



LABOUR MARKET INFORMATION

Manitoba Environmental Workforce Needs, Trends and Challenges

Labour Market Outlook to 2025

July 2022

ACKNOWLEDGEMENTS

The workforce projections in this report were funded by the Government of Canada's Sectoral Initiatives Program. This report was commissioned by Manitoba Environmental Industries Association (MEIA) and funded by Manitoba's Provincial Sector Council Workforce Development Program. We are greatly appreciative of the support.

We acknowledge the data or research expertise provided by Prism Economics and Analysis, Gartner TalentNeuron, Statistics Canada, Employment and Social Development Canada, as well as other sources and resources.

We would also like to thank those who have provided ongoing advice and feedback regarding our Labour Market Information (LMI) through ECO Canada's LMI National Advisory Committee, which includes individuals from the following organizations:

- Bow Valley College
- Environmental Services Association of Alberta
- Environmental Services Association Maritimes
- EnviroSearch Ltd.
- General Motors
- Government of New Brunswick
- Government of Saskatchewan
- Indigenous Works
- Labour Market Information Council
- Ken Banister and Associates
- North Shore Environmental Consultants
- EnviroSearch Ltd.
- Royal Roads University
- Ryerson University
- SAIT Polytechnic
- Stantec
- Stratos
- Tait Human Capital

Individuals or organizations interested in contributing to future research projects can send a request to research@eco.ca.



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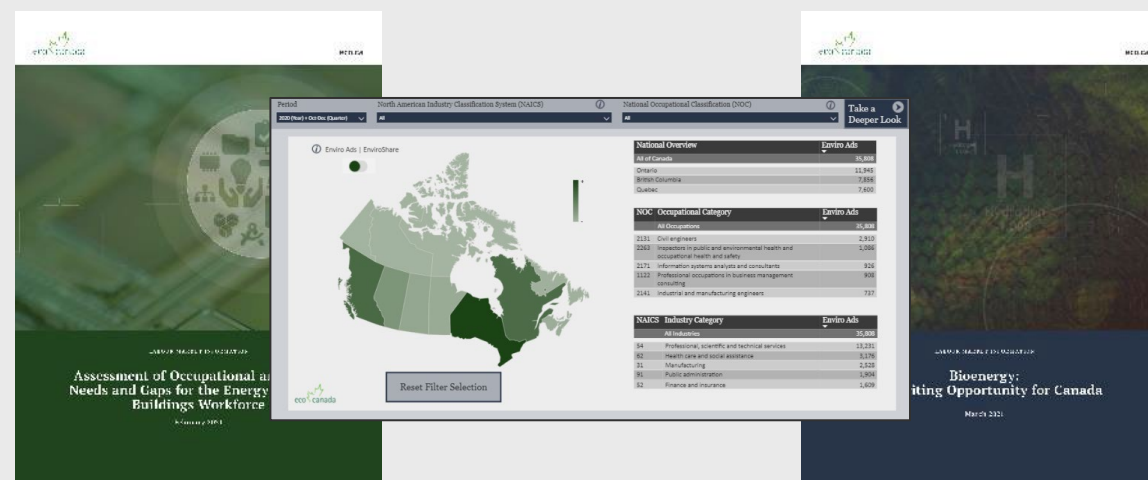
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ECO CANADA RESEARCH Our Value Proposition

ECO Canada provides **up-to-date, relevant, and credible** data and insights on **Canada's environmental workforce** to guide decision making within organizations and for individuals. Our labour market information helps:

- ✓ **Individuals** build meaningful careers
- ✓ **Employers** attract, develop and retain the best environmental talent
- ✓ **Governments** develop or refine programs or policies
- ✓ **Educators and trainers** prepare the workforce with the required knowledge and skills



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The background image shows the interior of a large industrial facility, likely a waste-to-energy plant. A massive pile of waste, including plastic, paper, and other debris, is being processed. Three workers in safety gear are visible in the foreground, standing near the waste pile. The facility has a high ceiling with a complex steel structure and numerous lights.

HIGHLIGHTS

HIGHLIGHTS

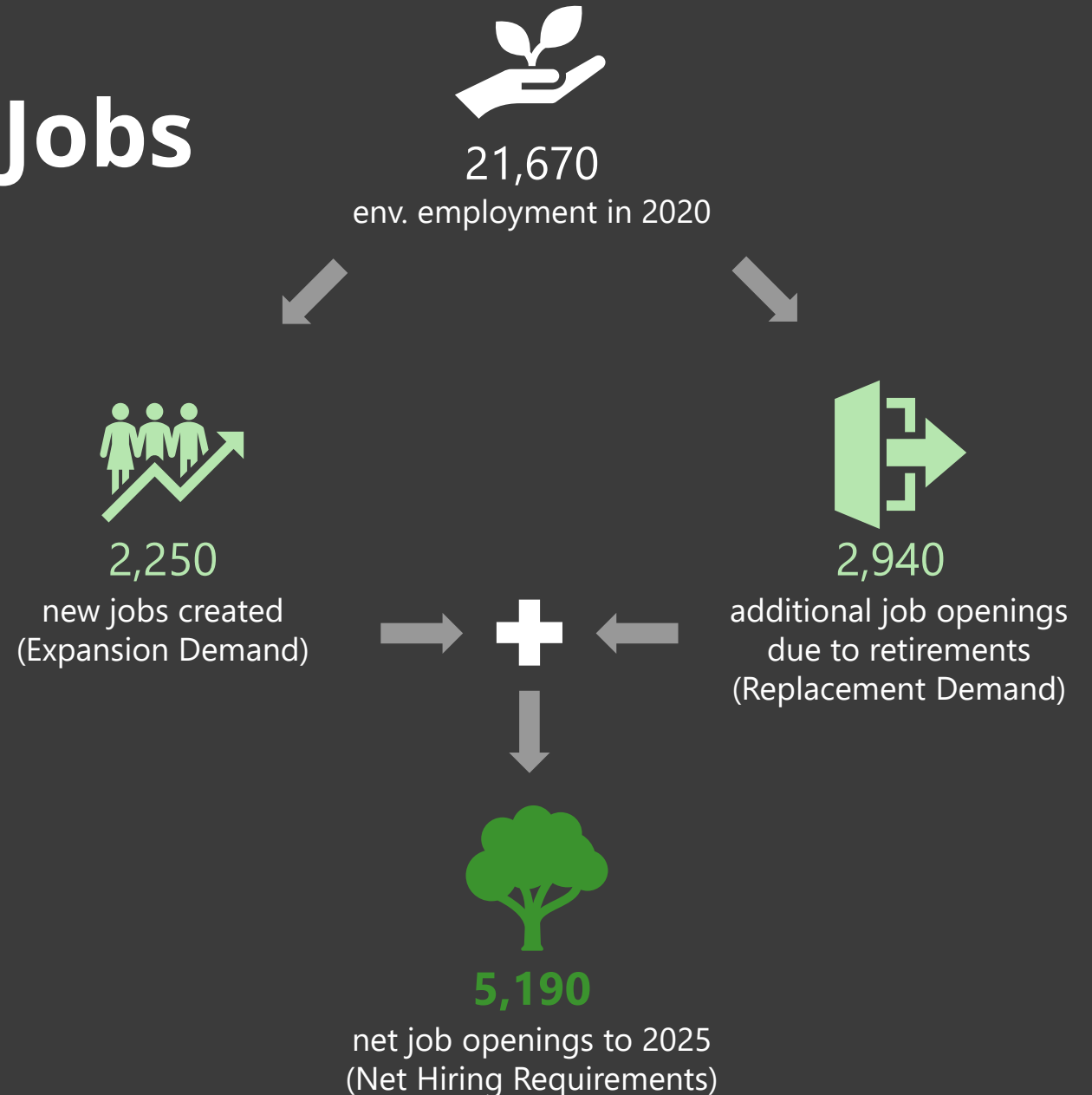
The Future of Green Jobs

About **1 in 29 workers** in Manitoba (**21,700 workers**) was in a green job in 2020.

- Environmental workers were present in every industry and a wide variety of occupations.
- Green talent is needed in a variety of environmental fields, from Sustainability to Water Quality to Fisheries & Wildlife.

Job growth and retirements will account for **5,200 net environmental job openings by 2025**—equivalent to 24% of 2020 employment levels.

- About 43% of net job openings will stem from expansion demand, while 57% will be due to replacement demand.
- About **46%** of net hiring requirements (**2,400 jobs**) will be for core environmental workers—or those in roles that require environmental competencies by 2025.



CANADA-WIDE HIGHLIGHTS

Critical Shortages Expected

The following occupations are projected to experience a shortage of environmental workers across Canada due to (1) wider supply/demand gaps, (2) post-secondary education pre-requisites, and (3) environmental-specific competency requirements:



Legislators and senior management



Engineering inspectors and regulatory officers & Inspectors in public and environmental health and occupational health and safety; Non-destructive testers and inspection technicians



Utilities equipment operators and controllers (incl. Water and wastewater treatment plant operators)



Physical and life sciences professionals



Construction managers; Construction millwrights and industrial mechanics



Electrical and electronics engineers; Aerospace engineers & Other professional engineers, n.e.c.



Architects; Landscape architects; Urban and land use planners & Land surveyors



Forestry technologists and technicians & Conservation and fishery officers; Agricultural and fish products inspectors



Managers in manufacturing and utilities



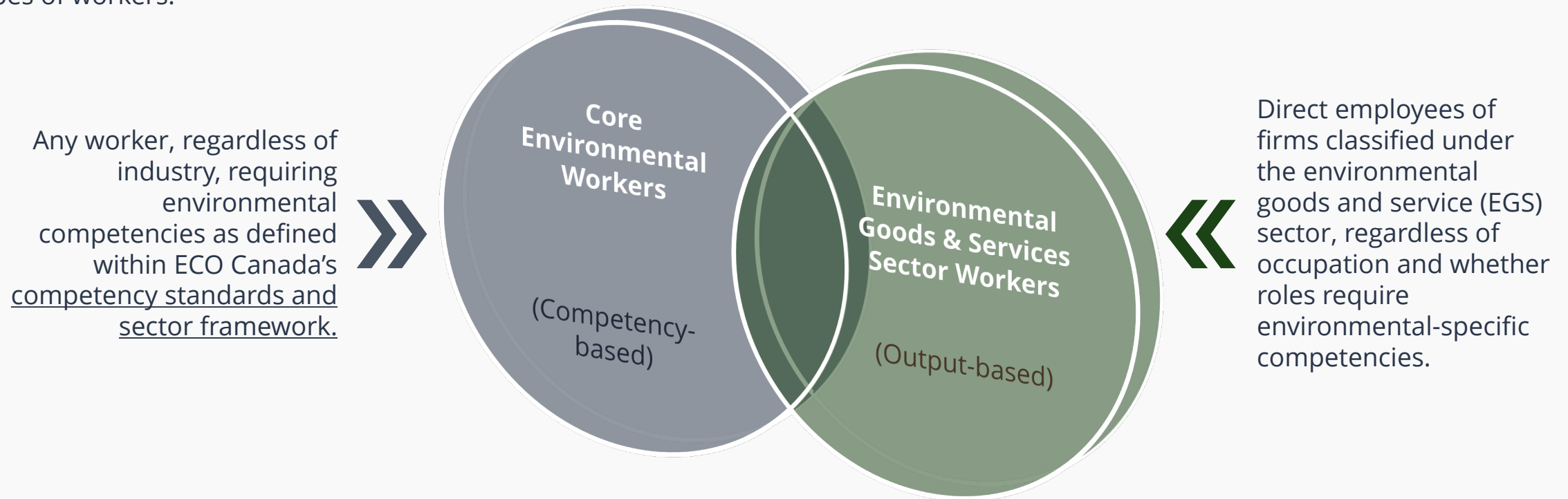
Contractors and supervisors, mining, oil and gas

SCOPE AND METHODOLOGY

THE ENVIRONMENTAL WORKFORCE DEFINED:

Two Classification Streams

The environmental workforce is broad and includes workers across various industries and occupations that drive or support the goals of **environmental protection, resource management, and sustainability**. Our definition and research encompass two types of workers:



A Sustainability Manager working in a mining company and an Accountant employed in a cleantech company are included in this definitional framework. An Impact Assessment Lead in an environmental consulting firm is both a core environmental worker and an EGS sector worker.

Scope and Methodology

	Provincial Labour Demand	National Labour Shortages
ENVIRONMENTAL WORKFORCE	<ul style="list-style-type: none"> • Core environmental workers • All environmental workers include core workers and environmental goods and services sector workers 	<ul style="list-style-type: none"> • All environmental workers with additional analysis on core environmental workers
LABOUR CHARACTERISTIC	<ul style="list-style-type: none"> • “EnviroShare” (share of environmental to total jobs or workers in the Canadian economy) • Environmental employment estimates • Net environmental hiring requirements (or net job openings): <ul style="list-style-type: none"> – Expansion demand (new jobs created), plus – Replacement demand (jobs that become available as green workers retire). 	<ul style="list-style-type: none"> • Number of environmental job seekers • Demand-supply gaps <ul style="list-style-type: none"> – Moderate risk: gaps range between 100 and 500 environmental workers – High risk: gaps of 500 or more environmental workers
OTHERS	<ul style="list-style-type: none"> • National Occupational Classification (NOC), up to the 4-digit level • North American Industry Classification System (NAICS), at the 2-digit level • Environmental sub-sectors, using ECO Canada’s <u>sector model</u> 	<ul style="list-style-type: none"> • National Occupational Classification (NOC), at the 3 or 4-digit level

For more information on our methodology, see our [Scope and Methodology](#) document

NATIONAL OCCUPATIONAL CLASSIFICATION (NOC)

Core Environmental Workers

In Manitoba, environmental workers were matched with **262** of **500** NOCs. Of these, **60** were mapped to core workers, including:

NOC Title and Code	Sample Environmental Jobs and Titles	EnviroShare in 2020
Forestry professionals (2122)	Area Forester; Coordinator Forest Operations; Forest Technologist;; Planning Forester; Urban Forester	26%
Water and waste treatment plant operators (9243)	Biosolids Plant Operator; Facility Operator; Industrial Waste Treatment Plant Operator; Water & Sewer Operator; Water Treatment Specialist	50%
Forestry technologists and technicians (2223)	Arboriculture Technician; Avian Wildlife Technician; Conservation Technician; Forestry Conservation Technician; Forestry Technician	24%
Conservation and fishery officers (2224)	Bird Control Officer; Conservation Land Negotiator; Fish and Wildlife Officer; Land Stewardship Coordinator; Watershed Technologist	34%
Geological engineers (2144)	Geotechnical Engineer; Mining Engineer; Mine Planner; Production Geologist	36%
Civil engineers (2131)	Acoustic Engineer; Asset Planning Analyst; Civil and Geological Engineer; Civil Technologist; Water/Wastewater Engineer	62%
Meteorologists and climatologists (2114)	Air Quality Meteorologist; Carbon and Climate Change Researcher; Climate Change Specialist; Cumulative Effects Specialist; Environmental Scientist	37%
Geoscientists and oceanographers (2113)	Environmental Geologist; Geologist; Geophysicist; Hydrogeologist; Surface/Subsurface Land Analyst	40%
Urban and land use planners (2153)	Development Planner; Heritage Planner; Regional Planner; Transportation Planner	58%
Inspectors in public and environmental health and occupational health and safety (2263)	Advisor Health, Safety & Environment;; Assistant Health and Safety Manager; Employee and Environmental Health & Safety Coordinator; Occupation Health & Safety Officer; Regulatory Compliance Advisor;	29%

EMPLOYMENT

Drivers & Trends

The convergence of market, regulatory, social and technological factors will influence the number and type of environmental workers needed today and in the future.

The main trends employers expect will impact the number and type of environmental workers needed in the future:



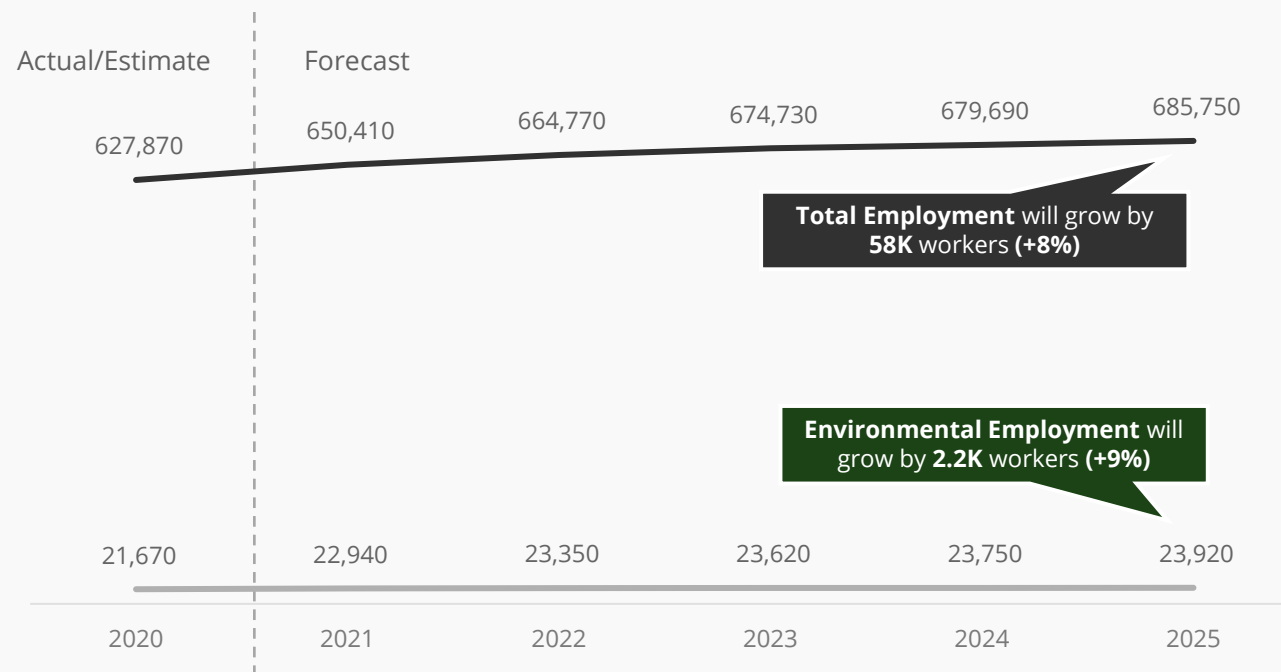
DETAILED FINDINGS

EMPLOYMENT OUTLOOK

A Green Labour Market Outlook for Manitoba

Manitoba's environmental employment is expected to grow by 2,200 workers by 2025, a 9% increase over 2020 environmental employment.

Top occupations employing core environmental workers include Administrative officers, Civil engineers and Inspectors in public and environmental health and occupational health and safety.



Top Occupations among Core Workers Based on Environmental Employment in 2020

Administrative officers (1,020 workers)

Civil engineers (670)

Inspectors in public and environmental health and occupational health and safety (450)

Senior managers - health, education, social and community services and membership organizations (350)

Architects (310)

MANITOBA PROJECTED RETIREMENTS

For Next Five Years

The increased opportunity for environmental employment will largely come from job openings due to expected retirements in the labour market by 2025. As a result, core environmental workers are projected to see job openings in mid to senior level roles given an average yearly retirement rate of 6%.

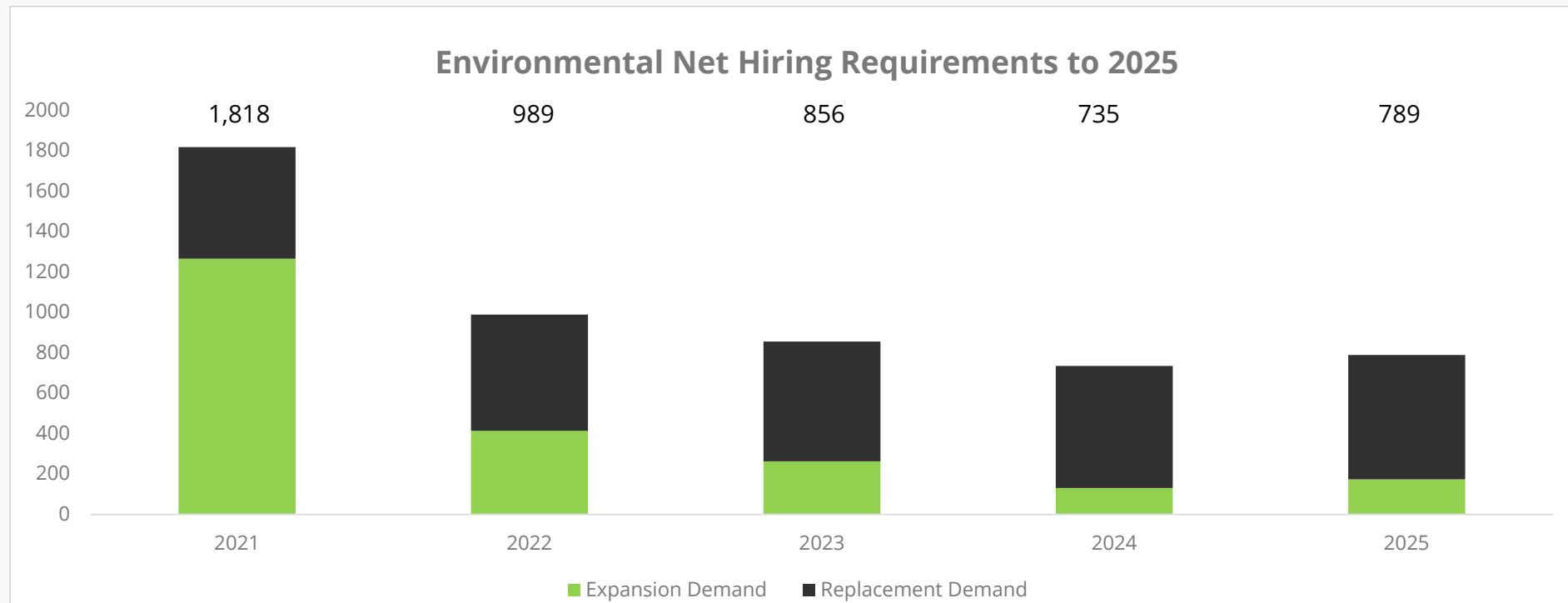
Top Occupations among Core Workers Based on Projected Retirement Rates, 2020 to 2025



NET HIRING REQUIREMENTS

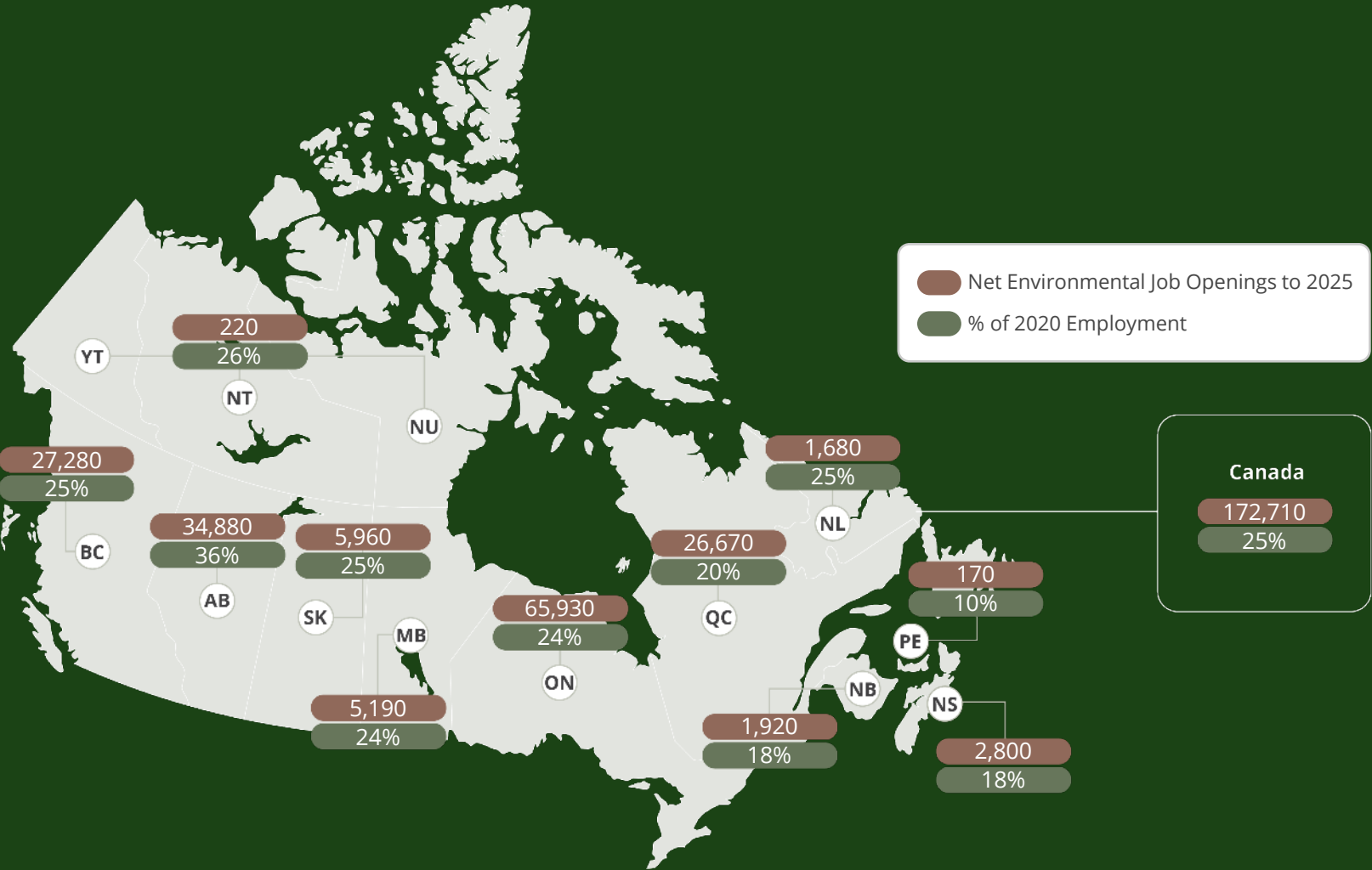
For Next Five Years

Together, job growth and worker retirements will account for **5,190 net environmental job openings** by 2025—or **24%** of 2020 environmental employment levels. In 2021, job openings will be largely driven by expansion demand/job growth. In the following years, the primary driver of job openings is expected to be retirement.



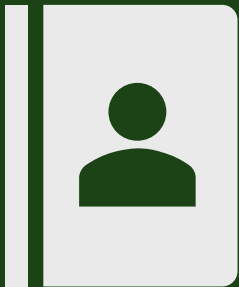
REGIONAL HIGHLIGHTS

Green Job Opportunities in Every Region



Manitoba has the 6th highest number of job openings for environmental workers in Canada.

Opportunities will result from jobs in growth sectors, as well as openings created by retiring workers.



MANITOBA INDUSTRY HIGHLIGHTS

A Cross-sectoral Workforce

The Mining, quarrying and oil and gas extraction sector employed about 3,000 of Manitoba's environmental workforce in 2020 with the highest EnviroShare of 14.1%, followed closely by the Professional, scientific and technical services sector at 12.9%.

Industry (NAICS)	Environmental Employment in 2020 (% of Total Workforce)	EnviroShare
All industries	21,670 (100%)	3.5%
Agriculture, forestry, fishing and hunting (11)	1,620 (8%)	5.8%
Mining, quarrying, and oil and gas extraction (21)	480 (2%)	14.1%
Utilities (22)	300 (1%)	4.8%
Construction (23)	1,970 (9%)	4.2%
Manufacturing (31-33)	2,250 (10%)	3.8%
Wholesale and retail trade (41, 44-45)	1,180 (5%)	1.7%
Transportation and warehousing (48-49)	570 (3%)	1.5%
Information and cultural industries (51)	400 (2%)	3.5%
Finance and insurance, and real estate and rental and leasing (52-53)	730 (3%)	2.4%
Professional, scientific and technical services (54)	3,910 (18%)	12.9%
Management of companies and enterprises (55)	7 (0%)	2.0%
Administrative and support, waste management and remediation services (56)	590 (3%)	2.8%
Educational services, health care and social assistance (61-62)	4,560 (21%)	2.9%
Arts, entertainment and recreation (71)	320 (1%)	3.3%
Accommodation and food services (72)	350 (2%)	1.0%
Other services (except public administration) (81)	890 (4%)	3.5%
Public administration (91)	1,440 (7%)	4.1%

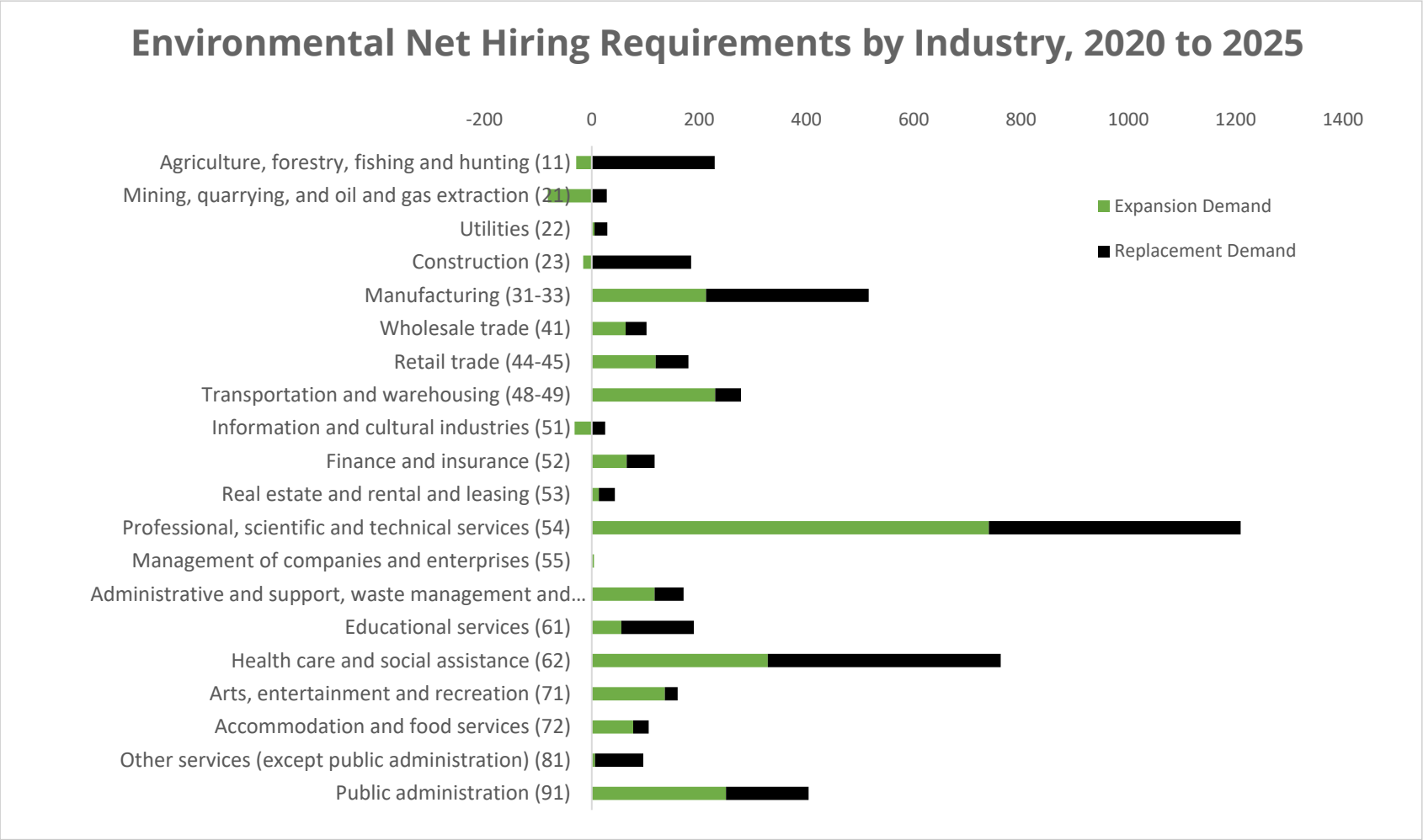
MANITOBA INDUSTRY HIGHLIGHTS

A Cross-sectoral Workforce (cont.)

The Professional, scientific and technical services sector will account for over **24% of net environmental job openings** to 2025.

Worker retirements will drive most of environmental hiring for many sectors, including:

- Manufacturing
- Construction
- Agriculture, forestry, fishing and hunting
- Educational services
- Public Administration



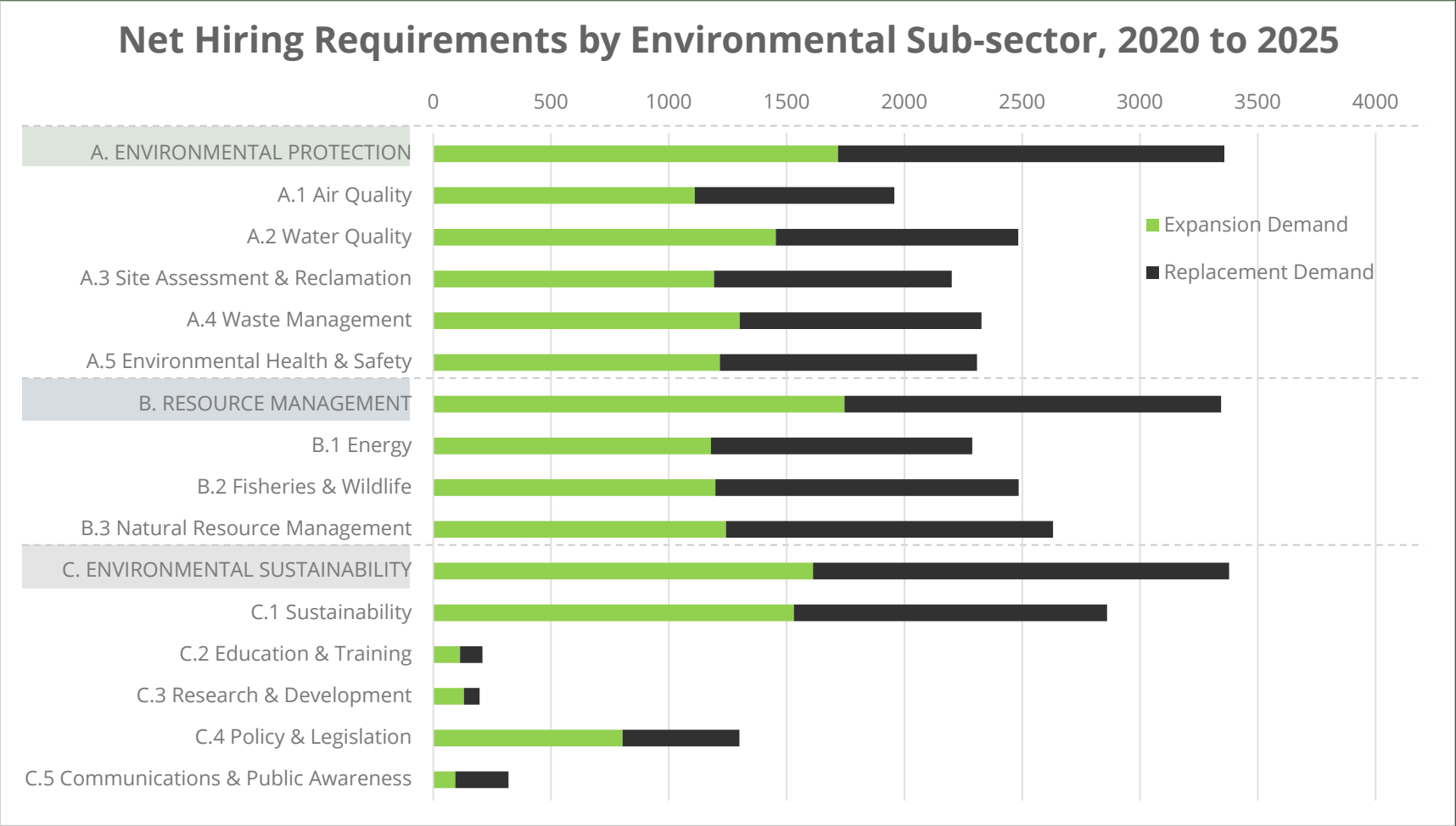
MANITOBA SUB-SECTOR HIGHLIGHTS

Meeting Environmental Goals

Although hiring is expected across environmental sub-sectors, the greatest needs will occur in:

- Sustainability (2,860 net job openings)
- Natural Resource Management (2,630)
- Fisheries & Wildlife (2,480)
- Water Quality (2,480)

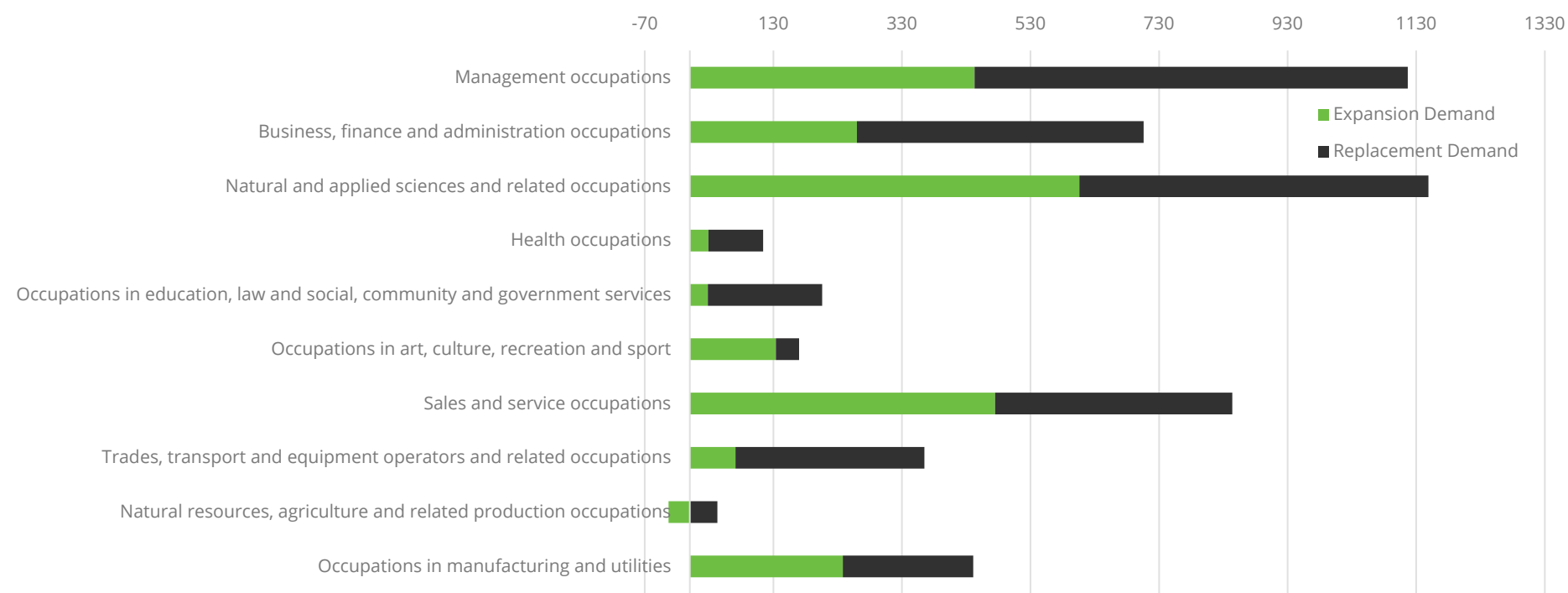
Note: An environmental job or role could be mapped to one or more sub-sectors.



A Multi-disciplinary Workforce

Green job opportunities exist across all job functions. About **44% of all forecasted environmental job openings** will be in roles related to (1) natural and applied sciences, and (2) management by 2025.

Environmental Net Hiring Requirements by Job Family, 2020 to 2025

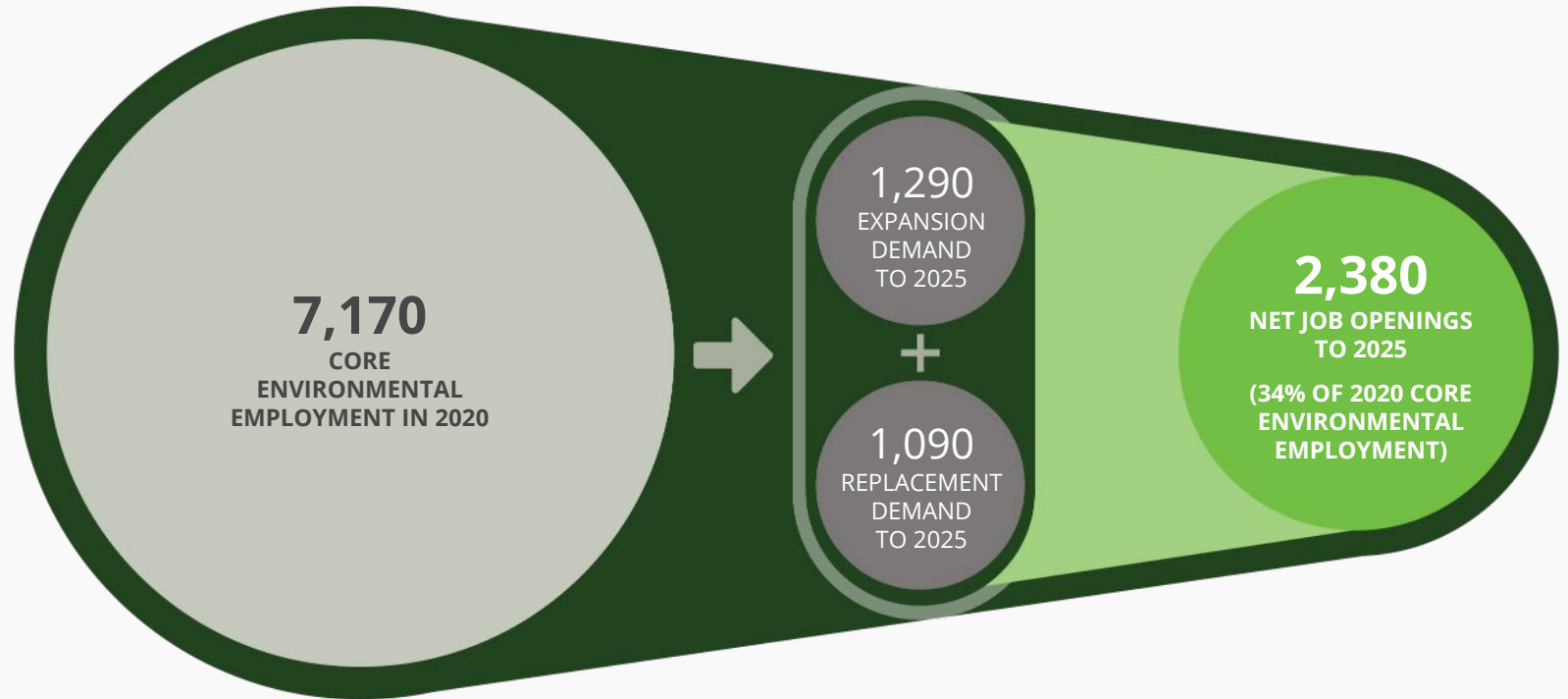


MANITOBA OCCUPATIONAL HIGHLIGHTS

Core Workers

Core environmental workers are a key to advancing responsible and sustainable economic growth. These workers have invested and prepared for the roles they are in by honing environmental-specific knowledge and skills, including the ability to integrate multiple disciplines and work across industries.

About **33%** of Manitoba's environmental workforce in 2020 were core workers (**7,170 workers**). Approximately **2,380 new core environmental workers** will be needed in Manitoba by 2025.



Core Workforce Hiring Projections

Core environmental workers are key to advancing our green economy and meeting policy or values-driven environmental targets.

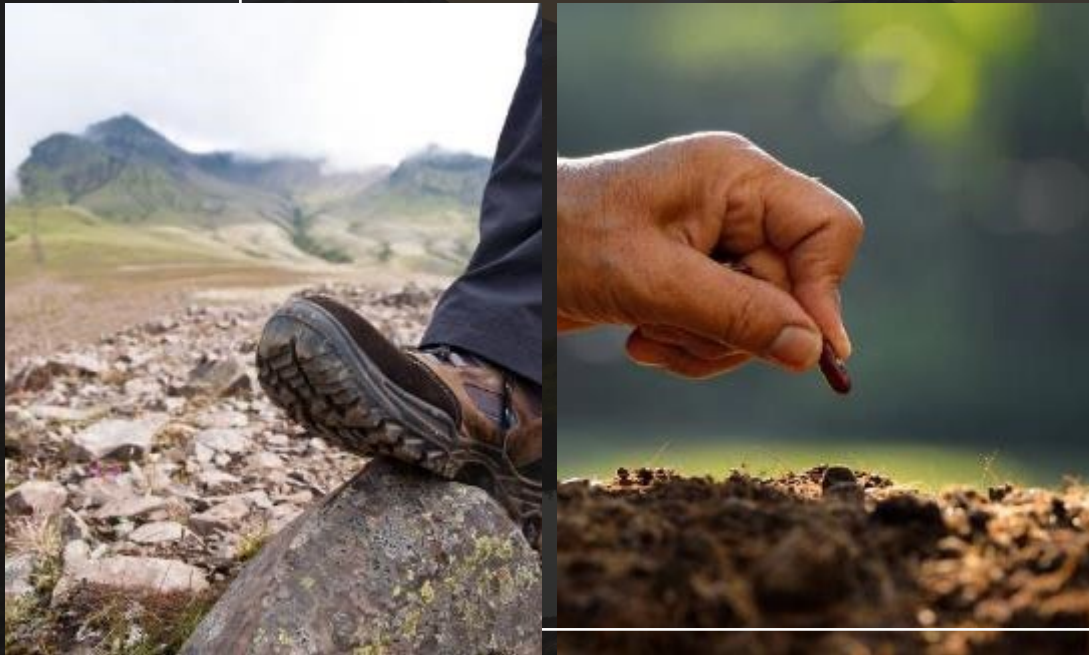
These workers have invested and prepared for the roles they are in by honing environmental-specific knowledge and skills, including the ability to integrate multiple disciplines and work across industries.

The top ten core environmental occupations shown here comprise more than 80% of the job openings for core workers and more than 37% of total environmental job openings to 2025.

Top Occupations Based on Net Hiring Requirements, 2020 to 2025

	Civil engineers (400 net job openings)
	Administrative officers (380)
	Water and waste treatment plant operators (190)
	Urban and land use planners (190)
	Other professional engineers, n.e.c. (180)
	Engineering managers (170)
	Inspectors in public and environmental health and occupational health and safety (150)
	Senior managers - health, education, social and community services and membership organizations (120)
	Contractors and supervisors, mechanic trades (80)
	Manufacturing managers (70)

About ECO Canada



ECO Canada is the steward for the Canadian environmental workforce across all industries.



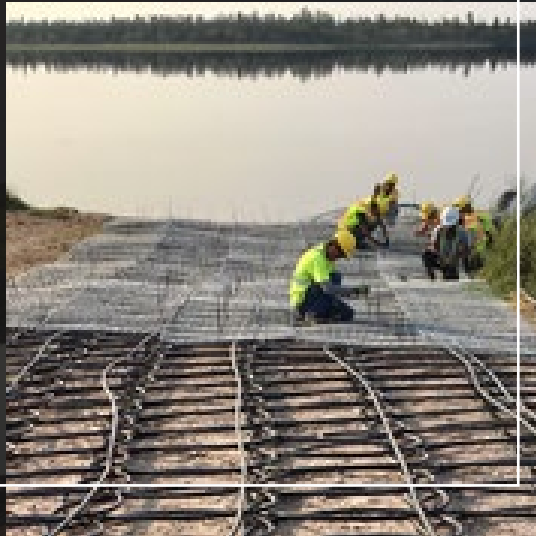
We champion the end-to-end career of an environmental professional.



Our efforts promote and drive responsible, sustainable, economic growth to ensure that environmental care and best practice are a priority.

We are thought leaders in the environmental labour market. Our research provides unmatched statistics with up-to-date, relevant data and insights for policy, business and educational purposes.

About Manitoba Environmental Industries Association



The **Manitoba Environmental Industries Association (MEIA)** works to advance environmental and clean technology opportunities in Manitoba through networking, education and support for its members.

MEIA serves as an information and opportunity hub, equipping members with the information they need to stay current on governmental policy and legislation, increase their knowledge of environmental practices, and gain business development knowledge.

As a provincial Sector Council, we also develop and deliver customized, high quality workforce training to Manitoba's natural resources, energy and environment industries.



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ECO Canada relies on employees and partners from Vancouver to Windsor to Montreal, as well as our Territories. Visit our website or contact us for more information.



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