



Advancing Equity, Diversity and Inclusion in Alberta's Growing Environmental Workforce: A Demographic Profile

About ECO Canada

Environmental Careers Organization (ECO Canada) is a not-for-profit corporation established in 1992 as part of Canada's Sector Council Initiative. ECO Canada is focused on identifying, communicating, and meeting the needs of environmental practitioners, employers, educators, and students. Its vision is to build the world's leading environmental workforce.

ECO Canada has supported Canada's environmental workforce by establishing professional development resources, training programs and educational partnerships, conducting in-depth labour market research and providing the largest industry-specific job board.

ECO Canada's programs and services are developed through strong national partnerships, consultative strategic planning, and ongoing labour market research. Its labour market research provides valuable insights into environmental career trends, which can be used by governments, educators, youth, and industry partners to make decisions and formulate strategies. To learn more, please visit www.eco.ca.

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Executive Summary

Alberta has a large and growing environmental workforce. As the transition towards a low-carbon economy proceeds, Alberta's need for environmental workers is expected to increase quickly. These workers are critical to the province's sustainable operation of traditional industries (forestry, oil and gas, mining) and the evolution of new sectors (cleantech manufacturing, renewable energy, energy efficiency).

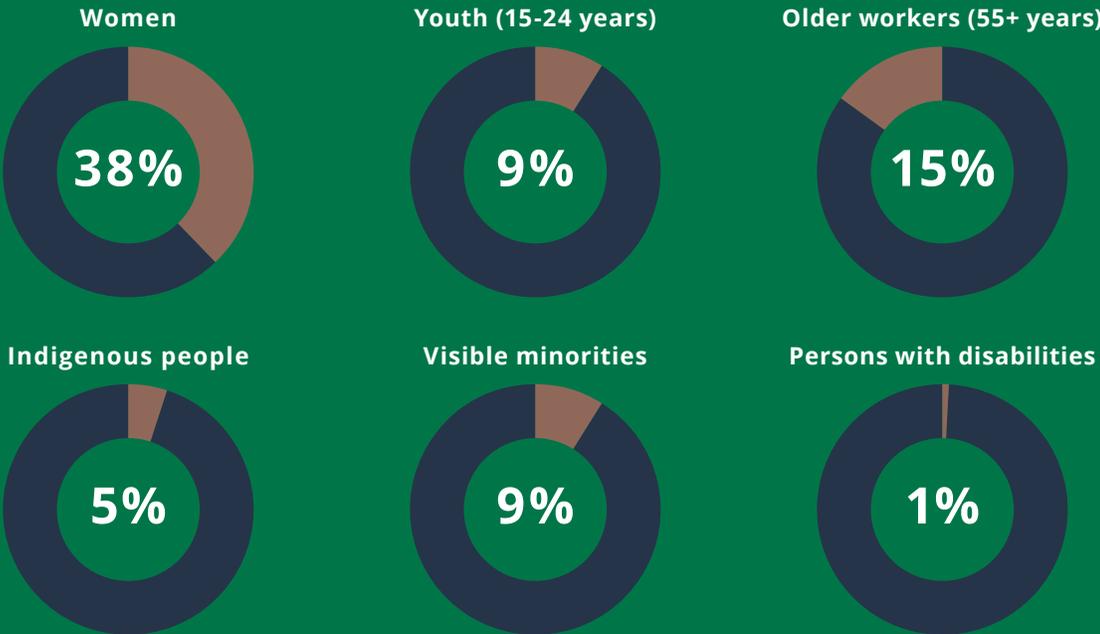
In 2020, **4.4%** of Alberta's workers (**96,100**) contributed to the province's environmental protection, natural resource management and sustainability goals. The province will need to fill **57,800** environmental job openings by 2030 to keep up with economic growth, the low carbon transition, and worker retirements.

Unfortunately, many Alberta employers looking for environmental workers struggle to fill their openings. To this end, employers are seeking insight into potential labour sources and ways to tap into them.

In early 2022, we surveyed Alberta employers about the demographic characteristics of their environmental workforces. A total of 185 business establishments responded to our survey representing about 20,200 employees and 5,650 environmental workers within different industries in Alberta. Based on these survey results:



SURVEY REPRESENTATION OF ENVIRONMENTAL WORKERS



While the extent of underrepresentation differs across industries, opportunities exist for all employers to meet their hiring needs by embracing diversity in the workplace. Fortunately, increasing equity, diversity and inclusion and accessibility in the workplace has been shown to have many benefits, from increased creativity and resilience to happier and healthier workforces.

To take advantage of this opportunity, employers will want to consider the following practices that encourage greater workplace equity, diversity and inclusion.

- Committing to diversity as an organizational value
- Using inclusive language in all organizational communications
- Fostering positive attitudes towards individuals' differences
- Recruiting with diverse applicants in mind
- Providing effective unconscious bias training for all employees
- Engaging in 'respectful workplace' training
- Fostering mentorship programs to support professional development
- Choosing offices with accessibility in mind
- Offering flexible work conditions to employees when possible
- Hiring multiple individuals from a demographic cohort at the same time
- Measuring progress toward equity, diversity and inclusion goals



Growing Alberta's Environmental Workforce Will Require Greater Equity, Diversity and Inclusion

Alberta's transition to a low-carbon economy requires a thriving environmental workforce across all industries, regions and many occupations. In 2020, **4.4%** of Alberta's workers (**96,100**) contributed to the province's environmental protection, natural resource management and sustainability goals. The province must fill **57,800** environmental job openings by 2030 to keep up with economic growth, the low carbon transition, and worker retirements.¹

Alberta's industries most in need of environmental workers this decade include:



NET JOB OPENINGS IN ALBERTA FOR ENVIRONMENTAL WORKERS



¹ ECO Canada. *Alberta's Cross-Sectoral and Multidisciplinary Environmental Workforce: A Snapshot of Employment and Hiring Needs to 2030*. August 2022.

Employers in these and other industries are already struggling to find the environmental workers that they need for current operations. This challenge is expected to become more acute throughout the decade. To ensure the labour supply is sufficient to meet the demand for green workers, employers must reach out to new and underutilized talent sources. Equity, diversity and inclusion efforts will be particularly important in building the labour force in sectors with few workers from underrepresented groups.

DEFINITION OF ENVIRONMENTAL WORKERS



An **environmental worker** is an individual whose work positively contributes to:

- 1 environmental protection;
- 2 management of natural resources; or
- 3 environmental sustainability.

Environmental workers include those in occupations requiring environmental-specific knowledge, skills or training, regardless of industry (e.g., an Environmental Advisor in a mining company) and those employed in environmental goods and services firms and drive or support their organization's environmental business activities, regardless of occupation or skills. (e.g., an Accountant and a Sustainability Specialist working in a cleantech company).

Sole proprietors, business owners and operators are also included in this definition.

A Demographic Profile of Environmental Workers in Alberta

This report provides a first look at the demographic characteristics of Alberta's environmental workforce based on a 2022 survey of employers of environmental workers in Alberta.² The results enhance our understanding of the extent to which opportunities exist to increase the participation of underutilized labour supply groups in this labour force.

Where data is available, we have highlighted the results for five industries that are top employers of environmental workers in Alberta:



Environmental consulting services



Professional scientific and technical services



Construction



Manufacturing



Natural resources (including Agriculture, forestry, fishing and hunting and Mining, quarrying, and oil and gas extraction)

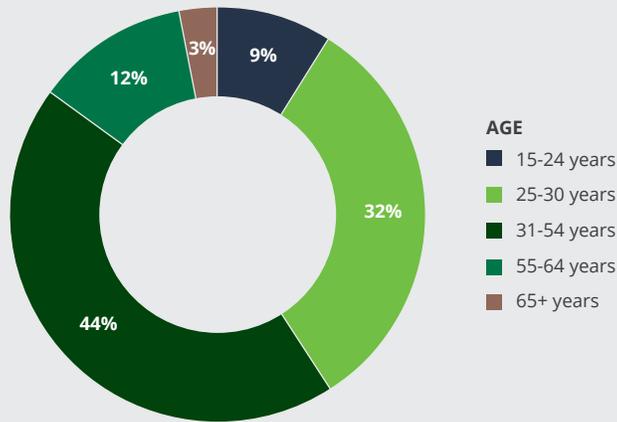
² [Appendix A](#) provides the respondent profile and [Appendix B](#) provides the study methodology.

The Environmental Workforce by Age

Our survey results show that over three-quarters of environmental workers (76%) fall into the core working age group (25-54 years). In comparison, according to 2021 Census data, only 66% of Alberta's labour force is 25-54 years of age. Youth (15-24 years) are underrepresented in Alberta's environmental workforce, with only 9% of environmental workers in this age group, compared to 12.7% of Alberta's labour force. Likewise, older workers (55+ years) comprise 20.7% of Alberta's workforce but only 15% of environmental workers.³

Figure 1

Age Diversity Across All Survey Respondents

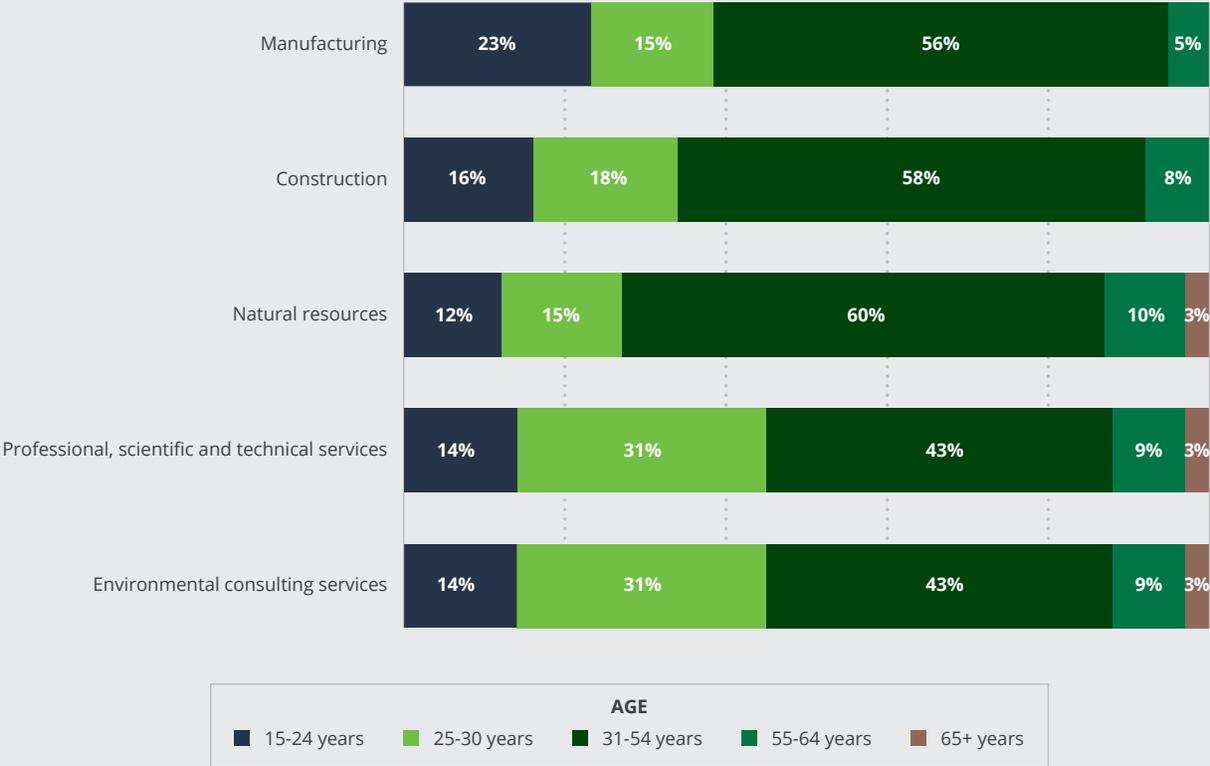


The age distribution of workers varies across the five top industries for environmental workers (Figure 2). Manufacturing showed the largest proportion of youth (15-24 years) and the smallest proportion of older workers (55+ years). In contrast, Natural resources had the highest representation of older workers (13%) and the smallest representation of youth (12%). In Environmental consulting services, which is a subset of Professional, scientific and technical services, nearly three-quarters of environmental workers were in the core working age (25-54 years).

³ Statistics Canada [Table 98-10-0446-01 Labour force status by visible minority, immigrant status and period of immigration, highest level of education, age and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts.](#)

Figure 2

Age Diversity by Top Industry Employers of Environmental Workers

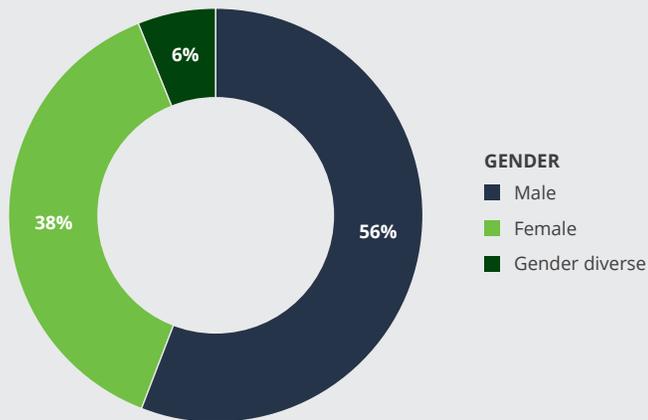


The Environmental Workforce by Gender

Approximately 56% of environmental workers represented in our survey were men, even though only 53% of Alberta's labour force identified as Men+ in the 2021 Census.⁴ In contrast, women comprised a mere 38% of the environmental workforce in Alberta but 47% (Women+) of Alberta's labour force.

Figure 3

Gender Diversity Across All Survey Respondents



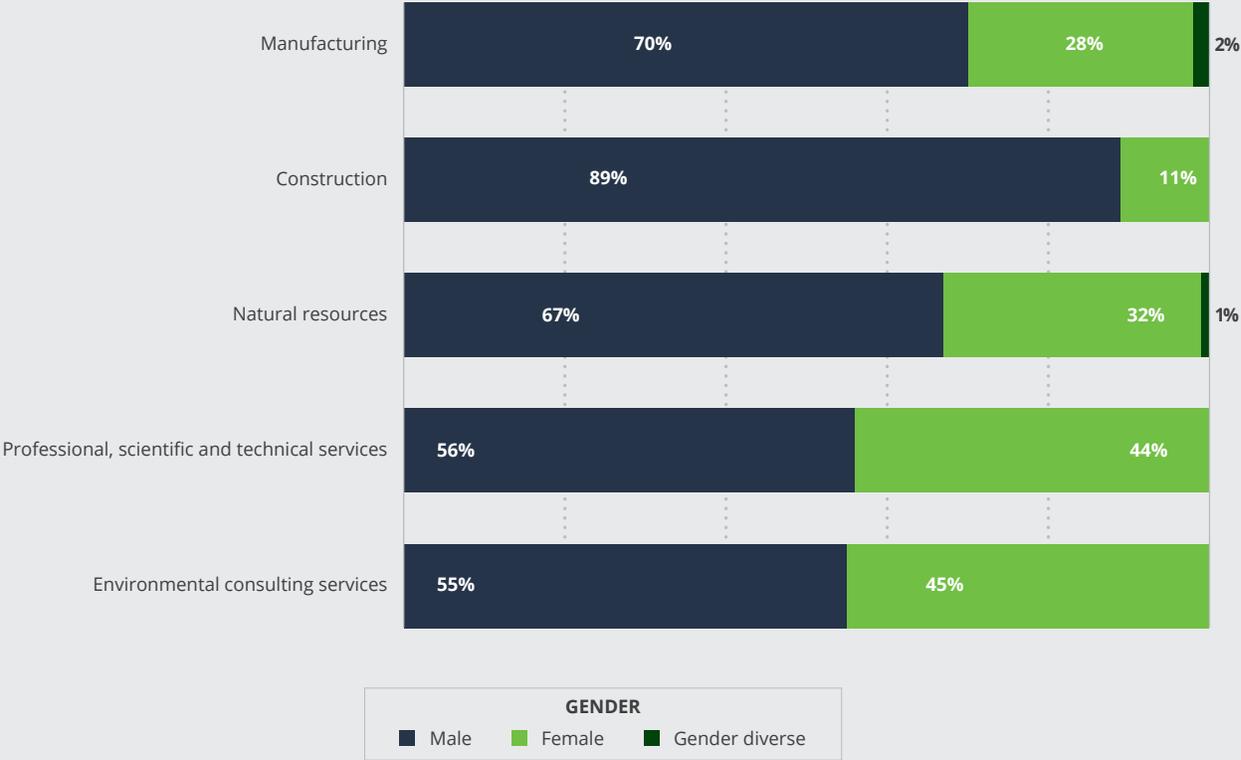
Amongst the top industry employers of environmental workers (Figure 4), Environmental consulting services showed the highest percentage of women (45%) in environmental roles. Construction had the lowest percentage of women (11%). The representation of women in the environmental workforce by industry is consistent with industrial representation. Across Alberta's broader economy, Women+ comprise 15% of the Construction workforce, 25% of the Manufacturing workforce, and 44% of the Professional, scientific and technical services workforce.⁵

4 Although Statistics Canada collected data for gender-diverse persons in the 2021 Census, individuals in the category “non-binary persons” have been distributed into a two-category gender variable (Men+, Women+) to protect confidentiality of responses. Approximately 0.33% of the Canadian working-age population (15+ years old) identified as non-binary or transgender in the 2021 Census. Source: Statistics Canada, *Canada is the first country to provide census data on transgender and non-binary people*, The Daily, Apr 27, 2022.

5 Statistics Canada. Table 98-10-0448-01 Industry groups by class of worker including job permanency, labour force status, age and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts.

Figure 4

Gender Diversity by Top Industry Employers of Environmental Workers

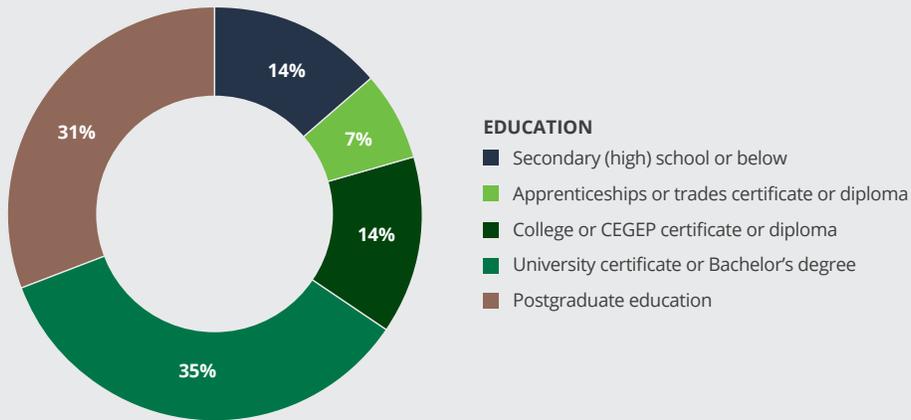


The Environmental Workforce by Education Level

The sample of environmental workers represented by our survey respondents showed higher education levels than Alberta's overall labour force. While just over 24% of workers in Alberta's labour force have a University certificate or Bachelor's degree, 35% of environmental workers have such a credential. In addition, 31% of environmental workers hold a credential above a Bachelor's degree, compared to 9% of Alberta's overall labour force. The prevalence of Apprenticeships or trades certificates or diplomas in the environmental workforce (7%) was slightly lower than in the overall workforce (9.4%).⁶

Figure 5

Educational Diversity Across All Survey Respondents



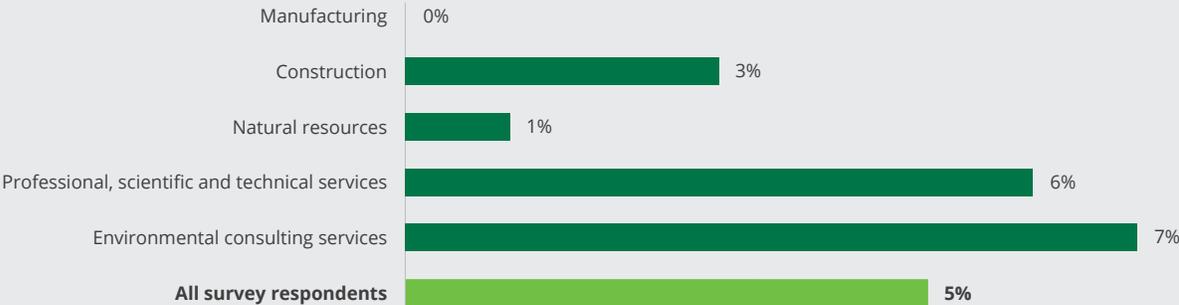
⁶ Statistics Canada. Table 98-10-0449-01 Occupational unit group by labour force status, highest level of education, age and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts.

Indigenous People in the Environmental Workforce

According to 2021 Census data, 5.6% of the individuals in Alberta's labour force identify as Indigenous persons.⁷ In contrast, only 5% of environmental workers represented in our survey responses were identified as Indigenous persons. The representation of Indigenous persons does vary across top industries, with the highest percentage of Indigenous persons found in the Environmental consulting services sector (7%).

Figure 6

Indigenous Identity Across all Survey Participants and by Top Industry



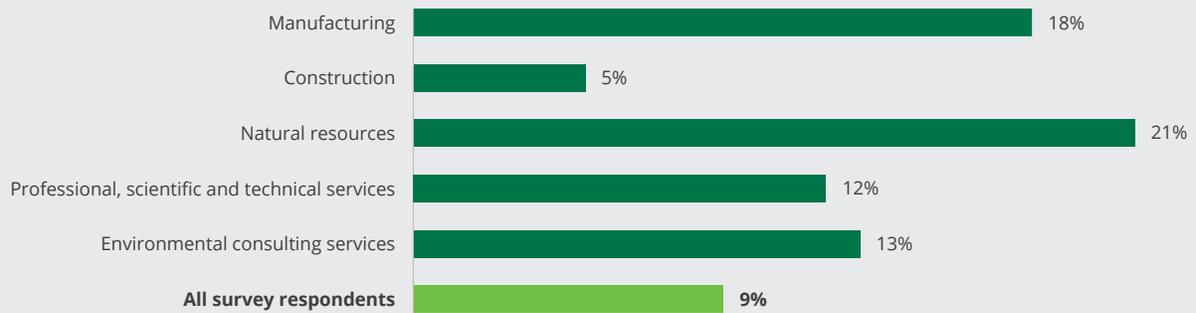
7 Statistics Canada. Table 98-10-0451-01 Labour force status by highest level of education, Indigenous identity, age and gender: Canada, provinces and territories, census metropolitan areas and census agglomerations with parts. Indigenous refers to individuals identifying themselves as First Nations people, Métis or Inuk (Inuit). First Nation (North American Indian) includes Status and Non-Status Indians.

Visible Minorities in the Environmental Workforce

A mere 9% of environmental workers were identified as visible minorities⁸ in our survey. The percentage of visible minority workers varies significantly across top industries, with higher shares of visible minority environmental workers in Natural resources (21%) and Manufacturing (18%). However, this still falls short of the representation of visible minority workers in Alberta's broader labour force, which sits at 27.8%.

Figure 7

Visible Minorities Across all Survey Respondents and by Top Industry



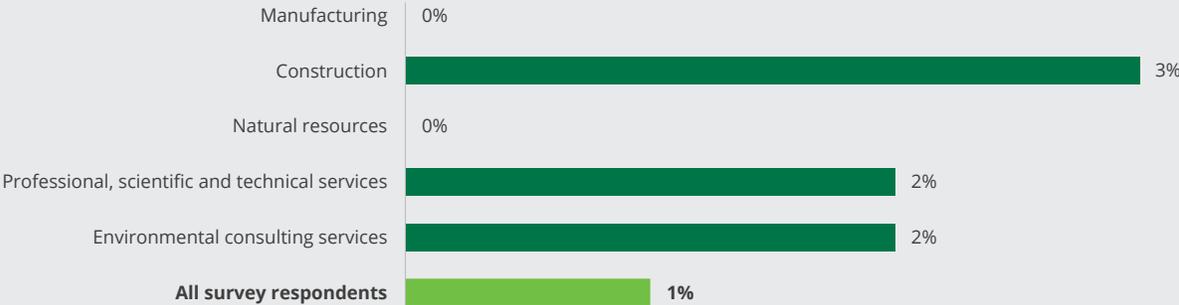
⁸ Visible minority are persons, other than Indigenous peoples, who are non-Caucasian in race or non-white in colour. The visible minority population consists mainly of the following groups: South Asian, Chinese, Black, Filipino, Arab, Latin American, Southeast Asian, West Asian, Korean and Japanese.

Persons With Disabilities in the Environmental Workforce

Our survey responses indicate that 1% of the environmental workforce in Alberta are persons with disabilities.⁹ None of the environmental workers represented in our survey in the Natural resources and Manufacturing sectors were identified as persons with disabilities.

Figure 8

Persons With Disabilities Across all Survey Respondents and by Top Industry



⁹ Persons with disabilities are those who have visible or invisible long-term or recurring physical, mental, sensory, psychiatric or learning impairments and who:
a. consider themselves to be disadvantaged in employment by reason of that impairment, or
b. believe that an employer or potential employer is likely to consider them to be disadvantaged in employment by reason of that impairment, and includes persons whose functional limitations owing to their impairment have been accommodated in their current job or workplace.



SPOTLIGHT

Alberta's Environmental Goods and Services Sector

The **environmental goods and services sector (EGSS)** consists of a heterogeneous set of producers of goods and services aiming at the protection of the environment and the management of natural resources.

Environmental goods and services are products manufactured or services rendered for the main purpose of:

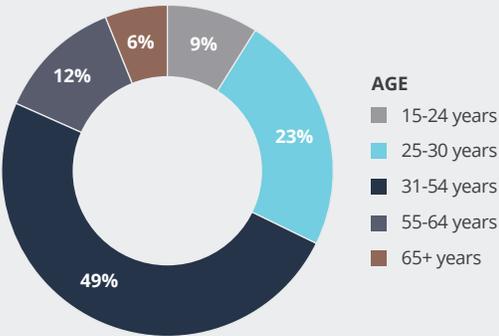
- preventing or minimizing pollution, degradation or natural resources depletion;
- repairing damage to air, water, waste, noise, biodiversity and landscapes;
- reducing, eliminating, treating and managing pollution, degradation and natural resource depletion;
- carrying out other activities such as measurement and monitoring, control, research and development, education, training, information and communication-related to environmental protection or resource management.

In our survey of Alberta employers, 85 identified as Environmental goods and services sector organizations. These employers represented about 7,990 total employees and 1,920 environmental employees.



Figure 9

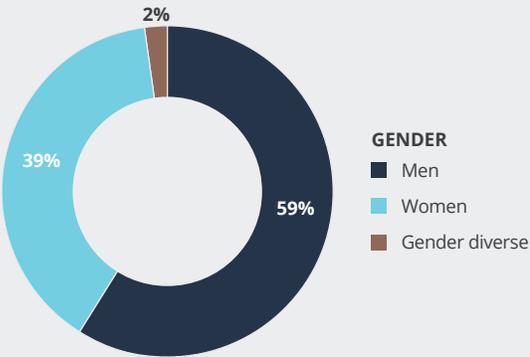
Age Diversity Among EGSS Respondents



Workers in the core working age group (25-54 years) comprised 72% of the EGSS workforce. Older workers (55+ years) were represented more in the EGSS workforce than the overall environmental workforce.

Figure 10

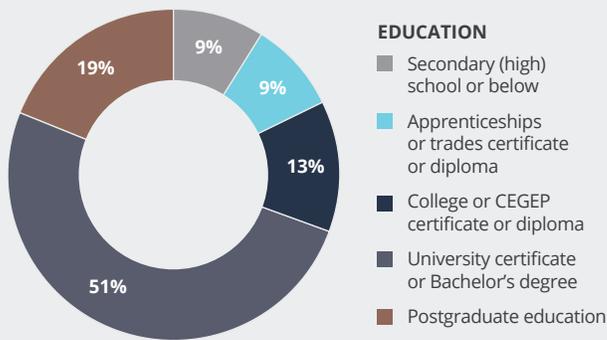
Gender Diversity Among EGSS Respondents



The EGSS workforce had a slightly higher percentage of women (39%) when compared to the overall environmental workforce (38%). Gender-diverse people comprised a smaller share of the EGSS workforce (2%) than the overall environmental workforce (6%).

Figure 11

Education Diversity Among EGSS Respondents



The proportion of EGSS workers with a University certificate or Bachelor's degree (51%) was more than twice that of Alberta's labour force (24%). Only 9% of the EGSS workforce had a high school education or below, while 14% of the overall environmental workforce and nearly 38% of Alberta's broader labour force held the same education level.

The proportion of Indigenous persons in the EGSS workforce (4%) was slightly lower than in the overall environmental workforce (5%). Visible minorities comprised 11% of the EGSS workforce but only 9% of the overall environmental workforce. The overall environmental workforce and the EGSS workforce included 1% Persons with disabilities.



Wise Practices for Equity, Diversity and Inclusion

The results of our baseline survey suggest an opportunity to grow the environmental workforce by increasing the representation of youth and older workers, women, Indigenous persons, visible minorities and persons with disabilities. To take advantage of this opportunity, employers will want to consider the following practices that encourage workplace equity, diversity and inclusion.



Committing to diversity as an organizational value

Organizations that commit to diversity as a core value are more attractive employers to job seekers and employees from underrepresented groups.¹⁰ These organizations are also shown to exhibit greater creativity and resilience, have happier and healthier workforces and appeal to a broader client base.¹¹

Using inclusive language in all organizational communications

How an organization communicates with internal and external stakeholders reflects its values and goals. Inclusive language seeks to create an environment where everyone feels welcome and included. Organizations that ensure all communications use inclusive language convey their intent to treat all people with respect, including their own workforce.

Fostering positive attitudes toward individuals' differences

Every individual is unique. Understanding and respecting individuals' differences in the workplace encourages greater communication and creates space for all employees to contribute their best ideas and talents.

Recruiting with diverse applicants in mind

Job postings are often a job seeker's first introduction to an organization and its culture. Organizations with carefully written gender-neutral and inclusive job descriptions that accurately reflect the job requirements will generate greater interest from diverse applicants. Further, posting jobs on various niche job boards will expose the opening to a larger pool of job seekers.

¹⁰ Georgeac, O. and A. Rattan. [Stop Making the Business Case for Diversity](#). Harvard Business Review. June 15, 2022.

¹¹ Tynes, B. [The Importance of Diversity and Inclusion for Today's Company's](#). Forbes. March 3, 2022.

Providing effective unconscious bias training for all employees

Everyone has unconscious biases (also known as implicit biases). These stem from our learned tendency to categorize people we come across into organized social groups. Unconscious biases often manifest in the form of social stereotypes that we are unaware that we hold and that impact our decisions. Effective unconscious bias training allows individuals to explore their unconscious biases and learn concrete techniques to modify their behaviour.

Engaging in 'respectful workplace' training

Educating staff about respect in the workplace helps promote and build psychologically safe workplaces. By articulating standards and expectations for everyone, this type of training can improve organizational culture and create greater confidence in dealing with difficult issues.

Fostering mentorship programs to support professional development

In addition to traditional one-on-one career mentoring, which helps junior employees identify and take advantage of opportunities for advancement, other forms of mentoring are also effective. Reverse mentoring, in which younger employees mentor senior-level workers about new processes and technologies, perceptions of employee experiences within the company and the state of equity, diversity and inclusion efforts, create communication avenues that would not otherwise exist. Mentoring circles, which allow peer-to-peer mentoring to occur, are also effective in removing barriers and building connections.¹²

Choosing offices with accessibility in mind

For individuals with physical disabilities, getting to, from and around the office can be a challenge in some offices. By considering the accessibility of the office environment when choosing a new location, employers can attract and keep employees who may otherwise be discouraged from working for them.

Offering flexible work conditions to employees when possible

Employees from all types of backgrounds are seeking greater workplace flexibility these days. Organizations with the ability to offer flexible scheduling, remote work, personal time off and job sharing are able to attract a more diverse workforce and create more employee engagement.

Hiring multiple individuals from a demographic cohort at the same time

New employees must adapt to a new culture when joining an organization for the first time. This adjustment process can be made easier for individuals from diverse groups if they are hired and onboarded at the same time as other workers with similar backgrounds.

Measuring progress toward equity, diversity and inclusion goals

Once an organization commits to increasing equity, diversity and inclusion, it will want to assess progress toward its goals through a series of metrics. These can include demographics across organizational levels, retention of employee groups, employee turnover, applicant demographics, promotion rates of employee groups, pay equity and employee mentoring successes.

¹² Schnieders, A. [4 Ways Mentoring Can Empower Your Diversity and Inclusion Initiatives](#). ATD Blog. August 18, 2020.

Appendix A: Profile of Survey Respondents

We had a diverse group of Alberta employers respond to our surveys.

Figure A1
Size of Employer

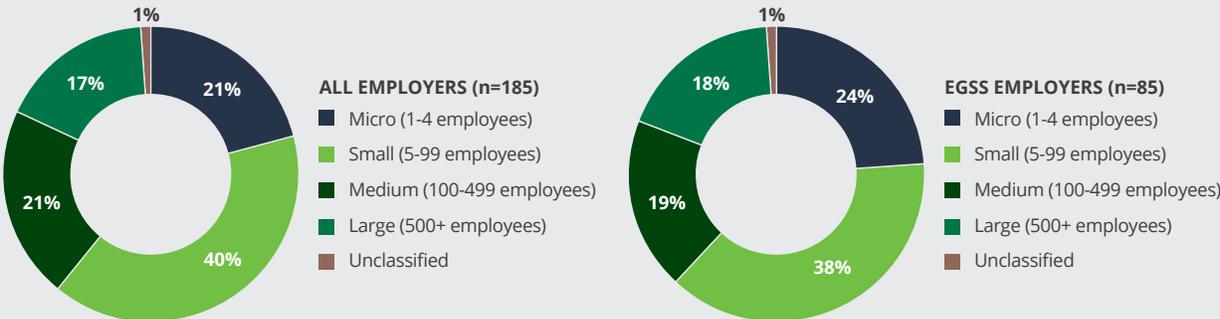


Figure A2
Employer Organization Type

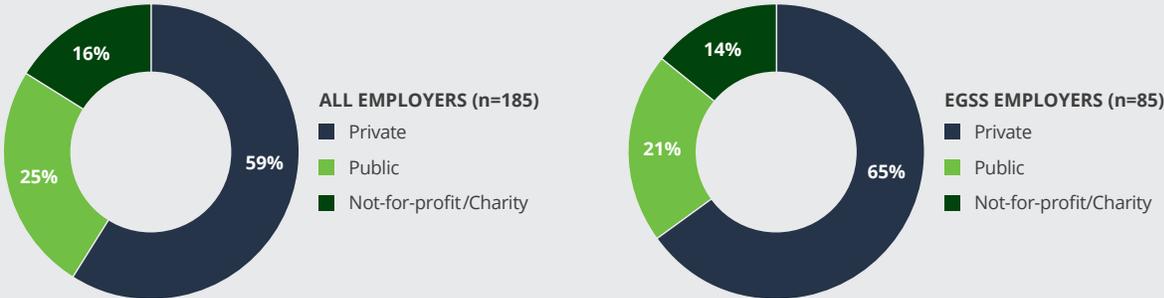
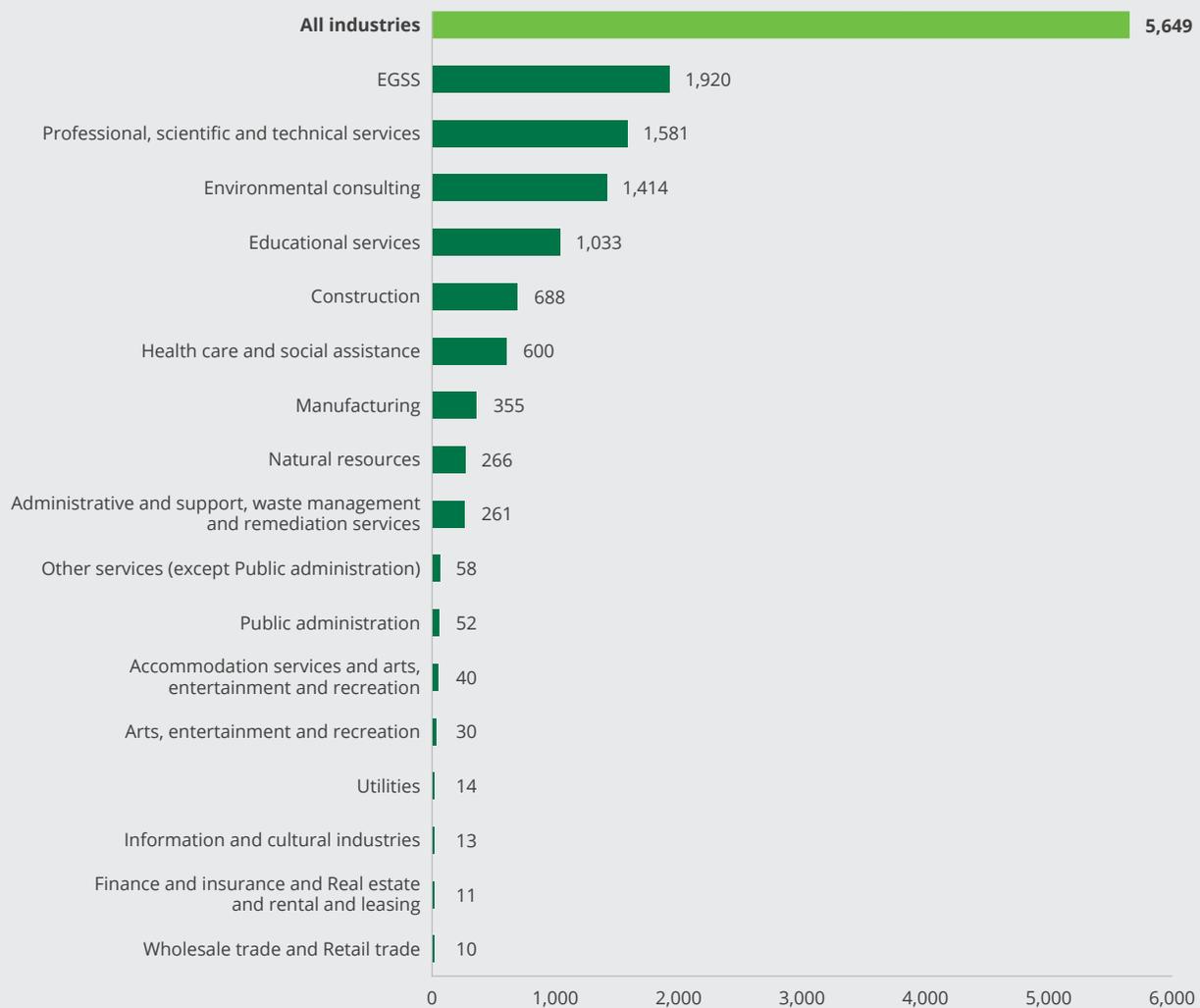


Figure A3

Environmental Employees Represented by Industry



Appendix B: Study Methodology

Our study was designed as a baseline survey to collect data and assess the current demographic composition of Alberta's environmental workforce.

The survey was promoted to environmental employers across all industries in Alberta and advertised and administered in English and French. Respondents were screened to ensure the sample was limited to organizations that employ environmental workers.

Data was collected using mixed methods that combined online programmed surveys and computer-assisted telephone interviews. As with all surveys, participation depended on people being aware of the survey and being available and interested in completing it. The survey was promoted through multiple channels over an approximately two-month period in 2022, and incentives were offered for completion.

Extensive outreach was conducted through:

- ECO Canada's contacts,
- Leger's LEO ([LegerOpinion.com](https://www.legeropinion.com)) panel of Canadians,
- Leger telephone surveys of Canadian employers using a purchased list of employers (including a purchased list specifically for Alberta employers) and their associated industry (NAICS) codes,
- Various environmental associations,
- Organic and paid social media, and
- Paid e-blasts from national and third-party newsletters.



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



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