

Overview of Ontario's Brownfields Program

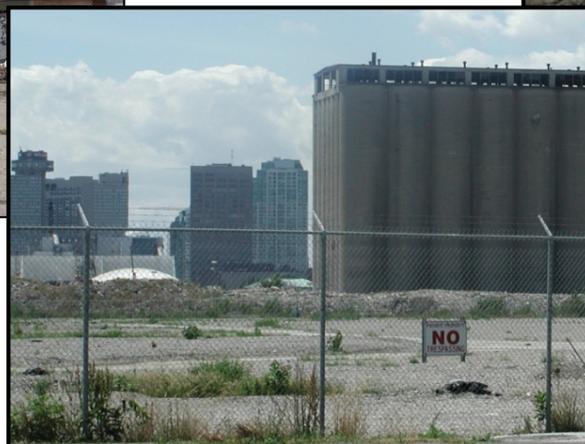
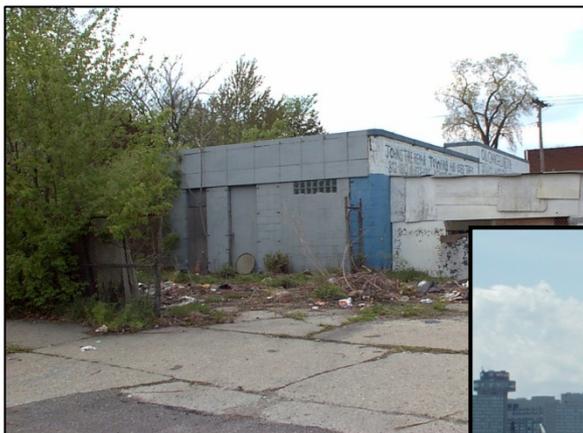
Information Session First Nations

January 20, 2009

Agenda

1. Welcome
2. Overview of Ontario's Framework for Brownfields Redevelopment
3. Discussion
4. Lunch
5. Current Status
6. Proposed Brownfield Reforms
7. Next Steps and Closing Remarks





Overview of Ontario's Framework for Brownfields Redevelopment



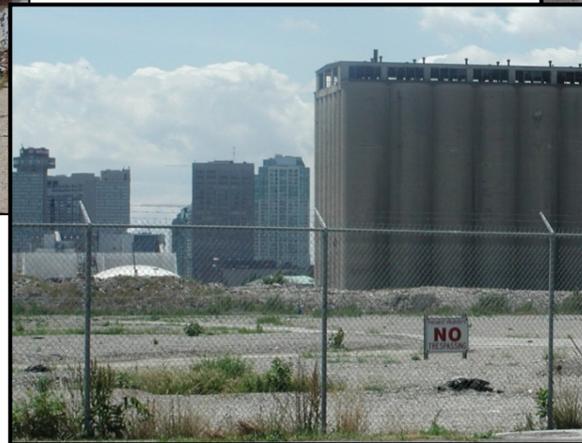
Outline



1. Overview of Provincial Contaminated Sites Initiatives
2. What is a Brownfield?
3. Government Response
4. Why is this Important?
5. Overview of Ontario's Brownfields Program
6. Service Station Example



Overview of Contaminated Sites





Overview of Provincial Contaminated Sites Initiatives

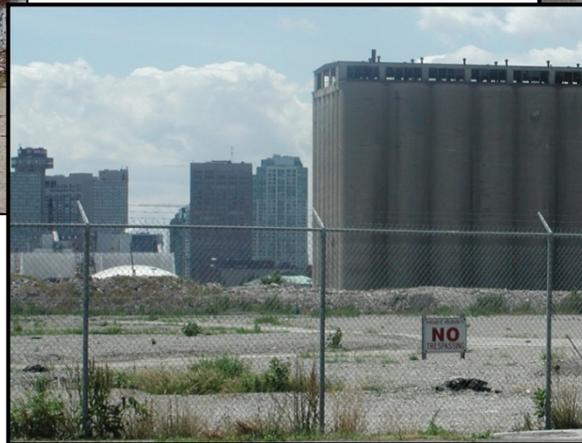
1. Voluntary Clean-up
 - Ministry of the Environment (MOE), Ministry of Municipal Affairs and Housing (MMAH)
 - Brownfields Program
2. Compliance-driven Clean-up
 - MOE – Orders, Inspections
 - MOE – Area-Wide Risk Assessments
 - Other
 - Ministry of Northern Developments and Mines (MNDM)– Mine closure clean-up plans
 - www.mndm.gov.on.ca
3. Abandoned Properties
 - Ministry of Energy and Infrastructure
 - One Window access to information about escheated properties.
 - MNDM
 - Clean-up partnership fund for abandoned mines
 - Ministry of Finance, MMAH
 - Removal of crown liens from municipal tax sale properties.

Overview of MOE Contaminated Sites Initiatives



Protecting our environment.

What is a Brownfield?





Brownfields Overview

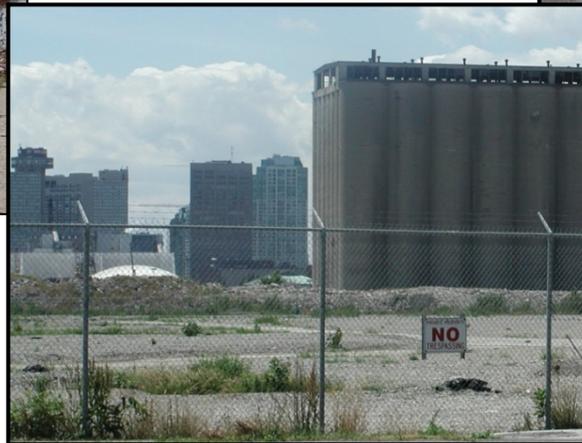
- A brownfield is an abandoned, vacant or underutilized industrial or commercial property which may or may not be contaminated and where there is potential for redevelopment.
- Brownfields can include vacant or underused industrial sites, gas stations, railway yards, warehouse sites, refineries, dry cleaners, foundries, mills or other commercial sites where chemicals or toxic substances may have been stored.
- Across Ontario, brownfields can be found in communities large and small, urban and rural. Estimates of the number of brownfields across Canada range from 30,000 to 100,000.
- **Key Challenge:**
 - Encourage the revitalization of brownfield properties and surrounding communities while protecting health and the environment.



Brownfields Overview

- Despite the potential complexity of redeveloping these properties, they are often in desirable and strategic locations:
 - In the heart of urban communities, on scenic waterfronts, in or near downtown areas.
- Brownfields have the advantage of being in areas where infrastructure is already in place and thus have a variety of potential uses, contributing to:
 - Urban intensification
 - Community revitalization
 - Economic development
 - Employment, and/or
 - Housing market rejuvenation (thus taking pressure off greenfield development).
- As a result, there has been growing interest among municipalities, communities, owners, developers and environmentalists to identify ways to clean-up these sites for productive uses.

Government Response





Brownfields Legislative History

- In January 2001, a Smart Growth Strategy was announced by the Ontario Premier, one aspect being the development and redevelopment of brownfields.
- Part of the Strategy was the development of legislation entitled the “***Brownfield’s Statute Law Amendment Act, 2001***,” which came into effect in October 2005.
 - This Act made amendments to various legislation including the *Environmental Protection Act* (EPA) and the *Ontario Water Resources Act*.
 - These amendments were implemented through Ontario Regulation 153/04 (“Record of Site Condition – Part XV.1 of the Act”) made under the EPA.

The Legislation Established:

- Clear rules for the assessment and clean-up of brownfield sites
- Clear rules for future environmental liability
- Quality assurance mechanisms
- Municipal planning and financial tools



Brownfields Legislative History

(Cont'd)

- **Clear Rules for the Assessment and Clean-up of Brownfield Sites**

Clear rules for the assessment and clean-up of contaminated sites while ensuring public and environmental health are protected, for instance, providing clear remediation standards.

- **Clear Rules for Environmental Liability**

Clear rules regarding environmental liability, for instance, protection from future environmental orders when cleanup standards are met.

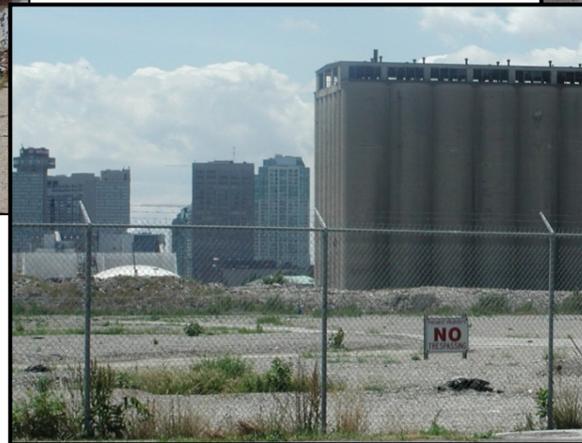
- **Quality Assurance**

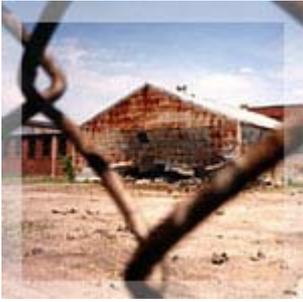
Mechanisms to ensure quality clean-up of contaminated sites, for instance, reporting to a site registry, requiring qualified persons to certify that a site meets appropriate standards.

- **Municipal and Financial Planning Tools**

Planning and financial tools including Community Improvement Planning legislation and property tax incentives.

Why is this Important?

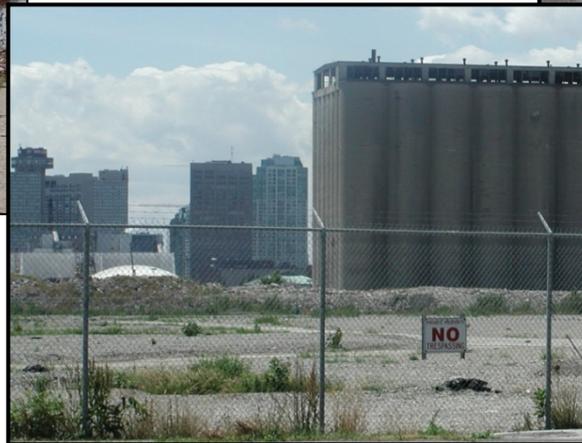




Benefits of Redeveloping Brownfield Sites

- Cleaning up and redeveloping brownfield sites provide:
 - Enhanced public health and safety
 - Environmental protection
 - Economic development and investment
 - Urban renewal
 - Cost-effective and efficient land use
 - Decreased urban sprawl into greenspace

Overview of Ontario's Brownfields Program





Records of Site Condition (RSC)

- Record of Site Condition is a document that provides a summary of the environmental condition of a property.
 - In order to complete this document, a property owner would hire a Qualified Person.
 - A Qualified Person is defined in regulation to include Professional Engineers and Geoscientists.
 - A Qualified Person certifies that the property meets the appropriate standards at a specific point in time.
- Once the RSC is completed, the Qualified person files this document on the Brownfields Environmental Site Registry (BESR).
- A RSC is mandatory if there is a change of property use to one that is more sensitive (e.g., commercial to residential use).



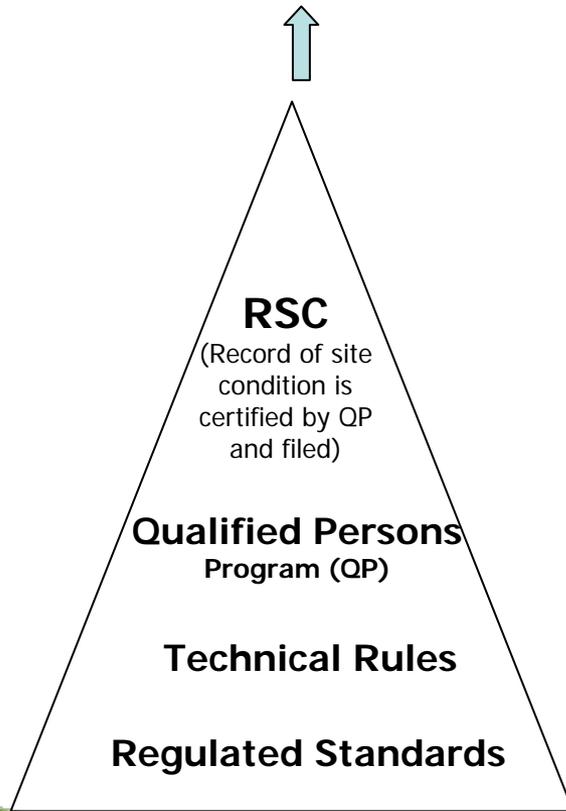
Benefits of filing a Record of Site Condition

The property owner benefits in the following ways:

1. Receives limited liability protection from environmental orders;
 - This statutory liability protection is available to current and future owners and not to a polluting owner. A polluter is always responsible.
2. Eligibility for financial incentives for restoring brownfield properties.

Liability Protection – How does it work?

Liability Protection

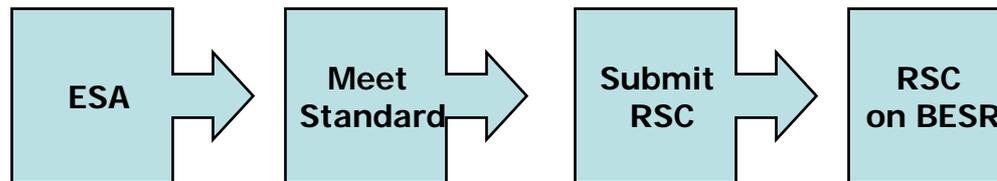


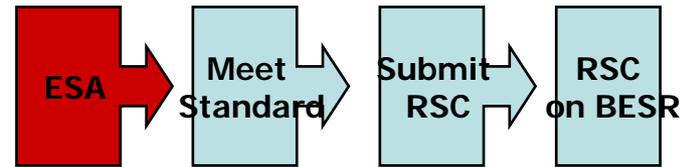
1. QP conducts an environmental site assessment of property
2. If any clean up is required to meet the soil and ground water standards, than this is completed
3. QP certifies that the property meets provincial standards for the intended land use (industrial, commercial, residential, etc.)
4. The property owner files RSC to the publicly accessible electronic Registry (BESR)
 - ❑ In return, the owner (and future owners) receive liability protection from environmental orders
 - Regulatory liability protection for any historic contamination remaining on the property as of the certification date on the RSC

Record of Site Condition Process

Records of Site Condition: A Guide on Site Assessment, the Cleanup of Brownfield Sites and the Filing of Records of Site Condition

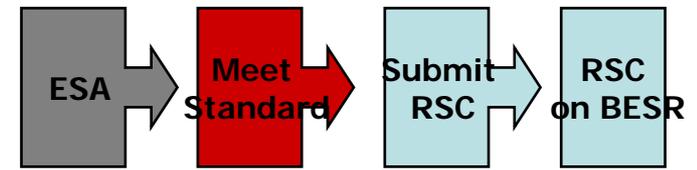
- Four components of process include:
 - Environmental Site Assessment(s):
 - Meeting the Standards;
 - Submit a RSC to Ministry;
 - RSC filed to the Registry.





Environmental Site Assessments (ESA)

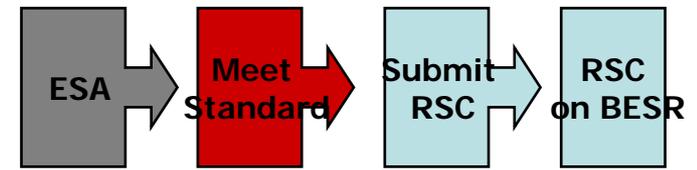
- Canada Standards Association (CSA) environmental site assessment standards (ESA) are adopted by reference.
- Some terms and conditions in the CSA standards are re-defined to make them consistent with Ontario legislation.
- For RSC purposes:
 - **Phase I ESA** - determine the likelihood that one or more contaminants have affected land and water.
 - **Phase II ESA** - determine the location and concentration of contaminants in land or water.



Site Condition Standards

“Soil, Ground Water and Sediment Standards for Use under Part XV.1 of the Environmental Protection Act”

- The Ministry sets site condition standards for soil, sediment and ground water for such contaminants as benzene, petroleum hydrocarbons and metals.
 - There are approximately 120 different contaminants.
- The standards are based on protecting human health and the environment.
- The standards are set based on ways people, animals and plants on a property may become exposed to contamination.
 - 1) Organized by property use and ground water potability.
 - 2) Application is limited by site specific conditions (e.g., shallow soil).
 - 3) Table contains soil, sediment and ground water standards:
 - Background standards are based on Ontario Typical Range numbers;
 - Generic full depth and stratified are risk-based numbers;
 - Shallow soil standards support improved procedures for applying standards.

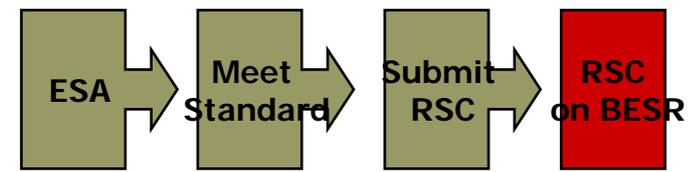


Property Specific Standards

“Risk Assessment”

“Procedures for the Use of Risk Assessment under EPA Part XV.1”

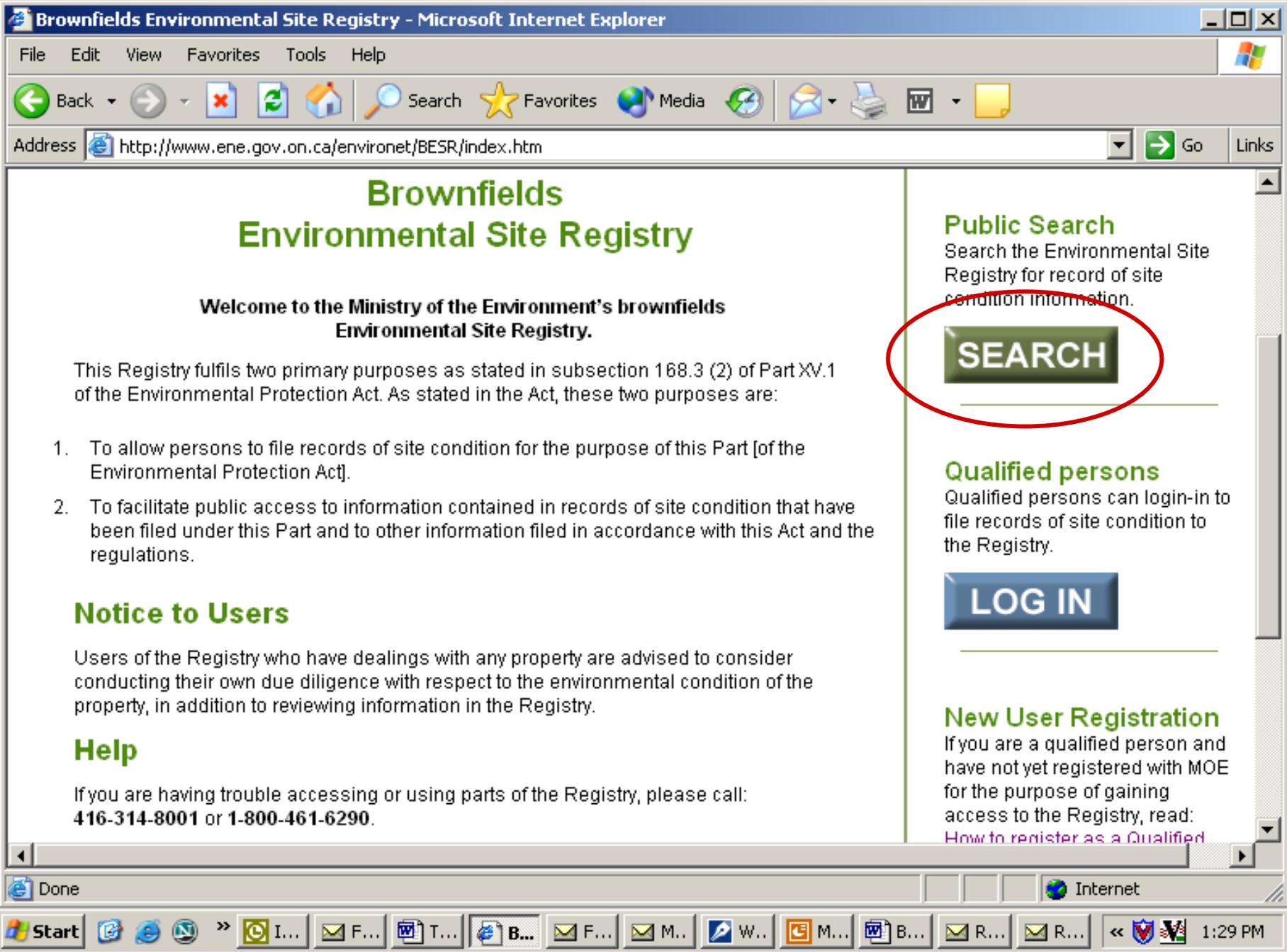
- Outcome is establishment of property specific standards;
- Unique Qualified Person for risk assessment (QP_{RA})
- Risk Assessment includes:
 - A pre-submission form;
 - Human health and ecological risk assessments; and,
 - A report
- Reviewed under specific timelines (8-22 weeks)



Environmental Site Registry

A publicly accessible, web-based registry

- Facilitates public access to information
- Information includes RSC and, if applicable, notices
- Contains a notice advising users to consider conducting their own due diligence of the environmental condition of any property
- <http://www.ene.gov.on.ca/environet/BESR/search.htm>



Brownfields Environmental Site Registry

Welcome to the Ministry of the Environment's brownfields Environmental Site Registry.

This Registry fulfils two primary purposes as stated in subsection 168.3 (2) of Part XV.1 of the Environmental Protection Act. As stated in the Act, these two purposes are:

1. To allow persons to file records of site condition for the purpose of this Part [of the Environmental Protection Act].
2. To facilitate public access to information contained in records of site condition that have been filed under this Part and to other information filed in accordance with this Act and the regulations.

Notice to Users

Users of the Registry who have dealings with any property are advised to consider conducting their own due diligence with respect to the environmental condition of the property, in addition to reviewing information in the Registry.

Help

If you are having trouble accessing or using parts of the Registry, please call: **416-314-8001** or **1-800-461-6290**.

Public Search

Search the Environmental Site Registry for record of site condition information.

SEARCH

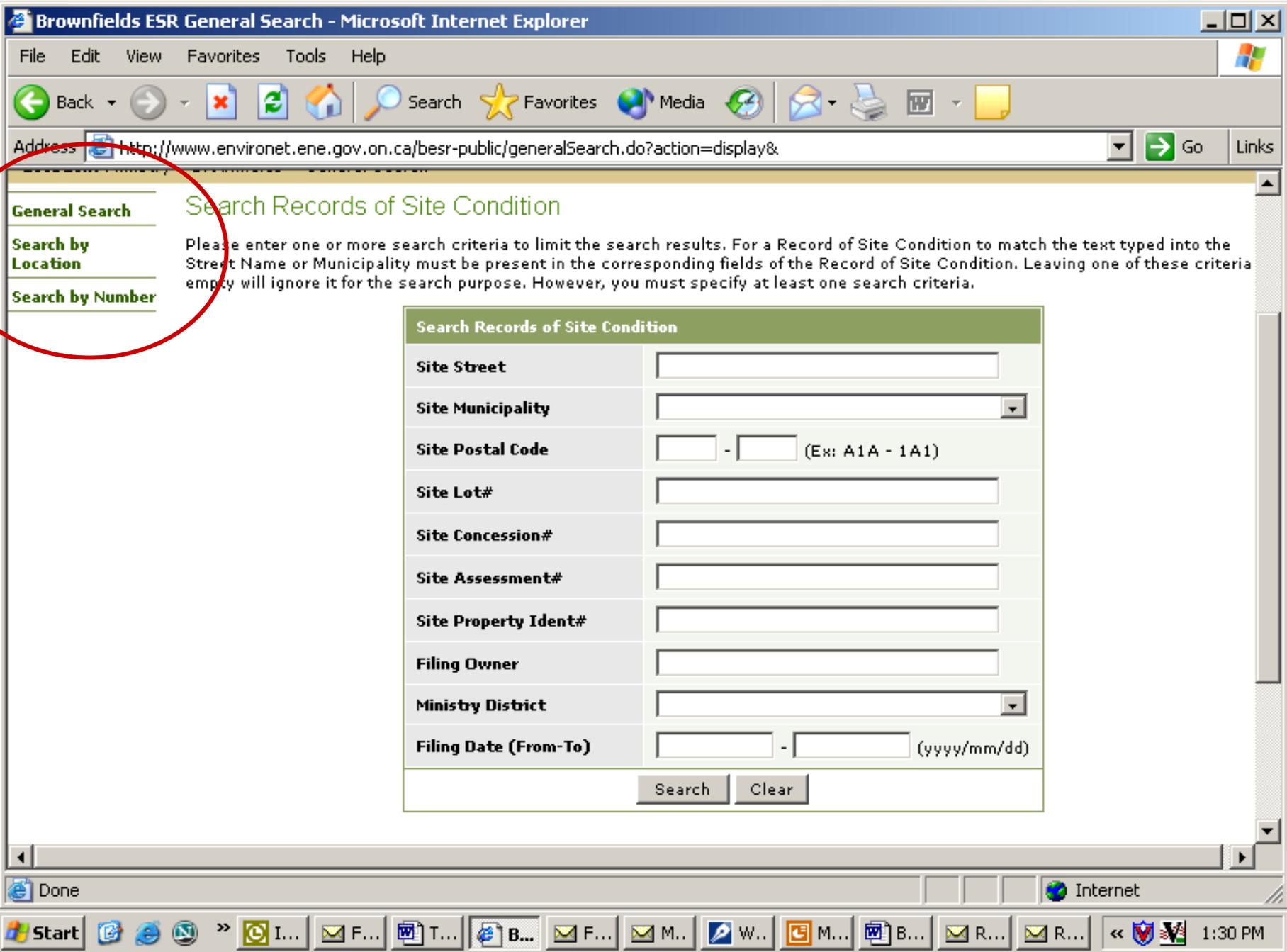
Qualified persons

Qualified persons can login-in to file records of site condition to the Registry.

LOG IN

New User Registration

If you are a qualified person and have not yet registered with MOE for the purpose of gaining access to the Registry, read: [How to register as a Qualified](#)



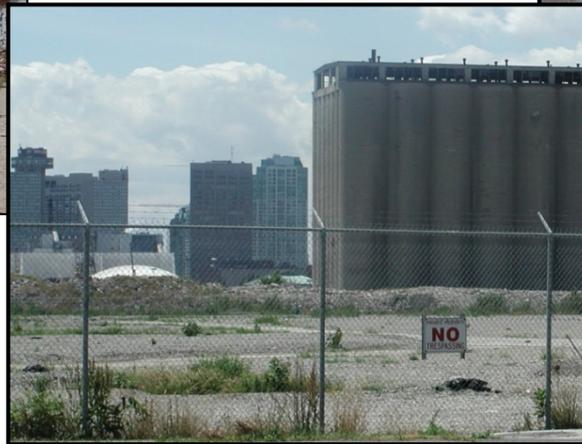
- General Search
- Search by Location
- Search by Number

Search Records of Site Condition

Please enter one or more search criteria to limit the search results. For a Record of Site Condition to match the text typed into the Street Name or Municipality must be present in the corresponding fields of the Record of Site Condition. Leaving one of these criteria empty will ignore it for the search purpose. However, you must specify at least one search criteria.

Search Records of Site Condition	
Site Street	<input type="text"/>
Site Municipality	<input type="text"/>
Site Postal Code	<input type="text"/> - <input type="text"/> (Ex: A1A - 1A1)
Site Lot#	<input type="text"/>
Site Concession#	<input type="text"/>
Site Assessment#	<input type="text"/>
Site Property Ident#	<input type="text"/>
Filing Owner	<input type="text"/>
Ministry District	<input type="text"/>
Filing Date (From-To)	<input type="text"/> - <input type="text"/> (yyyy/mm/dd)
<input type="button" value="Search"/> <input type="button" value="Clear"/>	

Example



Service Station Redevelopment

- **Guidance tool will soon be available on-line**
 - A guide and resource for Ontario municipalities and others to assist with the redevelopment of former service stations located in their communities: www.aboutremediation.com
 - Provides a user-friendly, standardized approach
 - Guiding principles provide key elements and best practices



◆ Why Service Stations?

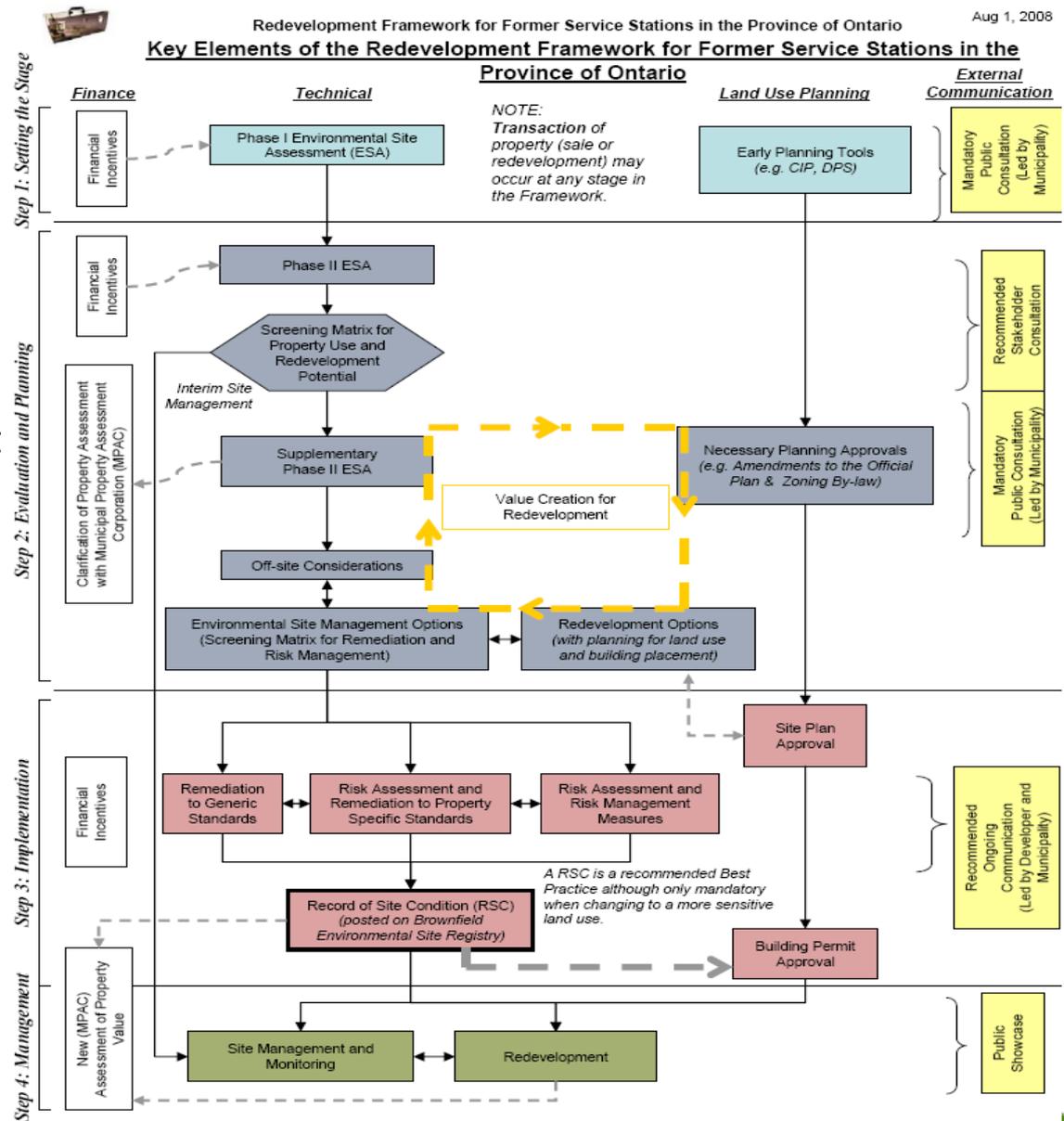
- Most common type of brownfield site in Canada
- Highly visible
- Often lower value sites that aren't worth the risk of redevelopment

Flow Chart

◆ Illustrates how municipal planning and technical decisions interact at different stages of redevelopment

◆ Guidance on:

- Improving the development potential of a site
- And, where no immediate redevelopment potential exists -> implementing **interim site uses** with property owner help



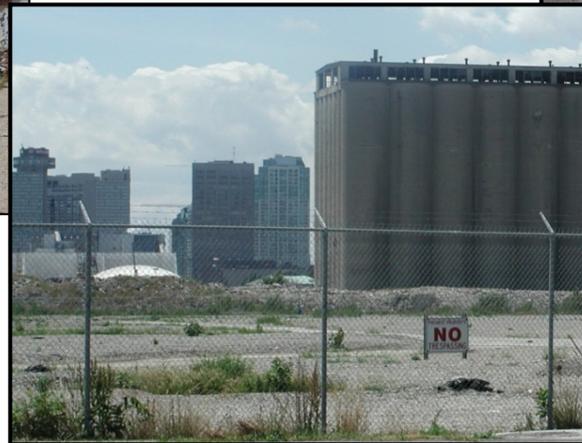
Overview of 4 Key Redevelopment Steps

Perspectives Steps	Finance	Technical	Land use planning	External Communication
Step 1: Setting the Stage	<ul style="list-style-type: none"> Assessing the opportunity for specific brownfield sites to be a catalyst for community revitalization 			
Step 2: Evaluation and Planning	<ul style="list-style-type: none"> Opportunities for redevelopment value creation 			
Step 3: Implementation	<ul style="list-style-type: none"> Multiple remediation strategies exist with equally protective outcomes 			
Step 4: Management	<ul style="list-style-type: none"> Recognizing relationship between on-going site management and redevelopment options 			

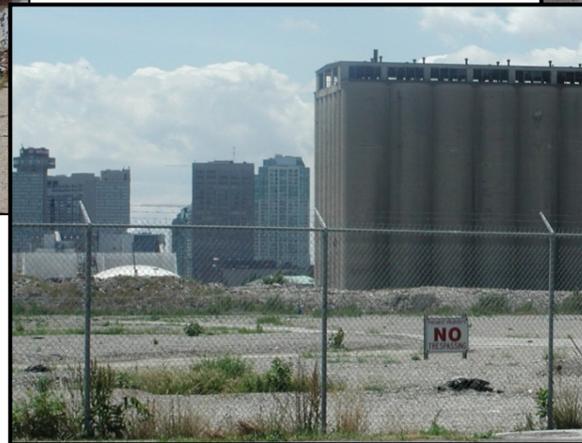
Overview of Common Remediation Technologies

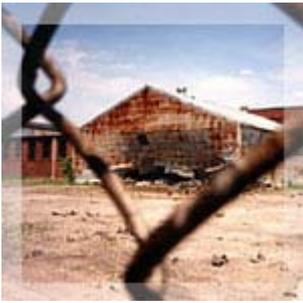
Remediation Type	Examples	Relative Chance of Success	Time (mos.)	Cost (\$K)	Ontario Regulations	Other Considerations
A. REMEDIATION TO GENERIC STANDARDS						
A1. SOIL						
Excavation and Off-site Disposal	<ul style="list-style-type: none"> • Dig and haul to landfill for garbage cover ("dig and dump") • Dig and treat for surface land spreading 	Higher	2-4	100 - 300	Licensed hauler, licensed disposal facility (May require PTTW and/or CofA (Sewage) if dewatering required)	<ul style="list-style-type: none"> ○ Problem removed from site ○ Relatively simple to design and implement ○ Shipping costs may be high depending on location of off-site disposal. Landfill tipping fees vary - market driven ○ May not be feasible for deep or difficult to access contamination ○ Fugitive emissions may be a problem
Ex-Situ On-site treatment	<ul style="list-style-type: none"> • Bioremediation • Allu Bucket • Composting • Thermal desorption 	Medium to Higher	4-36	100 - 200	CofA (Waste), CofA (Air) (May require PTTW and/or CofA (Sewage) if dewatering required)	<ul style="list-style-type: none"> ○ Requires space to operate treatment facility ○ Generally most effective for organic compounds ○ May not be feasible for deep or difficult to access contamination ○ Effectiveness may be limited by concentrations ○ Time varies depending on technology; biopile may take up to 2-3 years. Allu bucket may take only 4 months ○ Fugitive emissions may be a problem

Discussion



Current Status





Current Status

- In October 2005, the *Brownfields Statute Law Amendment Act, 2001* came fully into effect.
- **By 2006:** Stakeholders were requesting reforms that would provide:
 - Additional liability protection for brownfield developers
 - Enhanced environmental protection through more provincial oversight
 - Updated standards and a simpler risk assessment process
- **May 2007:** Key legislative reforms to Ontario legislation:
 - Liability protection for developers undertaking remediation before ownership
 - Civil liability protection for municipalities when relying on a RSC for a building permit or planning approval
 - Limited civil liability protection for the province to address abandoned lands
 - Amendments to *Mining Act* to include the concept of voluntary rehabilitation of abandoned mines to allow for the removal of the environmental regulatory barriers for “Good Samaritans” undertaking this work.



Current Status (cont'd)

- Regulatory amendments and revised standards are posted on Environmental Bill of Rights Registry for public comment until February 10, 2009.
- Ontario is currently discussing the proposed amendments with interested parties.



Environmental Registry Posting

Highlights of the proposed amendments include:

1. Enhanced Record of Site Condition integrity
2. Off-site liability protection
3. A streamlined risk assessment approach
4. Strengthened standards
5. Complementary amendments to Ontario regulations
6. Transition provisions

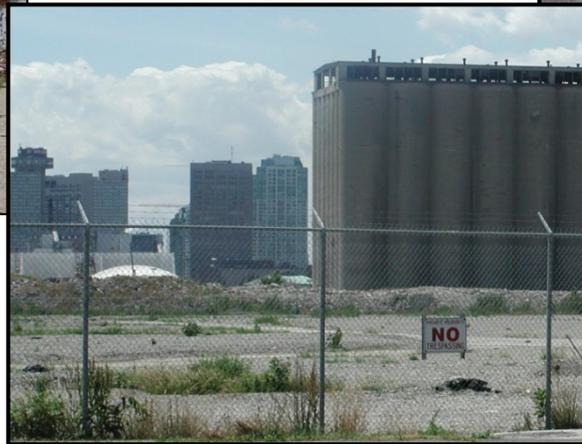


Environmental Registry Posting

Attachments posted on the EBR:

- Proposed regulatory amendments
- “Soil, Ground Water and Sediment Standards for use Under Part XV.1 of the EPA”
- Comparison Table of Existing versus Proposed Standards
- “Rationale for the Development of Generic Soil and Ground Water Standards for Use at Contaminated Sites in Ontario”
- “Protocol for Analytical Methods Used in the Assessment of Properties under Part XV.1 of the Environmental Protection Act, Version 2.0. Proposed Amendments”

Proposed Amendments





Proposed Regulatory Reforms

Highlights of the Proposed Regulatory Reforms:

1. Enhanced Record of Site Condition (RSC) Integrity
2. Off-site Liability Protection
3. A Streamlined Risk Assessment Approach
4. Strengthened Standards

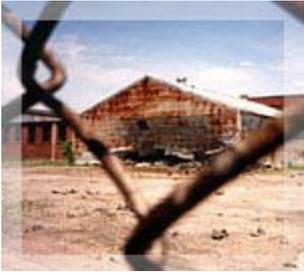


Overview of Proposed Reforms

1. Enhanced Record of Site Condition (RSC) Integrity

BENEFITS:

- A regulated timeline and streamlined process for submitting and reviewing RSCs before being filed on the Registry.
- New, clear rules and process for the completion of Phase One and Phase Two environmental site assessments.



Overview of Proposed Reforms

2. Off-Site Liability Protection

- Currently, when a RSC is filed on the Registry, limited protection from environmental orders is provided to the property owner e.g. orders for further site clean-up. If however, there is off-site migration of contaminants from the site, protection from orders is lost.
- The proposed amendments aim to clarify off-site liability protection if proponents undertake additional work and make additional certification in the RSC.
- The amendments also specify what concentration of contaminants migrating off-site would result in a loss of off-site liability protection.

BENEFITS:

- Clarifies when liability protection is lost in relation to off-site migration of historic contaminants.
- Off-site liability protection is only available to non-polluters.



Overview of Proposed Reforms

3. A Streamlined Risk Assessment Approach

- A property owner can set their own site-specific site condition standards through a streamlined risk assessment process.

BENEFITS:

- Provides an alternative to meeting generic standards and the traditional risk assessment process.
- Timely acceptance of risk assessments will help expedite brownfield redevelopment.
- The standards model can be adjusted to match the applicant's site-specific conditions supported by site-specific data.



Overview of Proposed Reforms

4. Strengthened Standards

- Current site condition standards in Ontario are based on science available prior to 1996 and require updating. The proposed amendments update site condition standards to reflect current science.

BENEFIT:

- Updated standards will reflect advances in science, strengthen the protection of human health and the environment and increase confidence in RSCs.

Next Steps and Closing Remarks

