Natural Resources Canada
Ressources naturelles Canada

Environmental Considerations Panel
1st Annual OAM Workshop

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Canada

Importance & Challenges of Environmental Considerations

- Presentation Overview:
  - OAM risk factors
  - The role NOAMI played to address this issue in Canada
  - Environmental Risk - Addressing acidic mine drainage & metal leaching
  - Potential application of CanmetMINING mine closure R&D

OAM Risks and Challenges

- Environmental issues
  - acidic drainage/metal leaching, contamination of receiving environment
- Public Health and Safety
  - mine openings, abandoned infrastructure, subsidence
- Financial issues
  - cost of clean-up/reclamation
  - Funding/on-going liabilities
- Community issues

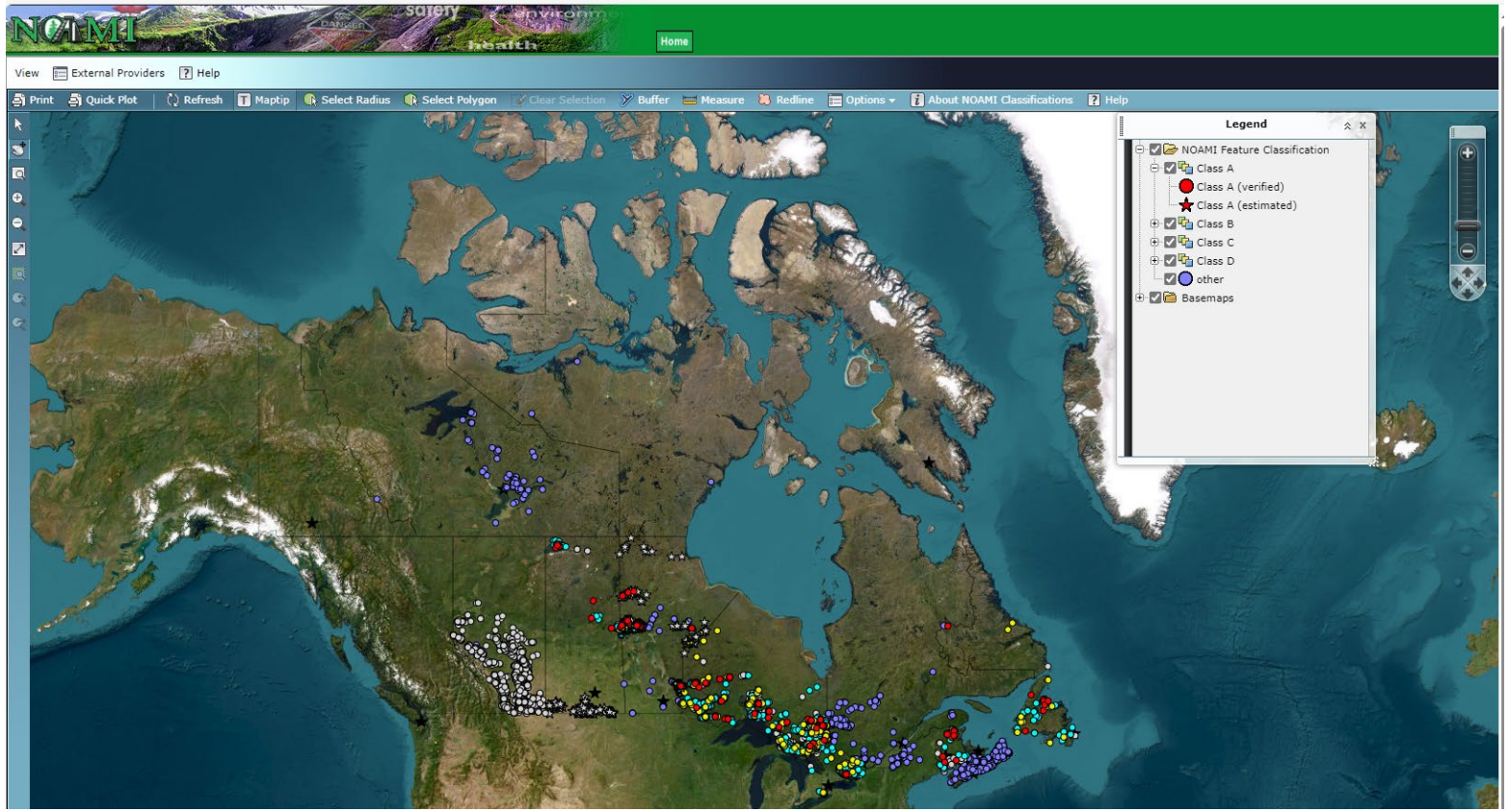
What to do with a hole in the ground? Some Considerations

- What is the overall objective?
  - Rehabilitating or repurposing?
- Are all the liabilities addressed?
- Risk assessment?
- Is the site stable – can it sustain a heathy ecosystem?
- Have the effects of climate change been taken into consideration?

NOAMI - A multistakeholder dialogue

- Pan-Canadian - government/industry/non-governmental partnership
- Launched in 2002 – linked to Mines Ministers
- Developed tools to address OAM sites & to prevent future abandonments
- Produced several guidance documents related to:
  - mine closure planning,
  - risk assessment,
  - financial assurance &
  - the concept of relinquishment

NOAMI Inventory of OAM sites



www.NOAMI.org

Progress to date by Jurisdictions

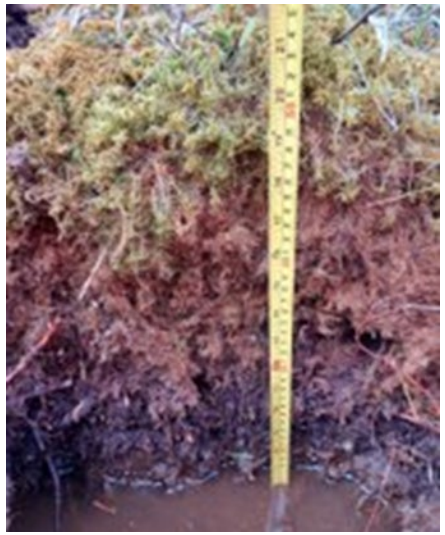
- More than $1 billion spent on OAM sites since 2002
- Programs for the closure of O&A mines established in most provinces.
- Federal government - Northern Contaminated Sites Program

Environmental Risk Study – An Example

- Dominion (Gurney) gold mine, Manitoba (1930's)
- Located in a Provincial Park
- Buildings, waste rock pile and tailings
- Assessment of the site identified that both waste rock & tailings were potentially acid generating
- Assessment of soil, groundwater & surface water as well as vegetation conditions
- No human health risk identified (remote location) but risk to ecological receptors
- Needed to develop a risk mitigation strategy/options
- Criteria selected to assess effectiveness, implementation, acceptability and cost.
- Link to local First Nations community

CanmetMINING R&D

- Focus on research to mitigate acid mine drainage/metal leaching and ecosystem risk
  - Evaluation of cover strategies – wet or dry? Organic covers – long-term performance / Climate Change?
  - Green Mines Green Energy - biofuels
  - Fugitive Dust project



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