

# PROTECTING WORKERS PROTECTING THE ENVIRONMENT

**British Columbia is a leader in protecting the health and safety of mine workers, the public and the environment. Our commitment is to uphold and build on our already strong environmental and safety standards.**

**The Mining Plan will ensure:**

- **The continuous improvement of science-based standards for environmental, health and safety protection in exploration and mining**
- **Collaboration with industry, First Nations, communities, interested parties and other levels of government to reinforce BC's leadership in environmental stewardship and sustainable mining**

# cornerstone 2

*Butchart Gardens, a National Historic site near Victoria,  
is a reclaimed limestone quarry*

# PROTECTING WORKERS PROTECTING THE ENVIRONMENT

## Keeping our workers safe

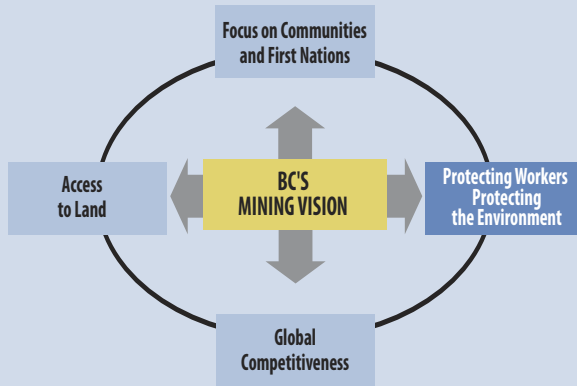
Mining is one of British Columbia's safest heavy industries.

Exploration and mine managers, workers and the Ministry of Energy and Mines are all dedicated to maintaining and improving safe exploration and mining practices.

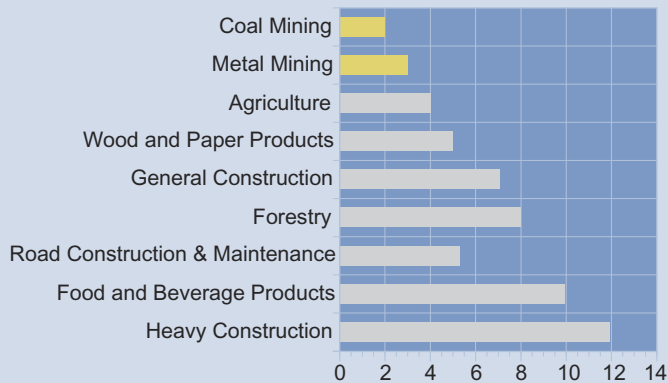
Worker health and safety are protected through a multi-faceted approach that combines:

- Mine site joint safety committees
- Inspections and audits
- Mine rescue and first-aid competitions
- Annual exploration and mine safety awards

- Expert review of exploration and mining operations



Industry Injury Rate, Average 1999–2003



Quinsam Coal near Campbell River received the 2003 John T. Ryan Safety Award for being Canada's safest coal mine, with zero time lost to accidents over a three-year period.

## Protecting the environment

British Columbia's natural beauty is one of its greatest resources, and the Province is committed to protecting the environment as a key part of its broader plan for sustained economic growth.

All mining and mine-related activities are carried out in ways that minimize their impact on their surroundings, and BC's standards for environmental protection are among the highest anywhere.

A range of provincial ministries and agencies work with industry and communities to help ensure these standards are not only met but continuously improved. For example, all significant mining projects are reviewed under BC's *Environmental Assessment Act* under a harmonized process with the *Canadian Environmental Assessment Act*.

Standards for clean air, clean water and healthy communities also apply at every stage of a mine's life, from exploration to reclamation.

The province's total mining footprint is very small. For example, the Eskay Creek gold and silver mine (right), occupies about the same area as a shopping centre and produces over \$130 million in annual revenues.



### Environmental Protection

- World-class environmental protection standards
- One of the first provinces to enact reclamation legislation
- Integrated land use plans throughout most of the province
- Innovative guidelines for waste rock disposal at mines
- Security bond policies to ensure modern mine sites are reclaimed

### World Class Code For Mines in BC

The Health, Safety and Reclamation Code was developed and written by a tripartite committee comprised of labour, industry and government. It contains specific requirements to protect workers and the environment.

In keeping with the government's commitment to balance environmental protection with sustainable development, the Code specifies outcomes that must be achieved. It also requires regular site inspections to ensure compliance.

### Focusing Inspections and Audits

The Ministry of Energy and Mines is developing procedures to focus exploration and mine site inspections and audits where they are most needed.

A baseline number of inspections/audits will be established in relation to risk factors such as the age and type of mine and frequency of accidents. Mines that have higher or lower risk profiles than the baseline will have their inspections adjusted accordingly.

## PROTECTING WORKERS PROTECTING THE ENVIRONMENT

### ACHIEVEMENTS

- ✓ Best safety record among British Columbia's heavy industries for 8 of the last 10 years
- ✓ Health, Safety and Reclamation Code clarified and simplified, while keeping the same high safety and environmental standards
- ✓ Annual mine rescue competitions and awards
- ✓ Highly trained and experienced professionals in the field
- ✓ Clear, science-based standards
- ✓ Ministry of Energy and Mines works with labour and industry to ensure safety standards are met
- ✓ Standards and regulations reviewed on an ongoing basis to continuously improve the province's health, safety and environmental protection record
- ✓ Annual industry health and safety recognition awards

### Strategy 4 Lead in health and safety standards and practices

- *Action 10*  
Establish a Minister's worker safety advisory council with representatives from labour and industry by the end of 2005
- *Action 11*  
Improve compliance of worker safety requirements through a newly-developed mine site inspection and audit program

**MINING FACT:**  
Mining is one of the safest heavy industries in British Columbia



Mines are required to have personnel trained in emergency response and mine rescue. An annual provincial competition is held to hone the skills and knowledge of provincial mine rescue teams.

## Strategy 5 Lead in environmental standards and practices

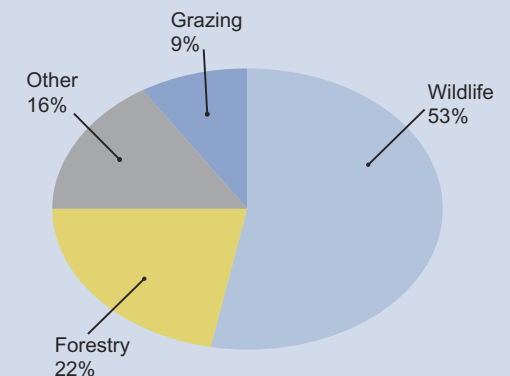
- **Action 12**  
Build on world-class environmental and reclamation guidelines through meetings with industry, government and environmental groups at regional workshops beginning in 2005
- **Action 13**  
Improve compliance with environmental standards and practices through a new program of focused inspections and audits at exploration and mine sites
- **Action 14**  
Recognize and continue to support exemplary environmental performance in mining activities through the annual Mine Reclamation Awards Program

**MINING FACT:**  
Total mining in the province disturbs less than three-hundredths of one percent of the land base

## ACHIEVEMENTS

- ✓ Streamlined science-based provincial *Environmental Assessment Act* review process
- ✓ Developed leading-edge guidelines and monitoring processes for waste rock
- ✓ Introduced best management practices for the aggregate sector
- ✓ Adopted emission standards for coal-fired power plants
- ✓ Supported the completion of successful, award-winning reclamation projects across the province
- ✓ Continued support for world-class reclamation specialists in environments ranging from rainforest to high alpine
- ✓ Continued protection of the environment adjacent to mine sites through application of proven standards and guidelines developed by the Ministry of Water, Land and Air Protection

## Uses of Reclaimed Mining Land



Over half of mine reclamation in British Columbia is designed to create wildlife habitat.

Deer grazing on reclaimed coal mining land in the Elk Valley.



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### Strategy 6 Collaborate on environmental challenges

#### ACHIEVEMENTS

- ✓ Participation in National Orphaned/Abandoned Mines Initiative
- ✓ Partnership between industry and government to complete clean-up and remediation of Britannia Mine site including construction of a new treatment plant, in partnership with the private sector, to remediate contaminated water
- ✓ Historic Mine Sites in BC publication release in 2003
- ✓ Biological process developed by BC's BioteQ now in use around the world to treat acid rock drainage and recover saleable metals
- ✓ Computer and appliance parts being recycled by Teck Cominco at its Trail smelter

#### Orphaned/Abandoned Mine Sites

Environmental problems occur across Canada at historical mine sites that operated under old standards.

The National Orphaned/Abandoned Mines Initiative is documenting these sites across Canada and assessing their environmental and health liabilities.

#### Best Management Practices

The Prospectors and Developers Association of Canada's Environmental Excellence in Exploration (E3) initiative provides free online access to field-tested best management practices for the global industry.

In British Columbia, government and the mining industry have been participating in regional "Joint Solutions" workshops to address challenges to exploration and enable permitting.

Building on these efforts, the Province will work with industry and stakeholders to develop made-in-BC best management practices for mineral exploration.

- *Action 15*  
Work with provincial universities and colleges on mining reclamation and biotechnology tools as part of British Columbia's Life Sciences Strategy
- *Action 16*  
Inventory and assess historic mine sites for potential environmental challenges through continuing participation in the National Orphaned/Abandoned Mines Initiative
- *Action 17*  
Building on world-class environmental standards and best management practices, develop "user friendly" best management guides for mining exploration in 2006
- *Action 18*  
Work towards harmonizing Fisheries and Oceans Canada and provincial fish and fish habitat management activities to reduce duplication and overlap
- *Action 19*  
Identify, in partnership with industry, new opportunities for recycling metals and minerals
- *Action 20*  
Support the Britannia Project in transforming an abandoned mine site into a world-class interpretive centre communicating the opportunities and challenges presented by mineral resource development activities



The Britannia Beach community and Britannia Mine site, is home to the BC Museum of Mining. The Province is working with the federal government and industry to clean up environmental problems related to this historical mine which operated prior to adoption of environmental guidelines.