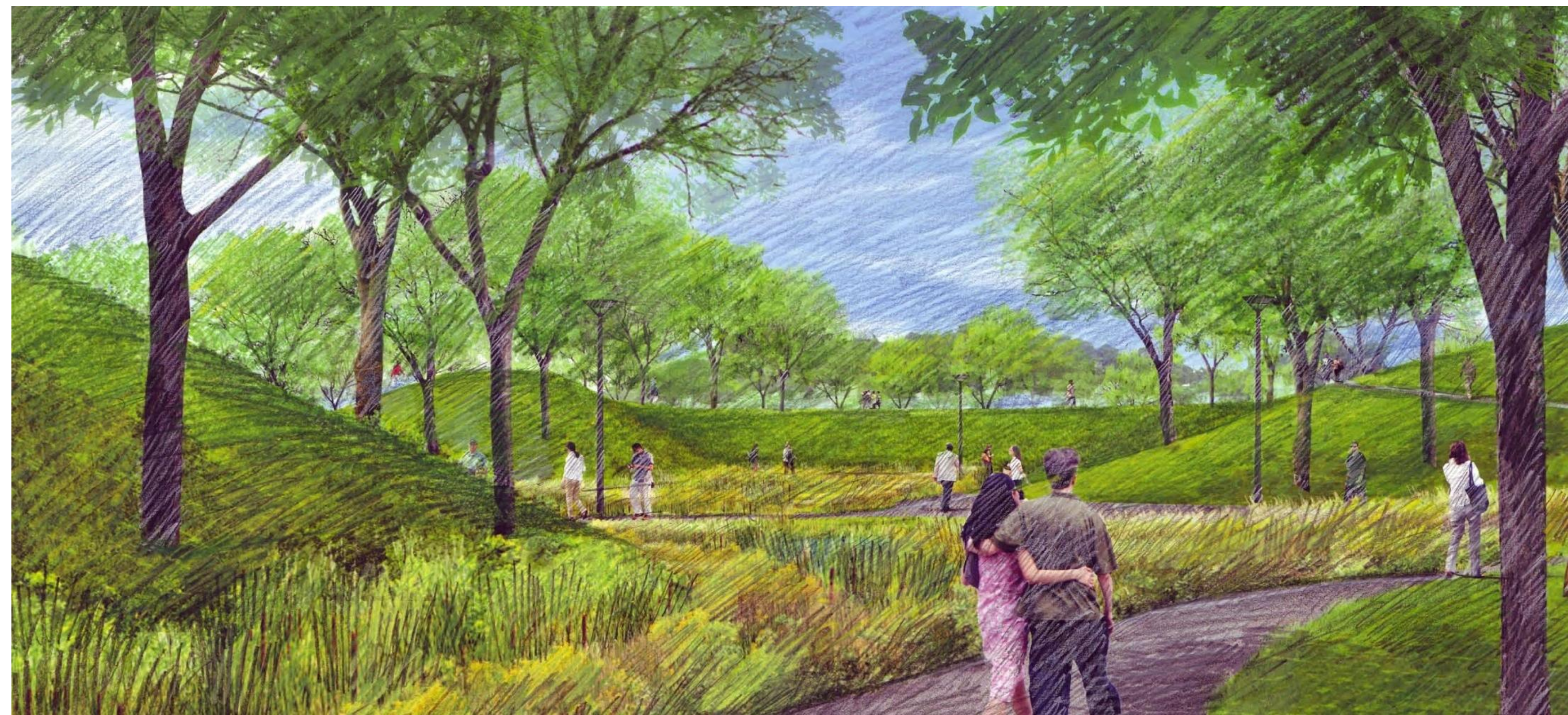
Soils Project Team

Waterfront Toronto

- Kevin Bechard
 - Director, Environmental Approvals
- Raffi Bedrosyan
 - Director, Port Lands
- Lisa Prime
 - Director, Sustainability
- David DuBois
 - Executive Director, Geo-Environmental
- Jane McGrath
 - Project Manager

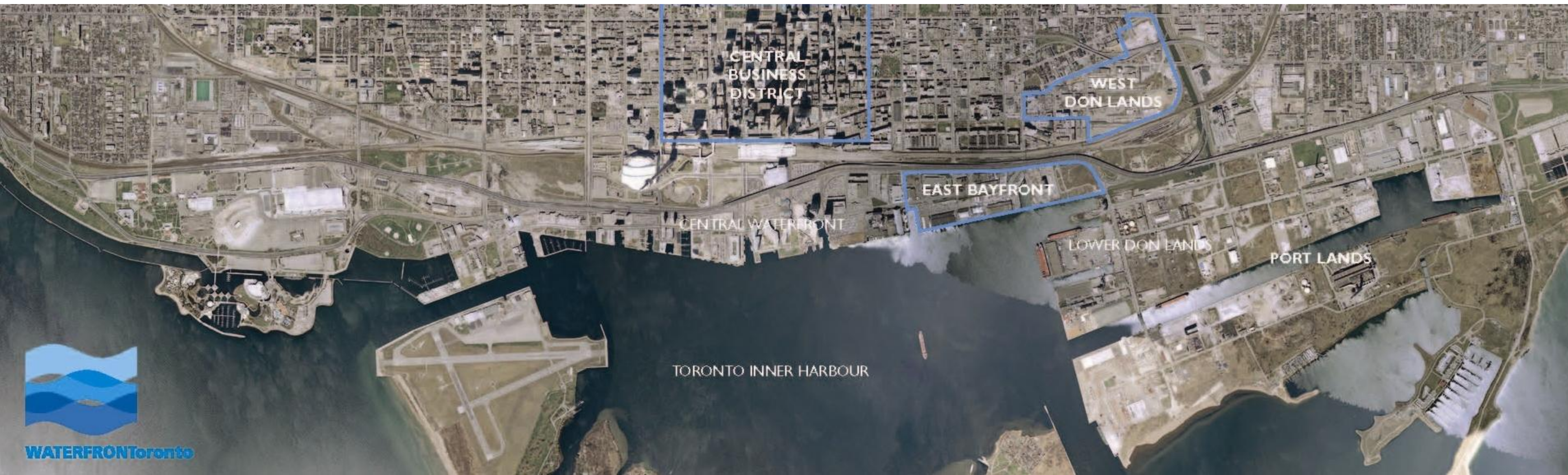
ENVIRON Soil and Groundwater Management

- Steve Desrocher
 - Senior Environmental Geoscientist/
Project Manager



Waterfront Toronto Vision

- Waterfront Toronto - public agency and steward of waterfront revitalization
- Created by the federal, provincial and municipal governments in 2001
- Mandated to oversee and lead all aspects of waterfront revitalization
- Committed to creating a waterfront that:
 - ensures public accessibility at the water's edge
 - allows high standards for sustainable development
 - delivers design excellence
 - fosters economic development



Waterfront Toronto – Sustainability

- Goal is long-term sustainable community outcomes that enhance the environment, provide economic benefits and produce social/cultural gain
- Seeking a qualitative improvement in human communities and ecological systems
- Revitalization not redevelopment

Aquatic Habitat Toronto

- Partners in aquatic habitat improvements include Fisheries and Oceans Canada, Ministry of Natural Resources, Toronto and Region Conservation, City of Toronto
- New aquatic habitat has been built under the Spadina, Rees and Simcoe WaveDecks



A History of Waterfront Industrialization



- Industrial activity increased on the waterfront from the 1820s to the 1960s at a time when environmental standards were less stringent

- Much of Toronto's waterfront was constructed by filling with materials that are considered contaminated by current standards



Site Remediation

- Impacted soils are currently widespread throughout the Designated Waterfront Area
- Waterfront Toronto's objectives include mitigation and control of risks associated with these soils

Cherry Beach Sports Fields



SUB-SURFACE ENVIRONMENTAL ANALYSIS*

- ZONE 1 MIXED SOILS WITH POTENTIAL FOR DIOXINS, FLY ASH & HEAVY METALS
- ZONE 2 MIXED SOILS WITH POTENTIAL FOR PETROLEUM PRODUCTS & HEAVY METALS
- ZONE 3 SAND & RUBBLE SOILS WITH POTENTIAL FOR PETROLEUM HYDROCARBONS & HEAVY METALS
- ZONE 4 MIXED SOILS WITH POTENTIAL FOR PETROLEUM HYDROCARBONS, HEAVY METALS & LEACHATE TOXIC WASTE
- ZONE 5 MIXED SOILS WITH POTENTIAL FOR PETROLEUM HYDROCARBONS & HEAVY METALS
- ZONE 6 SAND WITH POTENTIAL FOR HEAVY METALS
- ZONE 7 MIXED FILL & WOOD CHIP WITH NO FOUND CHEMICALS
- ZONE A MIXED SOILS WITH POTENTIAL FOR FLY ASH & HEAVY METALS

Sources: CH2M HILL, "Lake Ontario Park Overview of Environmental Risk Management Issues," June 2006; CH2M HILL, Cherry Beach Investigation drawings; Dillon, Port Area Business Park Analysis for the Toronto Harbour Commission



Lake Ontario Park

Remediation Requirements

- If soils do not meet standards for the intended land use, they require remediation
- Most of the soils within the Designated Waterfront Area are only marginally contaminated and can be treated for reuse
- The Lower Don Naturalization project will generate excess soils and require soils for grading – approximately 1,000,000 cubic metres of soil will require management



Lower Don lands

Waterfront Toronto's Soil Management Approach

Waterfront Toronto has developed an overall soil management strategy that has as its priorities:

- In place management of soil or groundwater where practical
- Removal, treatment and reuse of soil within the Designated Waterfront Area
- Removal, treatment and reuse of soil outside of the Designated Waterfront Area
- Removal and disposal of soil and groundwater outside of the Designated Waterfront Area



Implementation

- Soil and Groundwater Master Plan
 - Catalogue soil and ground water characteristics for future management
- Soil Recycling Pilot
 - Evaluate treatment technologies and costs
- Soil Recycling Approvals
 - Secure approvals from Ministry of the Environment to implement soil recycling project
- Construct and Operate Facility
 - Treat impacted soil from Designated Waterfront Area for reuse



Soil Recycling Pilot

Prior to committing to full-scale operation, Waterfront Toronto proposes to conduct a smaller-scale recycling pilot test that will treat up to 25,000 cubic metres of soil

The Pilot will:

- Identify range of treatment options and costs
- Confirm that we can treat impacted soil to standards set by the Ministry of the Environment Brownfield Regulation
- Showcase treatment technologies



**Soil Recycling Facility, Zeebrugge,
Belgium**

photo source: DEC Environmental

Soil Treatment Pilot Timeline

January 2010	Request for Proposal for technology issued <i>Objective is to select 3 or more contractors to conduct pilot-scale operations starting in 2010</i>
March 8, 2010	Request for Proposal closed
Spring 2010	Finalize Approvals
Summer / Fall 2010	Implementation of pilot
Winter 2011	Evaluate Results

Public Meetings will be held at key milestones



Proposed Site for Soil Recycling Facility



- 294 – 348 Unwin Avenue (8 hectares 20 acres)
- Currently zoned industrial
- Most recently used for aggregate processing and salt storage
- Adjacent land uses include former Hearn GS, PEC and industrial properties to the west, proposed Lake Ontario Park and Cherry Beach Sports Fields to the south and west

Design and Operation Principles

- Pre-testing of incoming soil quality before receipt of Soil Recycling Facility
- No hazardous waste or PCB waste

Site Controls

- Primary and controlled access from Unwin Avenue
- Tracking of incoming soil
- Dust control and ambient air monitoring
- Stormwater and runoff control
- Control of soil track-out from the site



Next Steps

- Establishment of Stakeholder Advisory Committee
- Public Meeting to introduce Soil Recycling Pilot firms – Spring 2010
- Public Meeting to showcase pilot results – Spring 2011
- If the pilot test is successful:
 - Issue Request for Proposal for full-scale operation

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