

Brownfields Redevelopment in Ontario, Canada: Two Case Studies

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Brownfields Redevelopment in Ontario

- Evolution of Ontario Regulations
 - 1989 Decommissioning Guidelines (limited)
 - 1996 Contaminated Sites Guidelines
 - 2004 Brownfields Regulation
- Two Case Studies
 - Risk Assessment in Shallow Soils
 - Completing a Record of Site Condition
- Brownfields Development Initiatives
 - City of Kingston REAP Program

Development of Ontario Regulations

■ 1996 Guidelines

- multiple land use criteria
- expanded list of parameters
- guidance on sampling protocols
- Site Specific Risk Assessments

**GUIDELINE FOR USE
AT CONTAMINATED
SITES IN ONTARIO**

ISBN-0-7778-4056-1

**Guidance on Sampling and Analytical Methods for Use at
Contaminated Sites in Ontario**

ISBN-0-7778-4058-03 (disk copy)

**Guidance on Site Specific Risk Assessment
for Use at Contaminated Sites in Ontario**

Development of Ontario Regulations

■ 2004 Regulations

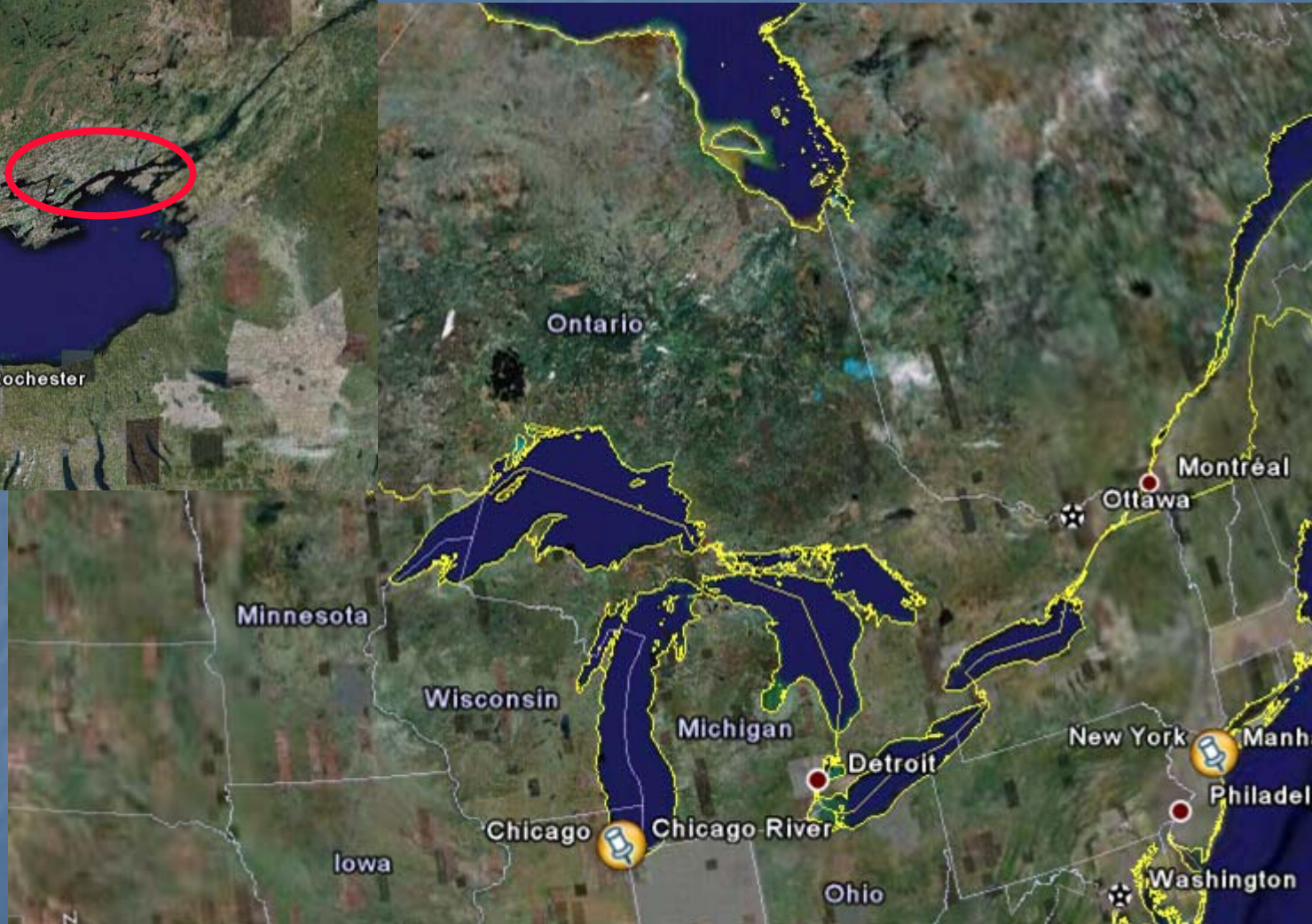
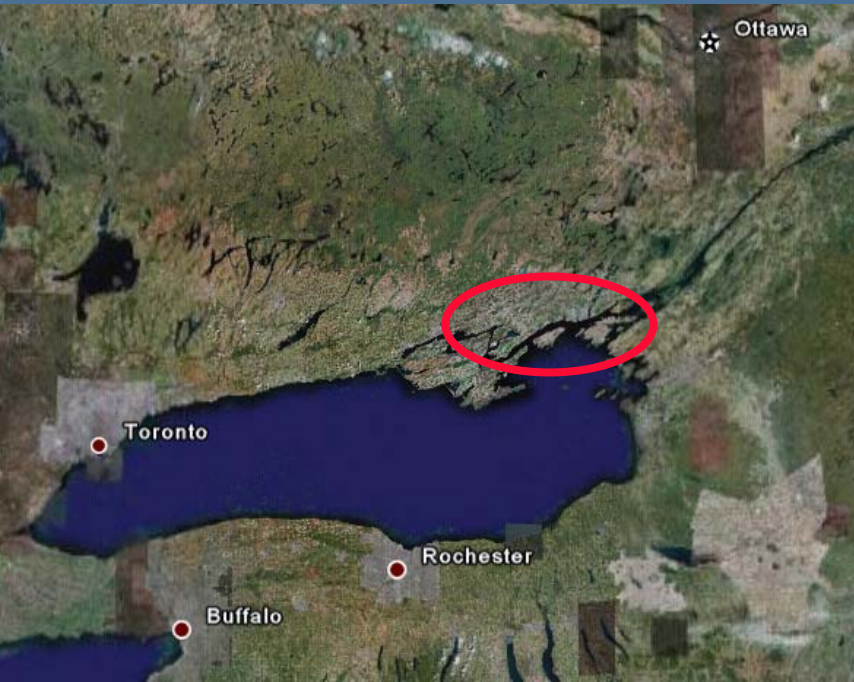
- numerically similar to 1996 guidelines
- harmonization with Federal criteria
- definition of "Qualified Person"
- guidelines become standards
- public site condition record

ONTARIO REGULATION 153/04
made under the
ENVIRONMENTAL PROTECTION ACT

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

March 9, 2004

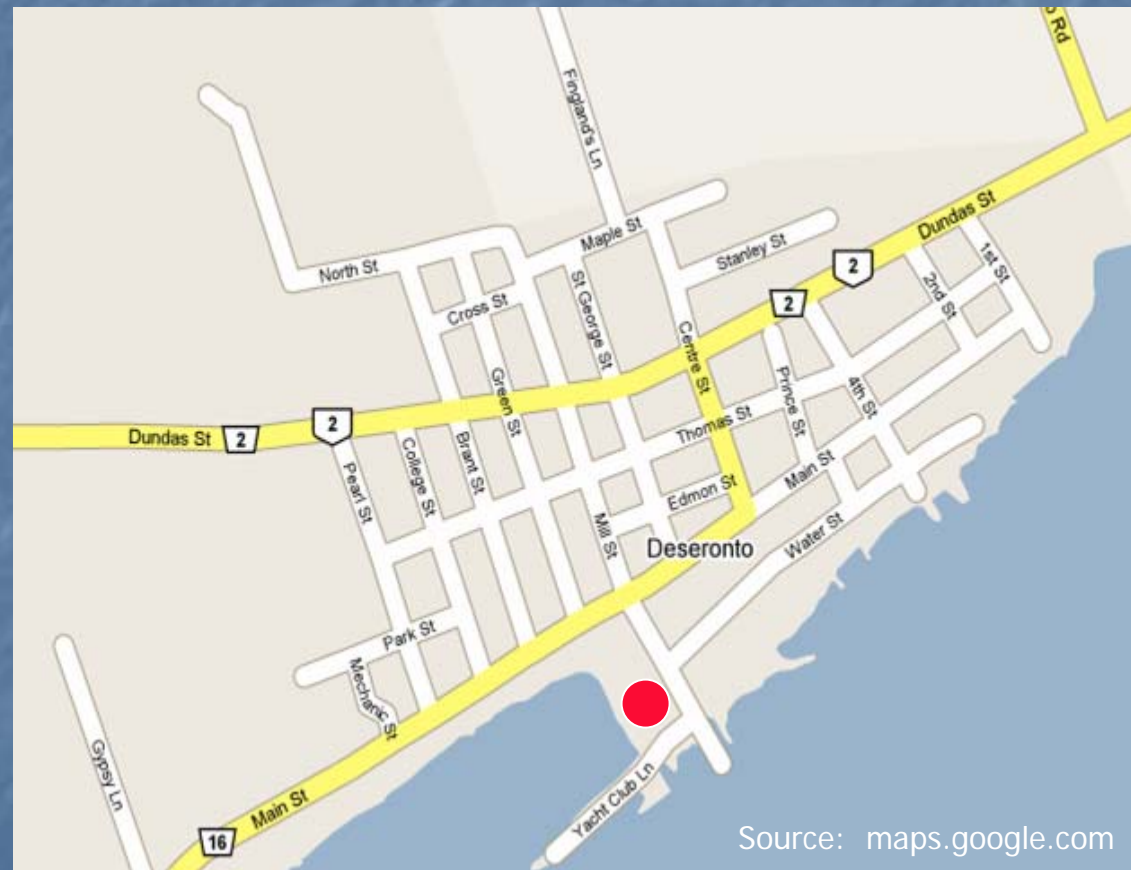
Case Studies



Images from:
Google Earth

Case Study 1: Former Canning Plant

- Town of Deseronto, pop. ~ 2,000
- vacant food processing facility
- located on downtown waterfront
- thin soil veneer over bedrock
- clean-up 2001-2003



Source: maps.google.com

Case Study 1: Former Canning Plant



- 4 hectares, 2 parcels
- potentially sensitive site
 - waterfront
 - limited soil depth
- Contaminants of Concern
 - 7 metals
 - 6 PAHs
- clean-up to 1996 guidelines

Case Study 1: Former Canning Plant

- Goal
 - repurpose property for commercial/residential use

- Challenges
 - sensitive site (surface water & shallow soil)
 - 1996 guidelines allowed 2 clean-up strategies:
 - background
 - Site Specific Risk Assessment (SSRA)

- Solution
 - modified SSRA approach
 - measure on-site soil and groundwater contamination
 - evaluate leachable contaminant levels in soil
 - develop site specific criteria for protection of aquatic receptor species.

Case Study 1: Former Canning Plant

May , 2006



MS Pilot Study, 2006

Case Study 1: Former Canning Plant

May , 2006



Case Study 2: Carwash Redevelopment

- City of Kingston
pop. ~120,000
- mixed industrial/residential
neighbourhood
- 0.7 hectare site
- site clean-up 2004-2005



Source: maps.google.com

Case Study 2: Carwash Redevelopment





Case Study 2:

- mixed land uses on neighbouring properties
- uncertain soil conditions
- adjacent to former scrap steel & battery recycling facility

Case Study 2:

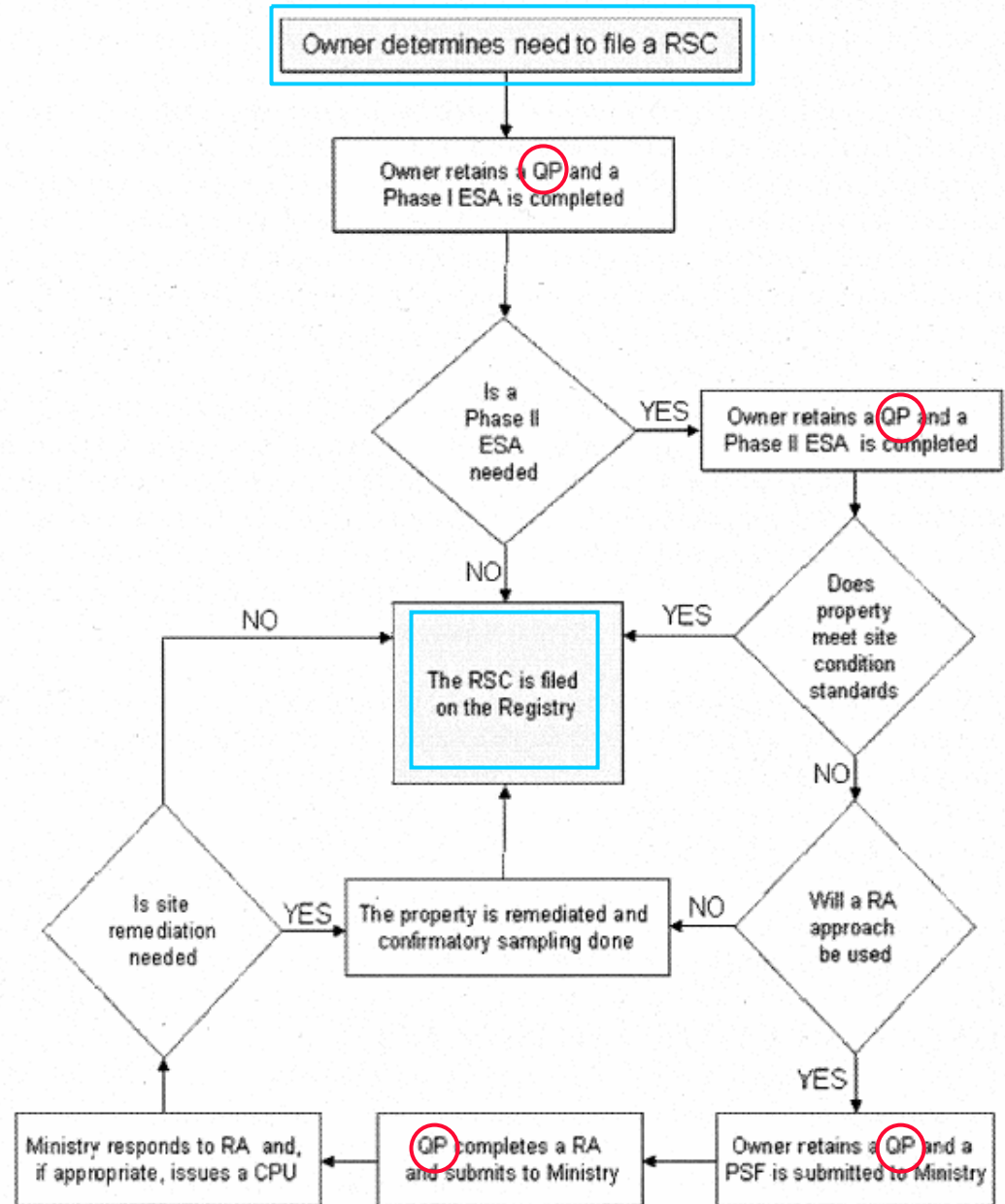
- waste ash materials encountered
- elevated metals concentrations
- concerns about PCBs
- remediation accomplished by off-site soil removal



Case Study 2:

Record of Site Condition

Figure 1: Overview of the RSC Process





SEARCH

Location: [Ministry Home](#) > [Land](#) > [Brownfields](#) > Brownfields Environmental Site Registry

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 Person under Ontario Regulation 153/04.](#)

Brownfields Environmental Site Registry

Location: Ministry > Brownfields > General Search

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" value="Joseph Street"/>
Site Municipality	<input type="text" value="KINGSTON"/>
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"/>	

Page 1 of 1

Number	Filing Owner	Filing Date
	RSC Property Address	Municipality
2047	RSC Kingston Home Base Non-Profit Housing Inc. Joseph Street and Fraser Street	Jul 12, 2005 KINGSTON

Certifications

As the qualified person, and in relation to this Part of the RSC, I certify that:

1. A phase one environmental site assessment of the RSC property, which includes the evaluation of the information gathered from a records review, site visit and interviews, has been conducted in accordance with the Regulation by or under the supervision of a qualified person as required by the Regulation.
2. I have conducted or supervised a phase two environmental site assessment, which includes the evaluation of information gathered through the sampling and analysis of soil and other site investigation or assessment activities, of all or part of the RSC property with respect to one or more contaminants, in accordance with the Regulation.
3. The information represents the site conditions at the sampling points at the time of sampling only and the conditions between and beyond the sampling points may vary.
4. As of June 27, 2005, in my opinion, based on the phase one environmental site assessment and the phase two environmental site assessment, and any confirmatory sampling, there is no evidence of any contaminants in the soil, ground water or sediment on, in or under the RSC property that would interfere with the type of property use to which the RSC property will be put, as specified in the RSC.
5. If non-potable ground water standards have been applied,
 - a. I have given written notice of intention to apply non-potable ground water site condition standards to the clerk of the local municipality in which the property is located and the clerk of any upper-tier municipality in which the property is located.
 - b. The owner of the property has informed me that either,
 - i. the owner did not receive a notice of objection from either the local municipality or the upper-tier municipality within 30 days of the municipality or upper-tier municipality receiving the notice described in paragraph a, or
 - ii. after receiving a notice of objection from the municipality, the municipality has withdrawn its objection and given written consent to the application of non-potable ground water standards.
 - c. I did not receive a notice of objection from either the local municipality or the upper-tier municipality within 30 days of the municipality receiving the notice described in paragraph a, or, after I received a notice of objection from the municipality, the municipality gave written consent to the application of non-potable ground water standards.
6. As of June 27, 2005, in my opinion, based on the phase one and phase two environmental site assessments, and any confirmatory sampling, which included the sampling and analysis of soil, it is not necessary to conduct sampling and analysis of ground water quality for the RSC property to make the certified statement set out in paragraph 3 of section 17 of Schedule A of the Regulation.
7. As of June 27, 2005, in my opinion, based on the phase one and phase two environmental site assessments and any confirmatory sampling, the RSC property meets the applicable Full Depth site condition standards prescribed by section 37 of the Regulation for all contaminants prescribed by the Regulation in relation to the type of property use for which this RSC is filed, except for those contaminants (if any) specified in this RSC at Part 2, Final RSC Property Profile - Risk Assessment Standards.
8. As of June 27, 2005, the maximum known concentration of each contaminant in soil, sediment and ground water at the RSC property for which sampling and analysis has been performed is specified in this RSC at Final RSC Property Profile.
9. In relation to any contaminant excepted from the certification mentioned in paragraph 9, or in relation to any other contaminant that in my opinion is likely to cause an adverse effect:
 - a. A risk assessment was prepared for the contaminant with respect to the property for which the phase two environmental site assessment was conducted.
 - b. The Director has accepted the risk assessment under clause 168.5 (1) (a) of the Act.
 - c. As of June 27, 2005, the property for which the phase two environmental site assessment was conducted meets the standards specified in the risk assessment for the contaminant.

Case Study 2: Carwash Redevelopment



Sept., 2004



May, 2006

City of Kingston REAP Program

- Brownfields
Redevelopment Program
- Community
Improvement Plan
- Provincial
Incentive Program



Kingston REAP Program

- Designated C.I.P.
- Total area >201 ha.
(497.2 acres)
- 529 properties
 - Old Industrial Area
 - Inner Harbour
 - Commercial Core



Kingston REAP Program

■ Incentives:

- Initial Study Grant
- Brownfields Financial Tax Incentive Program (BFTIP)
- Tax Increment-Based Rehabilitation Grant Program (TIRGP)

■ Partners:

- Province
 - enabling laws
- City of Kingston
 - strategic plan for incentives
- Development Sector
 - technical expertise and investment capital

Kingston REAP Program

- Incentives:
 - Initial Study Grant
 - 50 % grant for costs
 - \$10,000 (max.)
 - used for Environmental Assessments

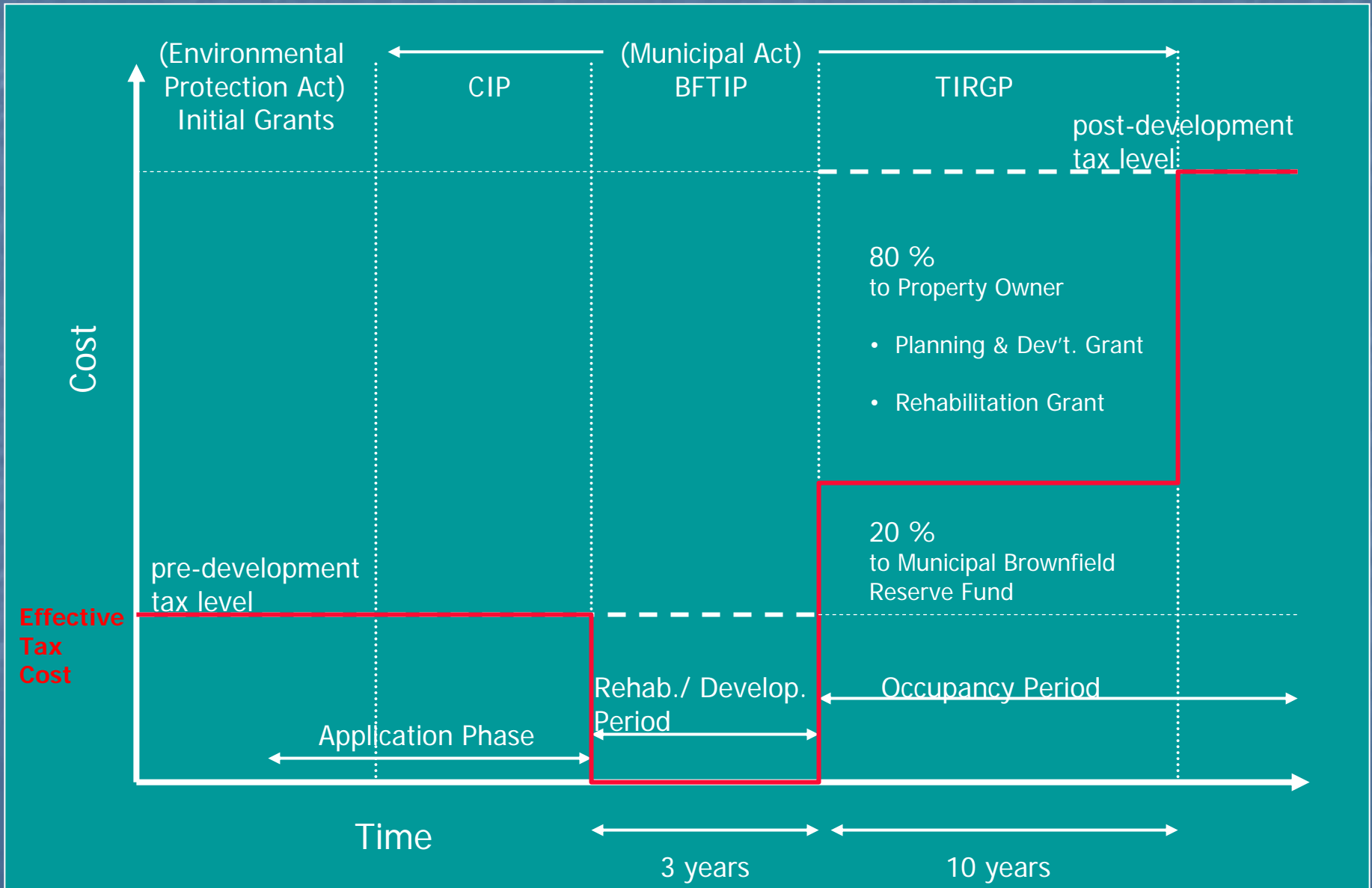
Kingston REAP Program

- Incentives:
 - Initial Study Grant
 - Brownfields Financial Tax Incentive Program (BFTIP)
 - applicable during remediation & development
 - exemption from property taxes (municipal & education taxes)
 - Development Charges & Impost Fees - deferred
 - 3 yr tax holiday (max.)

Kingston REAP Program

- Incentives:
 - Initial Study Grant
 - Brownfields Financial Tax Incentive Program (BFTIP)
 - Tax Increment-Based Rehabilitation Grant Program (TIRGP)
 - applicable at start of occupancy
 - 80 % of tax increase -> repays remediation costs
 - 20 % of tax increase -> retained for Municipal Brownfield Fund
 - Development Charges & Impost Fees -> can be waived
 - 10 yr period (max.)

Kingston REAP Program



Brownfields Redevelopment in Ontario

Summary

- Key regulatory milestones in 1996 & 2004
 - flexibility with remediation methods
- Record of Site Condition (2004)
 - public register of environmental conditions
- City of Kingston experience
 - successful partnering with industry and government

■ Acknowledgements:

- City of Kingston, Brownfields Dept. (J. Davis)
- Home Base Housing
- Town of Deseronto

■ Information Sources:

- Ontario Ministry of the Environment www.ene.gov.on.ca
- Ontario Ministry of Municipal Affairs & Housing www.mah.gov.on.ca
- Ontario Ministry of Finance www.fin.gov.on.ca
- City of Kingston www.cityofkingston.ca

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