Orphaned and Abandoned Mines in Newfoundland and Labrador

Orphaned and abandoned mines (OAMs) in Newfoundland and Labrador mostly predate the province joining Confederation in 1949; all the sites predate the Mining Act enacted in 2000. These properties, ranging from exploration sites to large-scale former producing mines, may pose safety risks to the public and cause environmental problems.

Public safety hazards of concern at OAMs include sealed and unsealed open shafts, access to underground workings, exploration trenches, exploration pits, open pit excavations, subsidences, landslides, unsafe buildings and infrastructure, and tailings impoundment structures. Environmental issues are related to contamination from chemicals used during operations and from the reactivity of waste rock and tailings. Detailed evaluations for all these sites have not been completed; estimated cost (liability) to address these issues is not known.

Past Spending on OAM Rehabilitation

The Department of Natural Resources (DNR) spent over $30 million on OAMs in recent years. In 2002, the Hope Brook mine site returned to the Province after Royal Oak Mines declared bankruptcy. Government rehabilitated the site addressing both environmental and safety issues at a cost of $21 million, and there is a continued annual budget of $30,000 for ongoing monitoring. Between 2007 and 2010, $6.4 million dollars were spent on removal of unsafe mine infrastructure at the Baie Verte Mines and Consolidated Rambler mine sites in northeastern Newfoundland.

Environmental issues at both sites do not pose immediate health and safety issues but are estimated to have a liability in the tens of millions of dollars and have not been addressed. In 2010/11, Government committed to addressing known issues at the Buchans mine site, at a cost of $3.6 million to ensure the tailings dams’ stability, and $3.6 million for the tailings spill area to address elevated levels of heavy metals in soils near the town.
In addition to these major projects, DNR also has an annual budget of approximately $20,000 to deal with immediate safety issues at OAMs. This work is limited to eliminating dangerous conditions on a site-by-site basis as identified. Remedial work consists of backfilling or capping mine openings, installing fencing and / or placing warning signs.

**Dam Safety**

An area of particular concern for DNR is the issue of dam stability at former mine sites. In 2010/2011, the Department of Natural Resources (DNR) conducted dam safety inspections at three former mine sites:

- Consolidated Rambler Copper Mine near Baie Verte, NL,
- Whaleback Copper Mine, near Springdale, NL, and
- Gullbridge Copper Mine near South Brook NL.

Significant deficiencies were identified at these sites and work began on rehabilitation measures. Full dam safety reviews were conducted on each site and detailed design of recommended repairs was prepared.

In December, 2012, there was a major failure of the Gullbridge tailings dam while repairs were underway. Emergency repairs were completed in March 2013. DNR has issued a request for proposals for preliminary engineering design and evaluation of alternative long-term solutions for the tailings management area at the former Gullbridge mine site.

**Prioritizing Rehabilitation of OAMs**

As available funds are identified, Government systematically identifies and evaluates OAMs in the Province. The Mines branch has a database of all known OAMs. This contains the location, ownership, and present site conditions for most sites and additional information is available in DNR files and publications. There are 6,327 mineral occurrences identified of which 4,785 have undergone exploration and a further 412 reached some stage of development. Some rehabilitation work has done at 122 of these 412 sites.

DNR plans to systematically evaluate the OAMs in the province. It is envisioned that a detailed site evaluation report will be produced for each site that will detail all the safety and environmental concerns, the required permanent rehabilitation measures, and the estimated rehabilitation cost. The goal is to estimate the total rehabilitation liability for all OAMs in Newfoundland and Labrador and prioritize the sites for permanent rehabilitation.

For further information on NOAMI please visit our website: [www.abandoned-mines.org](http://www.abandoned-mines.org)