

# ENGAGEMENT ON REMEDIATION OF CONTAMINATED SITES IN BC

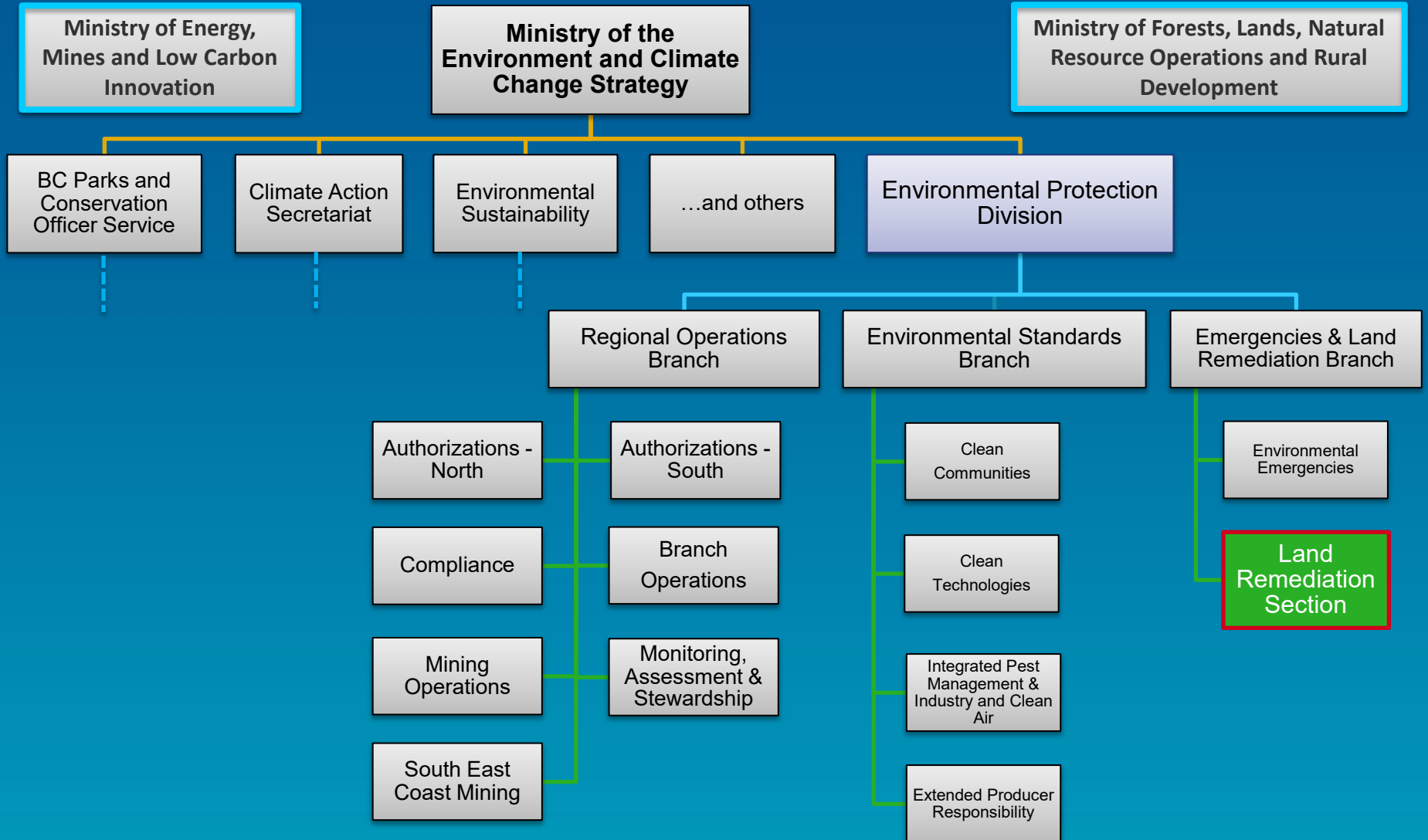
Land Remediation Section



Ministry of  
Environment and  
Climate Change Strategy

# WHO WE ARE

Crown Contaminated Sites Program  
\* Legacy Sites



# Environmental Protection Division

## Regional Operations Branch

Authorizations – North and South

Compliance

Mining Operations

Branch Operations

Monitoring, Assessment & Stewardship

South East Coast Mining

## Environmental Standards Branch

Clean Communities

Clean Technologies

Integrated Pest Management & Industry and Clean Air

Extended Producer Responsibility

## Emergencies & Land Remediation Branch

Environmental Emergencies

Land Remediation Section

- *Environmental Management Act, Part 4*
- *Contaminated Sites Regulation*

# ENGAGEMENT ON REMEDIATION OF CONTAMINATED SITES IN BC

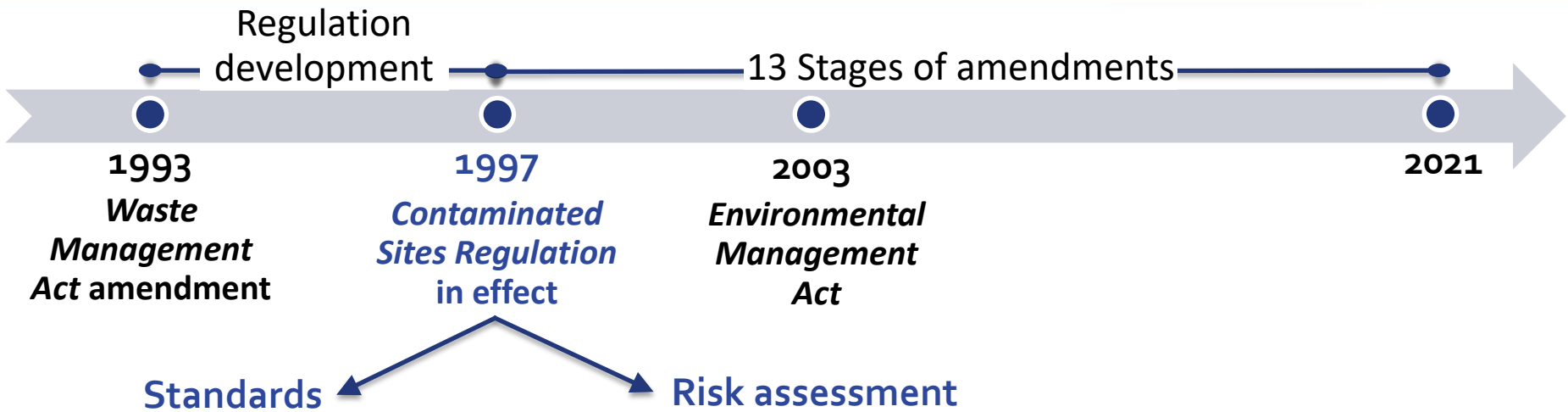
## Session 1: Risk Assessment of Contaminated Sites

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Land Remediation Section



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# 1993 TO PRESENT



# CONTAMINATED SITES LEGISLATION OBJECTIVES

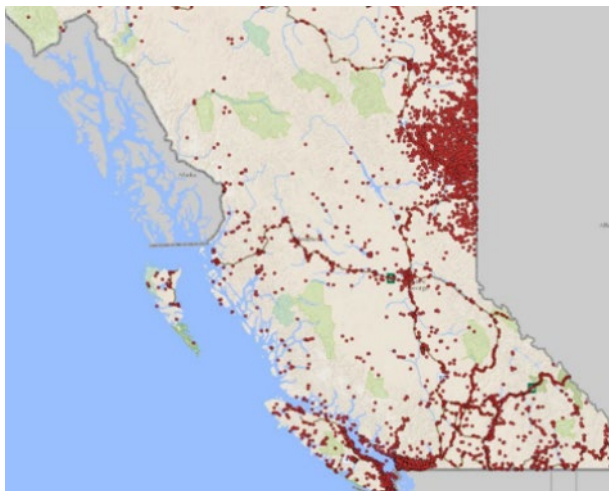


- ✓ **Protect human health**
  - ↳ Risks to drinking water sources, contaminated soils and water, etc.
- ✓ **Protect the environment**
  - ↳ Aquatic and terrestrial habitat, surface water quality, etc.
- ✓ Determine who's responsible
- ✓ Increase market confidence

# WHAT IS A CONTAMINATED SITE? WHY CLEAN IT UP?

A contaminated site is *essentially...*

... an area with chemical concentrations in soil, water, soil vapour, or sediment above the standards listed in the Regulation



- ↳ To protect human health and the environment
- ↳ To get land back into use

# WHAT IS CONTAMINATED SITE REMEDIATION?



Langley Drug Lab (orphan site)



<https://theconstructor.org/geotechnical/lime-soil-stabilization-method/27105/>



Bio-Cell Construction (Sumas Remediation)



Britannia Mine Water Treatment Plant (Infrastructure BC)



# WHAT IS RISK ASSESSMENT?



# HOW IS RISK ASSESSED?

'the dose makes the poison'

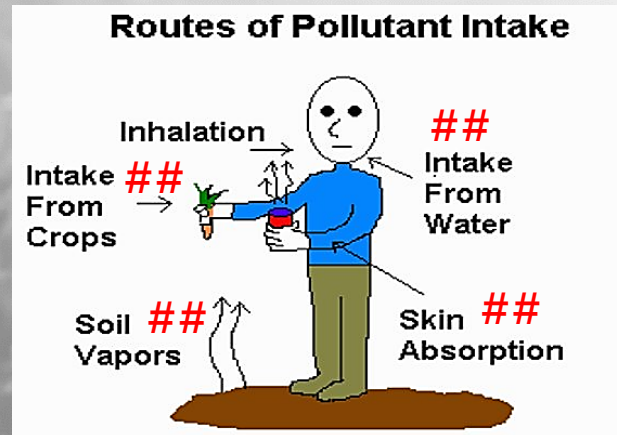
Who, what,  
and how



Estimate  
exposure



Compare to  
safe levels



**Exposure : Toxicity**

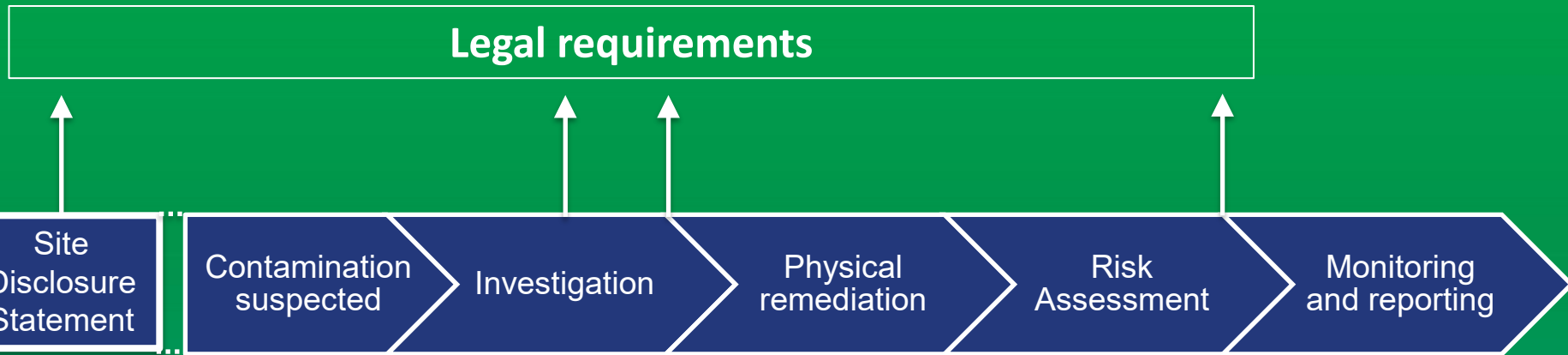
# RISK ASSESSMENT OUTCOME

Acceptable vs. unacceptable risks are based on exposure assumptions:

- Land use → Receptor and exposure
- Risk controls



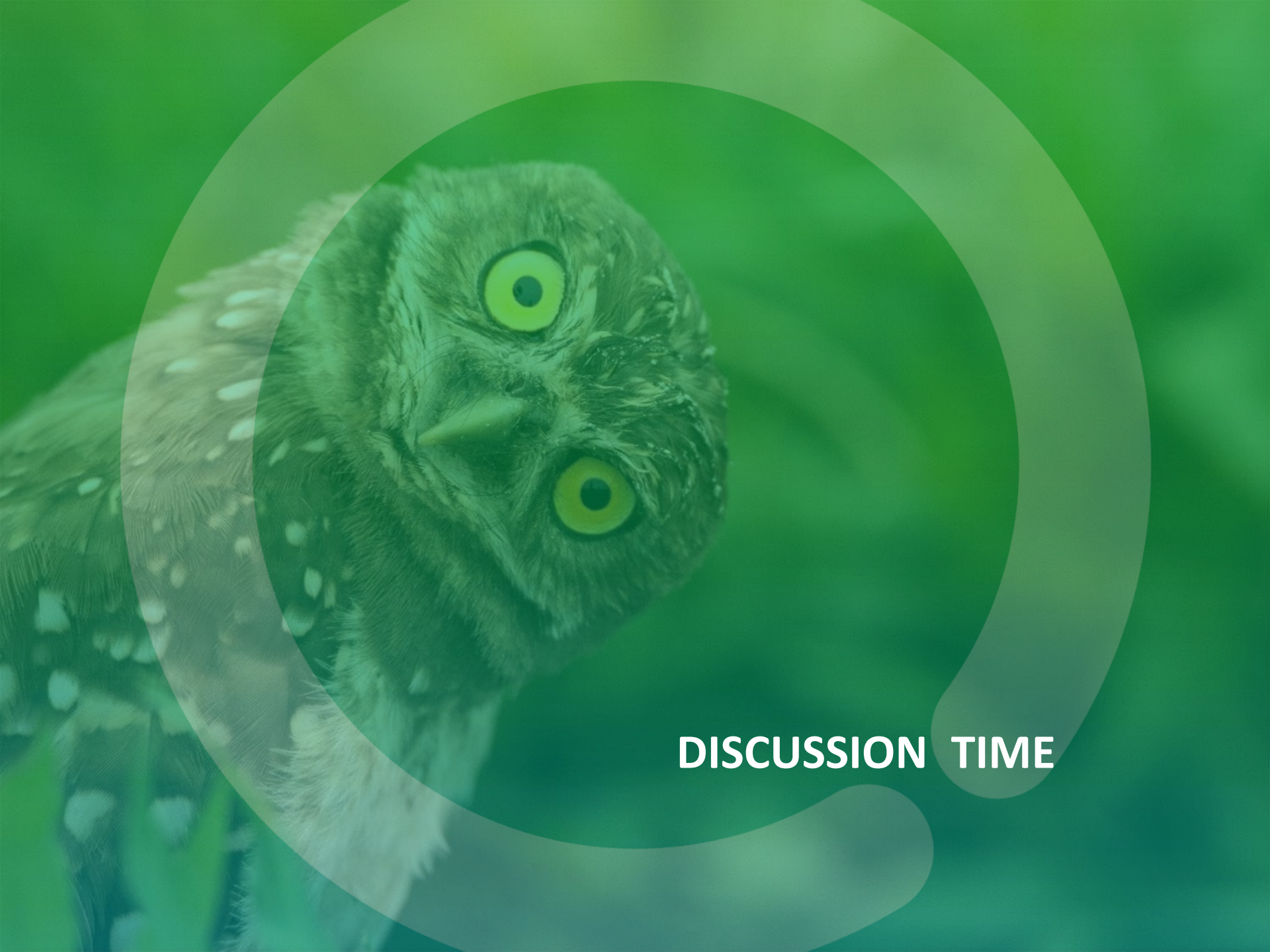
# SUMMARY





Thank you!

Questions?



**DISCUSSION TIME**

# How would you like to be engaged when risk assessments are being conducted for sites on your lands?

## Examples

- **Would you want to be notified if a site was using risk assessment as part of site remediation?**
- **At what stage of the risk assessment do you want to be involved?**
- **What level of information would you want? The location and a summary for the site? Or, full reports with detailed chemistry data, etc.?**
- **What valuable features do you want to protect and include in the risk assessment?**