

1. Objectives for developing Ontario's critical minerals strategy

1. Will these objectives support achieving Ontario's vision?

- The objectives will only support achieving Ontario's vision if they are followed by a co-ordinated and targeted action plan that is successfully implemented.
- Unfortunately, the successful implementation of such an action plan is not solely dependent upon the Ministry of Energy, Northern Development and Mines (ENDM).
 - The participation and responses of other provincial ministries, the federal government, the many individual and independent First Nations in the province, the mineral and manufacturing sectors, non-governmental organizations, and the public at large will all influence the outcomes of the strategy.

2. Are there any other elements that need to be considered in the objectives?

- These objectives are very broad.
 - Each objective might deserve an individual strategy based on its own merit!

3. What are some actions Ontario could consider to achieve these objectives?

- Develop a comprehensive communications plan for each objective, focussed on the specific interests of the diverse target audiences linked to the individual objectives.
- Work with the federal government to clarify what court judgments with regard to the aboriginal and treaty rights of the Aboriginal peoples of Canada (as cited Section 35 of the Constitution Act, 1982) mean for anyone seeking to acquire or develop resources on Crown land in Ontario.
- Set up a permanent committee with ENDM's Mines and Minerals Division and the Ministry of Natural Resources and Forestry's (MNRF) Regional Operations Division to ensure that both ministries have input on any decisions, designations and policies that apply to Crown land (especially those that put Crown land off-limits to mineral exploration and development) since both ministries have defined and distinct responsibilities for managing Crown land in the province.
- Direct some Ontario Geological Survey (OGS) resources away from greenstone belts to the less-well-mapped areas of the province (including in the Grenville geological province) where rare earth elements and other commodities necessary for the emerging 'Green Economy' might be found.
- Have ENDM engage in public education regarding minerals and mining, the employment and business opportunities available in the sector, and the urgent

need for Canadian sources of non-traditional mineral commodities to support the 'Green Economy'.

2. Supporting partnership opportunities with Indigenous communities

1. What opportunities do you see for Indigenous communities participating in resource development?

- Resource developments provide opportunities for well-paying jobs in or near the traditional lands of First Nation community members.
- Communities could establish businesses to provide a wide range of contracted services to resource developments (e.g., catering, expediting, telecommunications, mechanics, environmental monitoring, etc.).

2. What are the barriers that Indigenous communities face in participating in resource development?

- Elders in Indigenous communities have considerable influence, but information about the mineral sector may not be available to many of them (especially in remote communities) since it is not available in Ojibwe, Cree or Oji-Cree, while they do not speak English.
- The leadership in First Nation communities can change every two years if the band holds its elections under the federal *Indian Act*. New councils can hold new opinions. This can make it difficult for communities and/or third-party proponents seeking to develop relationships or engage in resource development.
- First Nation leadership practices (i.e., bottom up) are very different from business leadership practices (i.e., top down), making consultation and negotiations difficult for those who do not understand and accommodate these disparities.
- First Nations represent themselves as individual independent nations, so – as an independent nation – a community may not have developed precedents or unified 'positions' regarding resource development.
- Workers from First Nations may not have the education or training needed to participate in resource development or manufacturing.
- Community members may have to leave their homes to participate in resource development, and may be reluctant to do so.
- Workers from First Nation communities may want to have personalized work schedules that are inconsistent with normal industry practices, so they can pursue traditional activities at certain times of the year.

3. What supports might assist Indigenous communities with taking advantage of the many opportunities of a critical minerals strategy?
 - Fast track education and training to build capacity and prepare First Nation community members for the opportunities that will exist in the mineral and manufacturing sectors.
4. What kinds of initiatives or partnerships could create more opportunities for participation in critical minerals projects and the supply chain?
 - Provide start-up funding for the types of First Nation enterprises needed to support mineral exploration and development.

3. Developing an Ontario critical minerals list

1. Are there other considerations or factors that Ontario should take into account when developing a critical minerals list for Ontario?
 - Rename the proposed list of ‘critical minerals’ to the proposed list of ‘critical mineral commodities.’ Only about 20% of the items on the list are actually minerals (e.g., fluor spar, barite, and phosphate), and others are metals or groups of metals (e.g., copper, and rare earth elements).
 - Recognize that while the infrastructure (e.g., roads, mines, mineral processing operations and manufacturers) for some deposits and certain commodities is already well established in the province, it is missing for other yet-to-be-discovered deposits and mineral commodities.
 - Good, inexpensive transportation links are essential factors in making many commodities, especially those known as ‘industrial minerals’, competitive on the provincial, national and international market.
2. Are there any other minerals in Ontario that should be added to the list because they are considered ‘critical,’ or that should be removed from the list?
 - Consider adding additional mineral commodities to the Critical Minerals List proposed in the Framework Discussion Paper.
 - Some metals that are not included in Ontario’s list appear on both the United States Geological Survey (USGS) 2018 List of Critical Minerals and the Government of Canada’s 2021 Critical Minerals List.
 - Given that these metals may be found in Ontario (e.g., gallium and germanium may be found in volcanogenic massive sulphide deposits such as those at Kidd Creek in Timmins), it may be worth considering whether gallium and germanium, and other items on the USGS list such as arsenic should be added to Ontario’s list.

3. How can Ontario leverage its critical minerals list to demonstrate to the global investing community that the province is ready to supply the world with critical minerals?

- Reconsider stating in the proposed strategy that Ontario is ready to “*supply the world with critical minerals.*”
 - Ontario should be seeking to ensure a secure and stable supply of the province’s critical mineral commodities is available to supply its own manufacturing and consumer needs.
 - Ontario should be seeking to promote opportunities to use its critical mineral commodities to create ‘value-added’ manufacturing opportunities within the province.

4. Enhancing investment in mineral exploration and development

1. What else could Ontario do to promote the exploration for and development of critical minerals in order to enhance investment?

- Market the concept that ‘Ontario is open for business.’
- Fund the OGS to undertake a well-publicized enhanced program of geological research and mapping comparable to ‘Operation Treasure Hunt’ of the early 2000s to identify areas of significant mineral potential for the non-traditional elements needed to support the ‘Green Economy’.
- Hold one or more well-publicized free symposia via the ZOOM platform to share data with the global mineral exploration community and highlight ‘the Ontario advantage’ (i.e., well-endowed geology, well educated workers, etc.) and areas of potential for mineral exploration and development.
- Enhance the level of participation of ENDM at the Prospectors and Developers Association Convention in Toronto (which has been significantly diminished in recent years) to draw attention away from other jurisdictions from around the world seeking the same exploration and development investments that Ontario wants to attract.
- Prepare a guide to lead provincial, national and foreign companies through the steps they would have to follow to explore for and development critical mineral commodities in Ontario.
- Prepare and distribute (e.g., via the OGS website, Mining Matters, etc.) a suite of one-page information sheets with location maps for each critical mineral commodity to complement the sheets produced in the past for gold, base metals, diamonds, etc.

- Work with the mineral sector, business associations, and Aboriginal governments to develop marketing and investment promotion plans for the province or parts of the province.
- Seek opportunities for ENDM to work with the Ontario Growth Secretariat and other relevant ministries through the Growth Plan for Northern Ontario to promote the exploration for and development of critical minerals.
- Invite the mineral sector to sell proprietary geochemical and geophysical data sets that meet OGS standards to ENDM so that the data can be incorporated into publications and databases for free distribution.
- Review and reprocess the seismic and magnetotelluric data released through the Metal Earth program at the Harquail School of Earth Sciences at Laurentian University, and other sources, to identify areas of mineral potential for public distribution.

2. What else could Ontario do to prepare communities to be ready for, and actively participate in, exploration and development of critical minerals?

- Re-instate ENDM's well-publicized 'Prospector Training Programs' in communities across the province, including in Aboriginal communities, to stimulate awareness of, and interest and capacity in mineral exploration activities.
- Participate in 'career days' at local secondary schools to make students aware of the broad range of opportunities in the mineral sector, and the types of training and experience needed for such opportunities.
- Develop a series of television advertisements such as the ones broadcast by the NDP government in early 1990s to educate the public at large about how mineral products are essential to everyday life.
- Encourage the Ontario Mining Association to educate the public about the exceptionally high value of using land to provide mineral commodities, and the industry's remarkable improvements in environmental protection and rehabilitation work over the past few decades.

3. How could the Ontario Geological Survey play a greater role in supporting critical minerals exploration and development in the province?

- Engage fully with the initiative announced on April 1, 2021, when a new working group to "*provide advice on strategies to expand protected and conserved areas*" was introduced.
 - The OGS should provide geoscience data for any and all sites that may ultimately be considered as "*protected and conserved areas*" to ensure that

areas of significant mineral potential are not permanently placed off-limits to exploration and development.

- Mineral sector proponents have responded to past expansions of the networks of parks and conservation reserves in the province by moving their exploration and development investments to other jurisdictions.
- Create a ‘Critical Minerals Specialist’ position within the OGS.
- Ensure that the Provincial Significance Factor (PSF) for ore deposit models in OGS Open File Report 6141 (Procedural Guidelines for Provincially Significant Mineral Potential Mineral Resource Assessments) and the Metallic Mineral Potential Estimation Tool computer application reflects current exploration activity and market interests.
 - Any mineral resource assessment done using either of these methodologies is influenced by the PSF, which is based on factors including past and current mineral production in the province, and the current levels of interest in, and exploration for, deposits of specific mineral commodities.
 - If the PSF is not kept current, it may result in scores that are lower than they should be for the critical elements needed to support the ‘Green Economy’.

5. Regulatory and policy reform

1. Are there any additional areas of the regulatory system that are creating barriers for critical minerals projects?

- Make a relatively minor change to General Regulation 244/97 of the *Aggregate Resources Act*. It indicates that “*for the purposes of the definition of “aggregate” in subsection 1 (1) of the Act, rock is prescribed as a material except for metallic ores, andalusite, asbestos, barite, coal, diamond, graphite, gypsum, kaolin, kyanite, lepidolite, magnesite, mica, nepheline syenite, petalite, phosphate rock, salt, sillimanite, spodumene, talc or wollastonite.*”
 - This is an expansion of the definition of “rock” in the *Aggregate Resources Act* itself.
 - Fluorspar is included in the list of proposed critical minerals with exploration potential in Ontario. Although it contains calcium, it is never used as a metallic ore. Therefore, it would not be covered by the list of exclusions in General Regulation 244/97 of the *Aggregate Resources Act*.
 - If fluorspar is designated as a critical mineral commodity in Ontario, it should be added to the list of exclusions in General Regulation 244/97 of the *Aggregate Resources Act*.

2. Are there specific areas of policy guidance that industry and partners would find beneficial?

- Work with Ministry of Natural Resources and Forestry to adopt the guidance in the Minerals and Metals Policy of the Government of Canada that provides direction on establishing new protected areas on federal lands.
 - The policy “*recognizes the minerals and metals industry’s important contribution to Canada.*” It also recognizes “*the desirability of leaving federal lands, particularly those with high mineral potential, open for mineral development.*”
 - Amongst other actions, the federal government will “*fully take into account the mineral potential of the area in question before taking decisions to create protected areas on federal lands.*”
- Follow the example of other Ontario ministries and establish a “Mineral Policy” for the province.
 - At present, the Provincial Policy Statement established under the *Planning Act* includes direction regarding mineral resources, but it only applies to private land. Something comparable is needed for mineral resources on Crown land.
 - Other ministries and governments have established policies specifically intended to protect their interests in Ontario. For example:
 - The Ministry of Agriculture, Food and Rural Affairs (OMAFRA) has a policy to protect agricultural land and farm operations for the long term;
 - MNRF has an old growth policy for Crown forests; and
 - the federal Department of Fisheries and Oceans has a policy on access to wild aquatic resources as it applies to aquaculture.
- Follow the guidance provided by Supreme Court of Canada decision in Case 17285 (1985) and provide compensation, established by arbitration, when protected areas are established over pre-existing mining land and the rules that affect the pre-existing mining lands subsequently changed.
 - In the case cited above, claimholders in British Columbia were found to be eligible for compensation because a protected area was established over their pre-existing mining lands and subsequent park policies prevented them from exploring and developing their property.
 - There are similar precedents in Ontario.
 - Compensation was awarded by the Courts in Ontario to a few claimholders who initiated claims and lawsuits after the Ontario’s Living Legacy Land Use Strategy (OLL) was approved.
 - The provincial *Parks and Conservation Reserves Act* and its related policies that apply to the activities of claimholders in areas intended for protection have been made more restrictive since OLL was approved.
- Work with the federal government to establish a provincial position on what court judgments regarding the aboriginal and treaty rights of the Aboriginal peoples of Canada (as cited Section 35 of the Constitution Act, 1982) mean for anyone seeking to acquire or develop resources on Crown land in Ontario.

- Encourage the Ministry of Indigenous affairs to work with other ministries to provide direction on consultation processes for development proponents working in Ontario, to reduce uncertainty and establish consistency across the province.

3. What key considerations would you want looked at in a review of bulk sample thresholds?

- Set the threshold high enough to ensure that the proponent can carry out a definitive resource assessment.

4. What are some of the challenges related to advanced exploration and mine closure planning with respect to the development of critical minerals?

- Streamline the application / review process for exploration plans and permits so that it is comparable to and competitive with the processes in other Canadian jurisdictions.
- Align the provincial and federal environmental assessment requirements and review processes so that development proponents are only required to complete one assessment for each project.
- Align the provincial and federal water quality guidelines for deleterious elements.

6. Supply chain and manufacturing opportunities

1. What are the barriers and opportunities facing the development of an Ontario based critical minerals supply chain outside of mineral exploration and development?

- Establish legislation so that companies producing critical mineral commodities must process their products in Ontario, thereby creating secondary and value-added industries, unless the companies receive special exemptions to process their products elsewhere.

2. How can Ontario attract investment in new processing capacity needs in Ontario?

- Reduce the costs of electricity so that Ontario is more competitive with other provinces and nations.
- Set up a permanent committee with ENDM's Mines and Minerals and Northern Development divisions, and industry representatives to identify and promote opportunities related to mineral processing and manufacturing in the province.

3. What key industry partners should be engaged to best position Ontario in securing new supply chain developments?

- Engage with companies at the advanced exploration stage to encourage and enable supply chain developments as the companies go into production.
4. Are there any missing linkages in critical minerals supply chain processes that should be included in an Ontario critical minerals strategy?
- Add a fifth column to the proposed list of critical mineral commodities for “*Minerals that may be or are currently being reprocessed only.*”
 - It could include such things as aluminum and lead, and elements found in electronics components but not otherwise included in the list of critical minerals (e.g., gallium and germanium).
5. Are there any best practices from other jurisdictions that could be implemented in Ontario to better attract critical minerals supply chain investments?
- Review the 38 recommendations given at the end of the Northwest Territories Mineral Development Strategy (2013) to determine which can be modified and used to advantage in the province’s Critical Minerals Strategy.
 - Review the recommendations included in the Mining Readiness Strategy (2020) prepared by the Thunder Bay Community Economic Development Corporation to determine which can be modified and used to advantage in the province’s Critical Minerals Strategy.