

Draft Environmental Site Assessment Standard

Environmental Services Association of Alberta
Remediation Technologies Symposium
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Environmental Site Assessment Standard Presentation Outline

- Overview of Contaminated Sites Policy Framework
- Overview of Brownfield Redevelopment Working Group Report (2012)
- Overview of Draft Environmental Site Assessment Standard
- Purpose of Standard
- Scope of Standard
- Legislation and reporting
- Roles and responsibilities
- Phase 1 ESAs
- Phase 2 ESAs
- Remediation and confirmatory investigation
- Questions

Contaminated Sites Policy Framework

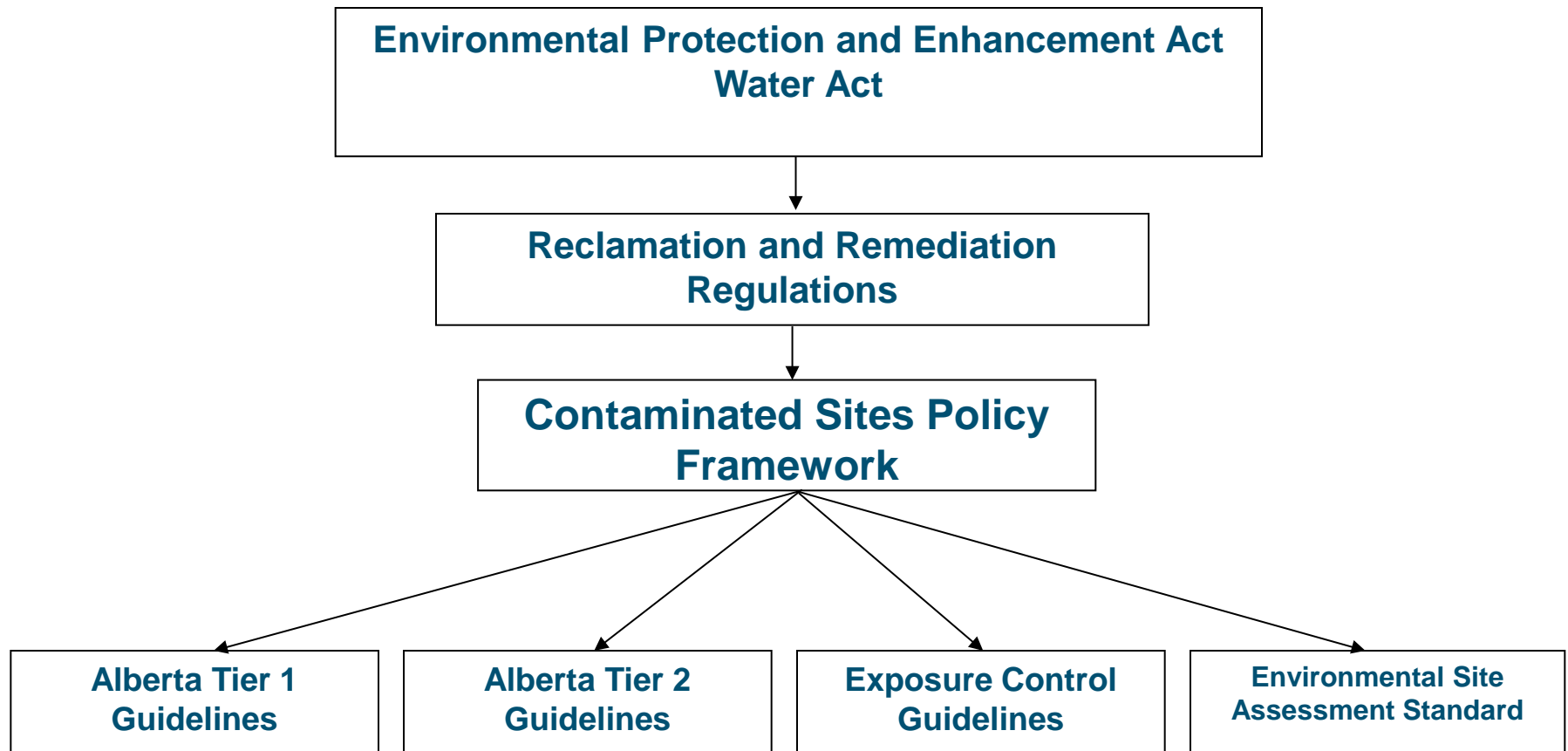
Why a Policy Framework?

- **Replaces policies that are no longer consistent with current Alberta Processes**
 - **Replaces Guidance for Management of Risks at Contaminated Sites in Alberta**
- **Build accessibility of policy documents for different interest groups**
 - **General principles in the framework**
 - **More specific technical requirements in supporting documents (Tier 1, Tier 2, ESA Standard, Risk Management Standard)**
 - **Clarification of specific issues in technical guidance under these documents**
- **More clarity of process for assessment and closure**

What Does the Framework Do?

- **Updates our old framework so it is consistent with existing policies (e.g. Tier 1, Remediation Certificate Regulation)**
- **Clarifies issues between Tier 1 application and CCME Protocol**
- **Clarifies relation between Tier 1 and Site Assessment Requirements**
- **Clarifies site management options that are available**
- **Lays the foundation for environmental site assessment and risk management guides**

Contaminated Sites Policy Framework Overview



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Brownfield Redevelopment Working Group

Brownfield Redevelopment Working Group

- Stakeholder committee formed from discussions between Province and Local levels of Government
- Co-led by Alberta Environment and Sustainable Resource Development and Municipal Affairs
- Mandate to provide strategic recommendations to the Ministers of Environment and Municipal Affairs on priority initiatives for Brownfield redevelopment.
- Final report completed April 2012

Recommendations and Barriers

- **Three major barriers identified**
 - **Higher cost than greenfield projects**
 - **Uncertainty of liability**
 - **Uncertainty of time to redevelop**

Recommendations; How Can Public Policy Help?

- **Build capacity and partnerships within governments, communities and developers**
- **Build social considerations into the equation; empower communities to decide what is good for the community**
- **Regulatory certainty; when is a site clean?**
- **Regulatory processes that consider development timelines**
- **Access to resources for contamination assessment; a small amount of certainty can often spur development**

Specific Recommendations: Regulatory Certainty

- **Certainty of regulatory requirements around site remediation and risk management**
- **“Site Based” remediation certificates**
 - **Expand remediation certificate program to cover sites not just area remediated**
- **Create a “no further action” certificate to address uncertainty on Tier 2 assessed sites**

Specific Recommendations: Risk Management Process

- **Transparency of regulatory process for approval of risk management plans**
- **Transparent, defined review process**
- **Regulatory process for acceptance of risk management plans is defined**
- **Public assurance of ongoing management**
- **Risk managed sites registered on title**
- **Assurance that requirements are known during land transactions**

Specific Recommendations: Access to Resources

- **Help offset costs of phase 2 site assessments for brownfields**
- **Help offset costs of remediation or risk management plan development for projects in community interest.**
- **Tax incentives to offset development costs**
- **Enable multiple year cancellation, deferral or reduction of Municipal Taxes;**
- **Use of Community Revitalization Levy for Brownfield Sites;**

Specific Recommendations: Building Capacity

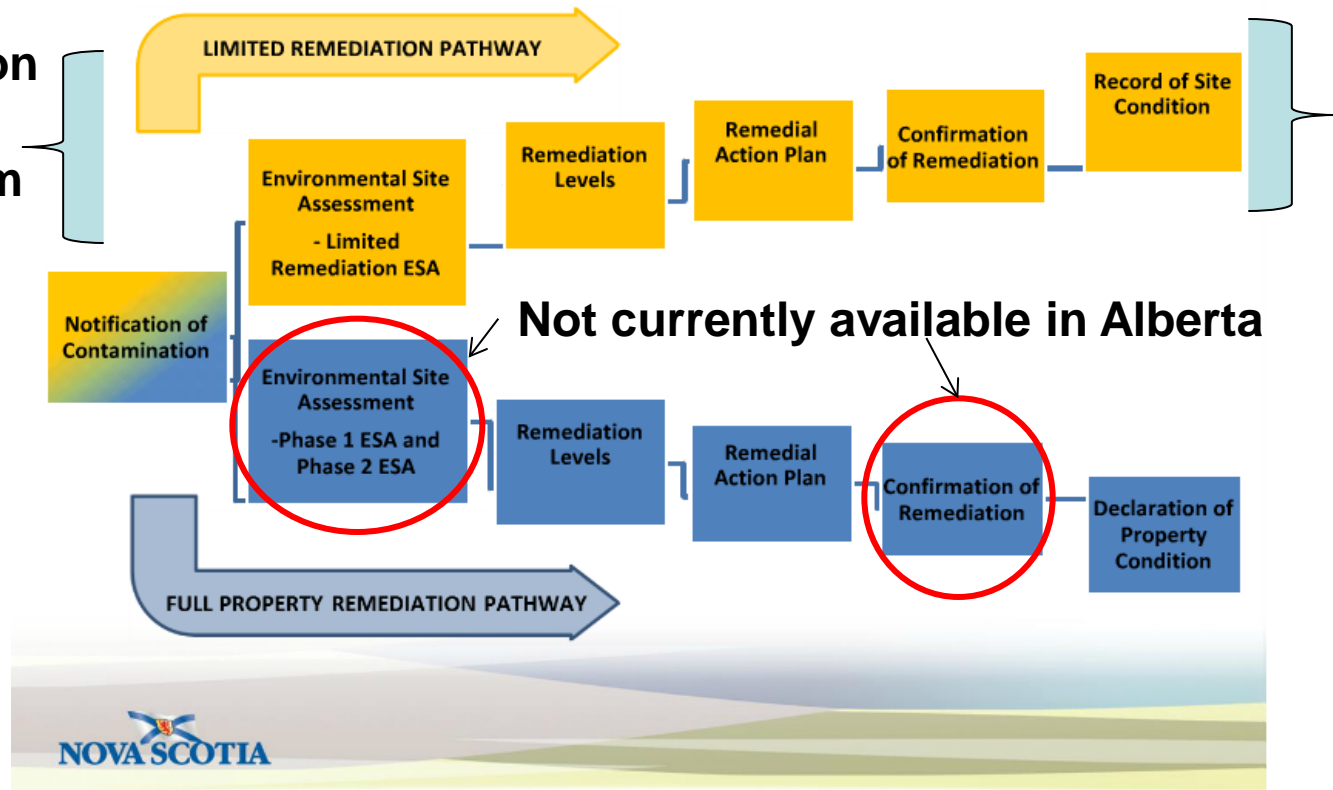
- **Establish a brownfield coordinator who can;**
 - **Actively promote understanding and build capacity on brownfield redevelopment within the development sector, municipal levels of government**
 - **Administer proposed provincial level Brownfield grants**
 - **Enhance coordination and collaboration of provincial and municipal approvals**
 - **Provide education to communities on how to navigate the system**

Example of Process that anticipates area based and site based closure mechanisms

—Nova Scotia Contaminated Sites Regulation

Regulatory Process

Alberta Remediation Certificate regulation and form



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Environmental Site Assessment Standard

Overview of Environmental Site Assessment Standard

- **Currently still in DRAFT development!!!**
- **Released for public review and comment**
- **Comments currently being compiled and reviewed**
- **Main areas:**
 - **Phase 1s**
 - **Phase 2s**
 - **Remediation and confirmatory**
 - **Reporting**

Purpose of ESA Standard

- **Consistent outline**
- **Minimum requirements**
 - **Site characterization and reporting**
 - **For contaminated or potentially contaminated sites**
- **Intended users**
 - **Site managers**
 - **Contracted environmental consultants**
 - **Project managers**
- **Supports info in Environmental Protection and Enhancement Act (EPEA) and Contaminated Sites Policy Framework**
- **Replaces 2008 draft ESA Guidelines**

Scope of ESA Standard

- **Used within Alberta's existing regulatory framework**
 - **Ex: EPEA and Regulations**
- **Other related documents:**
 - **Contaminated Sites Policy Framework**
 - **Alberta Tier 1 and Tier 2 Soil and Groundwater Guidelines**
 - **Applicable Codes of Practice**
- **Address evaluation and reporting processes**

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Phase 1 Environmental Site Assessments

Phase 1 Environmental Site Assessments (i)

- **Minimum reporting requirements**
- **When do these apply?**
 - **Department requirement**
 - **Substance release reports**
 - When release exceeds AB Tier 1 or Tier 2 guidelines
 - **Remediation Certificate Application**
 - **Support of a Phase 2 ESA**
 - **Reclamation Certificate Application**
 - Must meet requirements of Wellsite reclamation Certificate Application form (2010)

Phase 1 Environmental Site Assessments (ii)

- **Required components**

- **Scope**

- **Records review**

- Air photos, title searches, previous Phase 1 reports
 - Company records, regulatory info, utility records
 - Soil, geological, geotechnical info
 - Surface water bodies, hydrologic info

- **Site visit**

- Conducted after records review
 - Observations of interior and exterior site conditions
 - Buildings, structures, equipment,

Phase 1 Environmental Site Assessments (iii)

- **Required components (continued)**

- **Interviews**

- landowner, occupant, and facility operator.

- **Reporting**

- written report
 - summary of objectives, approach, findings, and conclusions
 - Is a Phase 2 ESA or remediation needed?

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Phase 2 Environmental Site Assessments

Phase 2 Environmental Site Assessments (i)

- **Purpose of a Phase 2 ESA**
- **Intrusive sampling**
 - **Screening**
 - **Delineation**
 - **Confirmatory sampling**
 - Following remediation
- **Determine potential for adverse effects**
 - **Presence or absence of contamination**
 - **Type, extent, degree, approximate volume**
 - **Is remediation needed?**

Phase 2 Environmental Site Assessments (ii)

- **The principal components of a Phase 2 ESA are:**
 - **Review existing ESAs or other background info**
 - **Develop a Conceptual Site Model (CSM);**
 - **Plan site investigation**
 - Includes development of sampling plans;
 - **Conducting site investigations;**
 - **Interpret and evaluate data gathered during investigations**
 - **Summarize conclusions and provide recommendations.**

Phase 2 Environmental Site Assessments (iii)

- **Required components**

- **Review of Existing Info**

- Previous ESAs and, remediation reports

- **Conceptual Site Model (CSM)**

- Visual representation
 - Includes a description
 - Types, sources, extent of contamination
 - Release and transport mechanisms
 - Pathways, receptors, exposure routes
 - Dynamic in nature, it can be updated!!!
 - May be simple or complex as project warrants!!!

Phase 2 Environmental Site Assessments (iv)

- **Required components (continued)**

- **Receptor and Exposure Evaluation**

- Info collected to build CSM and characterize site and possible contaminants
 - End land use, zoning, proximity, lithology, Tier 2 needs, DUAs

- **Sampling Analysis**

- Media sampling, field methods, investigation tools, rationale and design, analytes, QA/QC

- **Data Validation and Interpretation**

- All findings reported, including nil findings

- **Conclusions**

- Evidence of contamination in connection with the property, or not?
 - Were objectives met? Recommendations? Additional work needed?

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Remediation and Confirmatory

Remediation and Confirmatory

- **Part of the ESA process**
- **Purpose of remedial investigations:**
 - **develop solutions to mitigate unacceptable levels of contamination in soil, groundwater, surface water, sediment or other media.**
 - **Guidelines for remediation in AB Tier 1 and Tier 2**
- **Purpose of confirmatory sampling:**
 - **ensure potential human health and ecological endpoints met.**

Confirmatory Sampling

- **Following remediation**
- **Verify if area meets remediation objectives**
 - **Are guidelines met?**
 - **Identify exceedance areas**
 - **Lab analysis**
- **Report success of remediation and acceptability for site land use**

Remediation Certificates

- **Voluntary**
- **Offers regulatory liability closure for a remediated area.**
 - **Must meet Alberta Tier 1 or Tier 2**
- **Assurance that additional remediation is not required if guidelines are amended or updated.**

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Thanks

