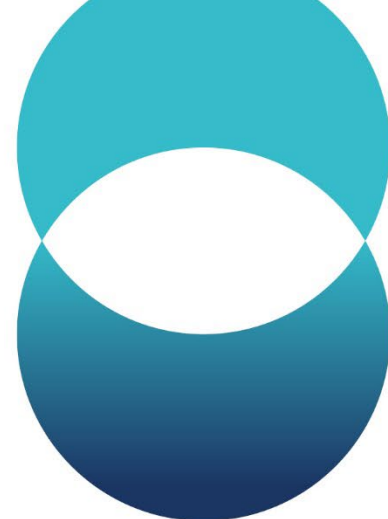


**The Conference
Board of Canada**



Learning From One Another

Economic Forecast Technical Report

Prepared by
The Conference Board of Canada





Forecasting methodology

Northern Ontario, Yukon, and Nunavut

This research employed cross-sectional data analysis, qualitative analysis, historical time series, and forecasting. We used The Conference Board of Canada's Territorial Forecasting Model (TFM) to produce economic forecasts in Nunavut and Yukon from 2024 until 2045. We used the Provincial Medium-Term Forecasting Model (PMTFM) and a custom regional model to generate forecasts for Northern Ontario over the same time period. We forecast baseline, high, and low cases for each region. The model builds on consistent assumptions formed from our global, Canadian, and provincial forecasts, alongside ongoing monitoring of international, national, and provincial/territorial events. We developed the additional assumptions used in these models through engagement with our project partners including post-secondary institutes, Indigenous organizations, and provincial and territorial government stakeholders, and through reviews of publicly available information on the status of projects and investments in the Northern regions. The forecasts were completed in September 2023. Specific research activities included:

- a review of academic and grey literature (public policy, industry, etc.) on labour market issues in the provincial and territorial economies;
- a review of relevant data sources from Statistics Canada (census, National Household Survey, and Indigenous Peoples Survey, among others) and other federal and provincial/territorial government departments.

Definition of Northern Ontario

We defined Northern Ontario using the geographical boundaries defined by Statistics Canada and the Government of Ontario. Northern Ontario includes the following census divisions: Algoma, Cochrane, Manitoulin, Nipissing, Parry Sound, Greater Sudbury, Sudbury, Timiskaming, Kenora, Rainy River, and Thunder Bay.

Economic forecast assumptions

Part of the assumptions for each forecast include major projects that are ongoing or expected to begin operating during the forecast period. The threshold for a major project was total cost exceeding \$10 million. See Appendix A for the list of projects for each scenario per region.

We derived the industries covered in the forecast using the Northern American Industry Classification system (NAICS), 2017 version. We forecast real GDP and employment by industry at the four-digit NAICS level. We categorized the sectors included in the results of the real GDP and employment forecasts at the two-digit NAICS level. They are as follows: other primary sector (agriculture, forestry, fishing, and hunting), mining, manufacturing, construction, utilities, wholesale and retail trade, transportation and warehousing, finance, insurance, and real estate, commercial services (professional, scientific, and technical services; business, building, and other support services; information and cultural services;



arts, entertainment, and recreation; accommodation and food services), non-commercial services (health care, social assistance, hospitals, and educational services), public administration and defence. You can find more information about the 2017 version of the North American Industry Classification system on the [Statistics Canada website](#).

Occupational demand scenarios

We developed occupational-demand scenarios based on the forecasting assumptions and economic outlooks. We developed the occupational scenarios using the 2021 National Occupational Classification and occupation demand was forecast for occupations at the five-digit level.

We present the results of the occupational forecasts in several ways. We categorized the five-digit occupations within the forecast by skill level using the Training, Education, Experience, and Responsibilities (TEER) levels derived from the 2021 National Occupational Classification (see Table 1). We also categorized them by occupation type at the one-digit level following the 2021 National Occupational Classification (see Table 2). For the period 2024 to 2045, we present the top 50 occupations by job openings at the five-digit level for each region. You can find more information about the 2021 National Occupational Classification on the [Employment and Social Development Canada website](#).

Job openings are the combined number of expansion demand and replacement demand openings. **Replacement demand** corresponds to job openings that employers need to fill to replace workers who have retired, died, or migrated out of the territory. **Expansion demand** corresponds to job openings created as a result of economic expansion, such as the opening of a new mine. Expansion demand creates new jobs in the economy, but when the economy contracts, existing jobs may also be lost, which is reflected in negative expansion demand.

Implications of the incident at Victoria Gold's Eagle Gold Mine for Yukon

The economic forecast for Yukon was completed prior to the heap leach failure at Victoria Gold's Eagle Gold Mine, which occurred on June 24, 2024.¹ In the assumptions of the Yukon forecast, the mine is set to be in operation until 2032 in the baseline, high, and low scenarios. At this stage, the prospects for future production at the mine appear weak. The wider ramifications for the mining industry are not yet clear.

Mine closure would result in weaker GDP growth projections over the next five years. The anticipated development of additional mining projects at the end of the decade will allow growth projections to strengthen. Remediation work at the site would partially offset the losses in GDP resulting from the mine closure.

The implications of the potential closure of the mine on the employment projections in the mining sector and the projections of occupation demand in the territory will likely be minimal over the 2024 to 2045 period of the forecast. The mine employs just over 600 people, but only about a third of employment at the Eagle Gold mine is from Yukon residents, with the remaining workers being fly-in fly-out.² Future remediation work at the mine could offer

¹ Government of Yukon, "Statement From Minister of Justice and Attorney General."

² Halliday, "Yukonomist: The last of the hard-rock mines?"



continued employment for some workers. Given the typically tight condition of Yukon's labour market, we envision the potential for reallocation of workers to other projects and sectors to be favourable.

In the case of a mine closure, there would be implications for GDP and employment in other linked sectors, including wholesale trade, transportation and warehousing, and accommodation and food services, with less activity by fly-in fly-out workers in the mining sector in the territory.



Table 1

Skill level derived from the Training, Education, Experience, and Responsibilities (TEER) levels, National Occupational Classification system, 2021 version

Skill level	Education/training required
TEER Level 0 Management	These occupations are characterized by a high level of responsibility, accountability, and subject matter expertise. Expertise can be acquired either through formal education or extensive occupational experience.
TEER Level 1 University degree	Occupations that usually require a university degree (i.e., a bachelor's, master's, or doctorate)
TEER Level 2 College/apprenticeship training	These occupations usually require college education or apprenticeship training of two or more years.
TEER Level 3 Occupational training	These occupations usually require college education, apprenticeship training of less than two years, or more than six months of on-the-job training.
TEER Level 4 On-the-job training	These occupations usually revolve around on-the-job training and do not require post-secondary education.
TEER Level 5 Short-term work demonstration	These occupations usually need short-term work demonstration and no formal education.

Note: Five-digit occupations from the occupational scenarios were sorted based on the skill level derived from the TEER in the National Occupational Classification, 2021 version. Each skill level represents the training, education, experience, and responsibilities required to enter into and work in an occupation.

Sources: The National Occupation Classification system, 2021 version; The Conference Board of Canada.



Table 2

Occupation type at the one-digit level derived from the National Occupational Classification system, 2021 version

Occupation category	Description
Management occupations	These occupations are considered to be at the top of the organizational hierarchy of workplaces or businesses. Decision-making that affects the organization as a whole, or departments within organizations, is undertaken by management.
Business, finance, and administration occupations	This category contains occupations that are concerned with providing financial and business services, administrative and regulatory services, and clerical supervision and support services.
Natural and applied sciences and related occupations	This category contains professional and technical occupations in the sciences, including physical and life sciences, engineering, architecture, and information technology.
Health occupations	This category includes occupations concerned with providing health care services directly to patients and occupations that provide support to professional and technical staff.
Occupations in education, law, and social, community, and government services	This skill-type category includes a range of occupations that are concerned with law, teaching, counselling, conducting social science research, developing government policy, and administering government and other programs.
Occupations in art, culture, recreation, and sport	This skill-type category includes professional and technical occupations related to art and culture, including the performing arts, film and video, broadcasting, journalism, writing, creative design, libraries, and museums. It also includes occupations in recreation and sport.
Sales and service occupations	This skill-type category contains sales occupations, personal and protective service occupations, and occupations related to the hospitality and tourism industries.
Trades, transport and equipment operators, and related occupations	This skill-type category includes construction and mechanical trades, trades supervisors and contractors, and transportation and heavy equipment operators. These occupations are found in a wide range of industrial sectors, with many occurring in the construction and transportation industries.
Natural resources, agriculture, and related production occupations	This category contains supervisory and equipment operation occupations in the natural resource-based sectors of mining, oil and gas production, forestry and logging, agriculture, horticulture, and fishing. Most occupations in this category are industry-specific and do not occur outside of the primary industries.
Occupations in manufacturing and utilities	This category contains supervisory and production occupations in manufacturing, processing, and utilities.

Note: Five-digit occupations from the occupational scenarios were aggregated up to the one-digit occupation type from the 2021 National Occupation Classification system.

Sources: The National Occupation Classification system, 2021 version; The Conference Board of Canada.



Appendix A

List of major projects

Northern Ontario

Table 1

Construction projects included in the baseline, high, and low scenarios for the Northern Ontario forecast 2024–2045

Project name	Cost (C\$ millions)	Start	Completion	Scenarios
New mill in Nipigon/Greenstone area	200	2027	2029	High
Marathon Palladium project—Generation PGM	665	2024	2026	High
Crawford nickel, cobalt, and iron mine—Canada Nickel	1,435	2025	2027	High
Kenbridge nickel project—Tartisan Nickel	134	2024	2025	High
Superior Lake—Metallum Resources	145	2024	2025	High
PAK—Frontier Lithium Inc.	869	2024	2026	Baseline, high
Lithium processing plant, Avalon	600	2023	2026	Baseline, high
Expansion of Thunder Bay jail and Kenora jail	96	2021	2023	All scenarios
Thunder Bay correctional complex	1,200	2022	2026	All scenarios
Highway 652 Cochrane bypass	33	2023	2025	All scenarios
Highway 11, 17 Coughlin Rd. East	62	2021	2024	All scenarios



Table 1 (cont'd)

Project name	Cost (C\$ millions)	Start	Completion	Scenarios
Highway 69 project, four-lane extension	240	2021	2029	All scenarios
Highway 11, 17 four-lane expansion Coughlin Rd. West	54	2022	2025	All scenarios
Community flood mitigation project, Thunder Bay	33	2019	2027	All scenarios
Flood mitigation, Junction Creek watershed	22	2019	2025	All scenarios
Mukqua Waakaa'igan Indigenous cultural centre, Algoma University	18	2022	2024	All scenarios
Algoma Steel Inc. project	703	2022	2029	All scenarios
Wataynikaneyap (Watay) Power	1,800	2018	2024	All scenarios
Thunder Bay Art Gallery waterfront relocation	44.75	2023	2025	All scenarios
West Parry Sound area recreation and culture centre	33.9	2023	2025	All scenarios
Wawa OSB Inc. plant	181	2022	2023	All scenarios
Waasigan transmission line				All scenarios
Greenstone Equinox mine	1,512	2021	2024	All scenarios
Cote Gold IAMGold	2,456	2020	2024	All scenarios
Argonaut Gold—Magino mine	422	2021	2023	All scenarios
Glencore—Onaping Depth	1,300	2018	2025	All scenarios
Bradshaw—Gowest Gold Ltd.	26.5	2021	2023	All scenarios
Detour Lake—Agnico Eagle	88	2022	2025	All scenarios
Pamour Mine—Newmont	512	2022	2024	All scenarios
Island Gold—Alamos	974	2021	2026	All scenarios
Macassa—Agnico Eagle	438	2019	2024	All scenarios
Electra battery materials industrial park	800	2022	2025	All scenarios

Source: The Conference Board of Canada.



Table 2

Mining projects included in the baseline, high, and low scenarios for the Northern Ontario forecast 2024–2045

Project name	Start	Completion	Scenarios
Crawford nickel, cobalt, and iron mine—Canada Nickel	2027	2052	High
Kenbridge nickel project—Tartisan Nickel	2026	2034	High
Superior Lake—Metallum Resources	2025	2034	High
Marathon Palladium project—Generation PGM	2026	2038	High
PAK—Frontier Lithium Inc.	2026	2052	Baseline, high
Rainy River—New Gold Inc.	2024	2031	Baseline, high
Williams (Hemlo) gold mine—Barrick Gold	2025	2030	Baseline, high
Rainy River—New Gold Inc.		2024	Low
Williams (Hemlo) gold mine—Barrick Gold		2025	Low
Young-Davidson—Alamos Gold	2021	2040	All scenarios
Red Lake (including Cochencour)—Evolution Mining			All scenarios
Detour Lake—Agnico Eagle			All scenarios
Macassa—Agnico Eagle			All scenarios
Lac des Iles—Impala Canada			All scenarios
Black Fox—McEwen Mining			All scenarios
IAM Gold—Cote Gold	2023	2041	All scenarios
Sudbury (Coleman, Copper Cliff Complex, Creighton, Garson, Totten)—Vale			All scenarios
Greenstone gold mine—Equinox	2024	2038	All scenarios
Island Gold—Alamos		2030	All scenarios
Magino Mine—Argonaut Gold	2023	2042	All scenarios



Table 2 (cont'd)

Project name	Start	Completion	Scenarios
Newmont Goldcorp—Porcupine			All scenarios
Borden—Newmont Goldcorp Corp.	2019	2034	All scenarios
Hollinger Open Pit—Newmont Goldcorp Corp.		2023	All scenarios
Hoyle Pond—Newmont Goldcorp Corp.		2025	All scenarios
Glencore—Onaping Depth	2024	2039	All scenarios
Musselwhite—Newmont Goldcorp			All scenarios
Bradshaw—Gowest Gold Ltd.	2023	2032	All scenarios
Goliath—Treasury Metals	2025	2038	All scenarios
Bell Creek—Pan American Silver Corp.		2025	All scenarios
Sudbury (McCreedy)—KGHM		2027	All scenarios

Source: The Conference Board of Canada.



Yukon

Table 3

Construction projects included in the baseline, high, and low scenarios for the Yukon forecast 2024–2045

Project name	Cost (C\$ millions)	Start	Completion	Scenarios
Gold Corp—Coffee Gold	380	2024	2032	High
Hypothetical mine 1	693	2031	2045	High
Hypothetical mine 2	693	2026	2040	High
Western Copper—Casino mine	3,969	2028	2045	Baseline, high
Kudz Ze Kaya	749	2023	2034	Baseline, high
Yukon Resource Gateway Project	468	2019	2026	All scenarios
Dempster Fibre Project (Northwestel)	74	2021	2025	All scenarios
Carmacks bypass, part of YRGP	30	2021	2025	All scenarios
Faro Mine remediation	500	2022	2045	All scenarios
Nisutlin Bay Bridge	160	2022	2026	All scenarios
Klondike Highway project	180	2023	2027	All scenarios
Whistle Bend school	52	2021	2024	All scenarios
Whitehorse airport runway	150	2022	2025	All scenarios
Arts and heritage resource centre	28	2022	2024	All scenarios
Big Creek Bridge replacement	13	2021	2026	All scenarios
Arctic Energy Fund	27	2021	2026	All scenarios
Burwash Landing school project	22	2021	2026	All scenarios

Source: The Conference Board of Canada.



Table 4

Mining projects included in the baseline, high, and low scenarios for the Yukon forecast 2024–2045

Project name	Start	Completion	Scenarios
Gold Corp—Coffee Gold	2025	2036	High
Hypothetical mine 1	2033	2045	High
Hypothetical mine 2	2028	2040	High
Western Copper—Casino mine	2028	2045	Baseline, high
Kudz Ze Kaya	2026	2034	Baseline, high
Minto—Pembridge Resources		2029	All scenarios
Victoria Gold—Eagle Gold		2032	All scenarios
Alexico Keno Hill		2032	All scenarios
Placer Mining			All scenarios

Source: The Conference Board of Canada.



Nunavut

Table 5

Construction projects included in the baseline, high, and low scenarios for the Nunavut forecast 2024–2045

Project name	Cost (C\$ millions)	Start	Completion	Scenarios
DeBeers Chidliak diamond mine	853	2024	2036	High
Hypothetical mine 3	245	2034	2045	High
Undersea fibre optic cable (Katittuq Nunavut Fibre Link)	202	2024	2025	High
Kivalliq Hydro-Fibre Link	1,600	2026	2030	High
Agnico Eagle—Hope Bay pre-production	652	2015	2037	Baseline, high
Hypothetical mine 2	245	2034	2045	Baseline, high
Agnico Eagle—Amaruq	432	2017	2024	All scenarios
Agnico Eagle—Meliadine	1,505	2016	2028	All scenarios
Sabina—Back River pre-production	1,029	2021	2038	All scenarios
Mary River Baffinland Iron Co.	740	2014	2038	All scenarios
Hypothetical mine 1	500	2025	2038	All scenarios

Source: The Conference Board of Canada.



Table 6

Mining projects included in the baseline, high, and low scenarios for the Nunavut forecast 2024–2045

Project name	Start	Completion	Scenarios
Hypothetical mine 3	2037	2045	High
DeBeers Chidliak Diamond Mine	2030	2039	High
Agnico Eagle—Hope Bay	2024	2037	Baseline, high
Hypothetical mine 2	2037	2045	Baseline, high
Agnico Eagle—Meadowbank		2025	All scenarios
Agnico Eagle—Meliadine	2019	2033	All scenarios
Baffinland Iron—Mary River		2039	All scenarios
Sabina—Back River	2024	2038	All scenarios
Hypothetical mine 1	2028		All scenarios

Source: The Conference Board of Canada.



Appendix B

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