

E

Environment

Mining... GREAT for Saskatchewan

- Environmental stewardship and sustainability are important to the mining industry. Environmental practitioners are an important part of the workforce at all mine sites. The Saskatchewan mining industry directly employs dozens of dedicated environmental professionals at operations throughout the province.
- The Saskatchewan mining industry invests considerable human resources and millions of dollars every year in environmental stewardship activities, including the monitoring of environment stations at sites, prevention and mitigation of environmental impacts, and in decommissioning and reclamation efforts and ongoing research efforts.
- Mining is a temporary use of the land that only uses 0.1% of available land in the province (less than the size of Saskatoon).

ENVIRONMENTAL PLANNING & THE MINING CYCLE

- Environmental stewardship is a part of mine planning from conception to production through to reclamation. Mining companies incorporate reclamation and decommissioning plans as part of the initial Environmental Impact Assessment Statement that is submitted to Saskatchewan Environment. These plans go through a thorough public review process before a Mine Operating License is granted.
- As part of their license to operate, all mines are required to provide financial assurance to government to ensure that there is money in place to reclaim mine areas. These plans are reviewed annually.
- Potash mines are working with the government to prepare decommissioning plans (even though they expect to operate for another 100 years).
- All mines have extensive tree planting programs for shelterbelts and wildlife habitat.
- Buffer lands around potash operations are managed for sustainable agriculture and/or wildlife habitat.
- The waste product of potash production is predominantly common salt which is contained in managed storage areas. A portion of the salt is used for highway de-icing, as well as for agricultural and industrial purposes.
- All potash mines have zero discharge to streams or lakes. Surplus brine is discharged into deep strata already containing brine 1300 to 1900 m underground.
- Saskatchewan's coal mines undergo continuous reclamation. The objective is to reclaim annually an area equivalent to that which is disturbed. Mined areas are reclaimed to productive farmland 2-3 years after production. Prior to mining, cover soil is salvaged and then directly replaced on recontoured lands.
- Revegetation to minimize wind and water erosion occurs (as soon as practical) following coversoil replacement. Reclaimed lands are revegetated to a permanent agronomic forage or native species cover that enhances biodiversity, provides better wildlife habitat and adds organic matter that promotes carbon sequestration.
- Mined lands are reclaimed to an acceptable predetermined sustainable multi-land use so that the land can be returned to a productive state as soon as possible. Reclaimed land could be returned to cereal or forage crop, pasture, natural forest, wildlife habitat, recreation and commercial land uses.
- Water management plans utilized by coal mining operations minimize the impact on surface and ground water resources.



REGULATION

- The mining industry is strongly regulated at both the federal and provincial levels. Applicable legislation includes the Canadian Environmental Protection Act, The Fisheries Act, The Navigable Waters Act, The Metal Mining Effluent Regulations, The Species at Risk Act, The Environmental Management and Protection Act, The Spill Control Regulations, The Clean Air Regulations, The Mineral Industry Environmental Protection Regulations, The Hazardous Materials Regulations, The Halocarbon Control Regulations and others.
- The Saskatchewan uranium industry is one of the most rigorously regulated industries in the world. It consistently meets or exceeds all standards set by federal and provincial governments.
- ISO 14001 is a voluntary international set of standards for maintaining an effective environmental management system where a company can demonstrate its commitment to environmental performance, pollution prevention and continual improvement. Five Saskatchewan uranium operations are currently ISO 14001 certified: McClean Lake (2001), Key Lake (2003), McArthur River (2003), Cluff Lake (2004) and Rabbit Lake (2010).
- On the exploration front, Canada continues to show world leadership through the Prospectors and Developers Association environmental excellence in explorative initiative (E3). E3 is an unparalleled online resource of data and environmental management practices designed to promote and ensure that the highest levels of environmental stewardship are practiced on mineral exploration projects worldwide. The SMA was one of the supporting organizations of this initiative.
- The SMA is also a founding participant of the Saskatchewan Mineral Exploration Government Advisory Committee (SMEGAC), an industry-government working group that has developed Best Management Practices for mineral exploration. In May 2008, the work of this group was recognized for an award of environmental excellence by the Association of Professional Engineers and Geoscientists of Saskatchewan.

- In July 2009, Cameco Corporation's former Contact Lake gold mine had the distinction of being the first decommissioned and reclaimed mine site to be entered in the Saskatchewan government's Institutional Control Registry. This industry-funded registry will manage all approved decommissioned and reclaimed mine and mill sites in perpetuity.
- AREVA's Cluff Lake mine site continues in the decommissioning phase, which started in 2004. Over 800,000 trees have been planted, along with establishment of a grass cover. Environmental monitoring of the site continues during decommissioning with regular air, water, plant and soils samples to ensure the environment is protected and the site will remain safe for traditional land uses.
- The SMA and member companies are major funders of a 5 year \$2.1 M research project in northern Saskatchewan that is examining woodland caribou population dynamics and their critical habitat.

RESEARCH & EDUCATION

- The industry actively participates in research, development and implementation of new technologies to improve combustion efficiency, reduce greenhouse gas emissions, increase resource conservation and further reduce environmental impact.
- In recognition of the importance of environmental management to our industry the SMA annually sponsors environmental engineering scholarships at the two Saskatchewan universities.

May 2014