

**Manitoba Environmental Industries Association  
HR and member needs assessment study  
May 11, 2010**

**kisquared**



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# Introduction

This report presents findings of the human resource (HR) and membership needs assessment undertaken by **kisquared** on behalf of the Manitoba Environmental Industries Association (MEIA). The report provides MEIA with member input on environmental industry education, training and HR services, a profile of MEIA members and member-identified priority areas.

## Objectives

The objectives of the HR and member needs assessment study are to:

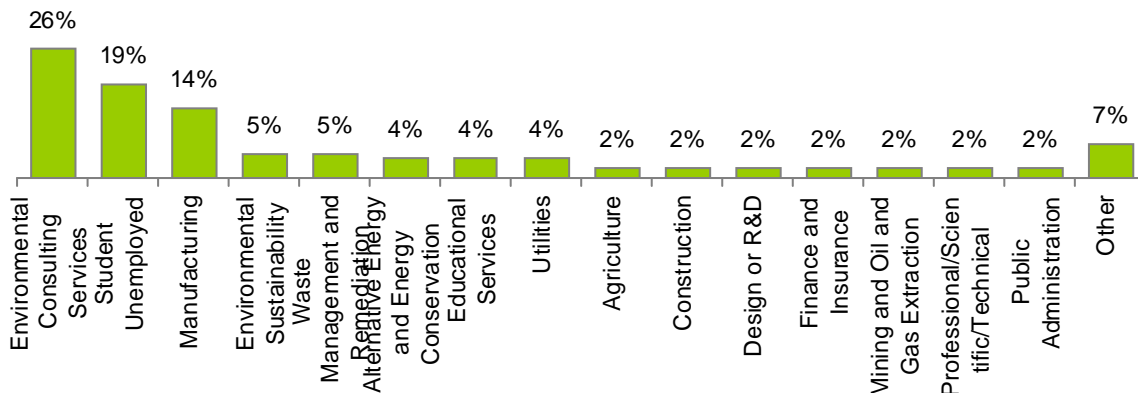
- Identify and prioritize the range of issues faced by MEIA’s membership;
- Identify the Manitoba environmental industry’s education, training and skills needs;
- Explore education / training programs and tools that the industry currently relies on as well as professional development resources needed to meet labour and skills shortfalls; and
- Recommend initiatives MEIA could undertake in order to address Manitoba environmental industry requirements (HR needs and beyond).

## Methodology

### Respondent profile

From January 27 to February 17, 2010, **kisquared** completed 57 interviews with MEIA business members and student members, yielding a margin of error of ± 5.02% at the 95% confidence level.

**Figure 1 RESPONDENT PROFILE**



Note: Data derived from Q1. “Other” responses include “Renewable and green building,” “Water, sewage and heavy metals” and “Multi-sectoral.” Total does not equal 100% due to rounding.

## Questionnaire design

The survey instrument was designed by **kisquared** in conjunction with MEIA; the 2002 MEIA Membership Study questionnaire was used as a starting point. President Katherine Devine and Research Associate Rachel Loewen met with the MEIA Board of Directors on January 11, 2010 to present the draft questionnaire and gather the Board's feedback. Changes were made accordingly and John Fjeldsted of MEIA signed off on the final version of the questionnaire.

## Study communication and industry buy-in

Prior to interviewing, **kisquared** sent a communiqué to MEIA members informing them of the upcoming study. Business members were sent a hard-copy letter and student members were sent an email. Another communiqué was sent during fielding to encourage those who had not yet responded to do so.

## Data collection and analysis

A database was provided by MEIA containing contact information for 2009 MEIA members. The database was cleaned and formatted prior to fielding. Fielding was conducted from **kisquared**'s in-house call centre. Professional interviewers identified themselves to potential respondents as employees of **kisquared** and indicated they were calling on behalf of MEIA to inquire about the future of Manitoba's environmental industry sector and their experience as a MEIA member.

After each interview was completed, the survey was checked for completeness and accuracy by both the interviewer and a research associate. Data from completed questionnaires were keypunched twice into separate computer files, which were then compared electronically to detect and correct any data entry errors. Data analysis involved running descriptives and frequencies for each survey measure.

## Reporting

This final report is a summary of frequency and descriptive statistics, organized under the following headings:

- Introduction
- Executive summary
- Study findings
  - Member profile
  - Human resources
  - MEIA membership opinions
- Appendix A: Marginal results

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Where appropriate, comparisons are made to findings from the previous Manitoba Environmental Sector Study, undertaken by **kisquared** on behalf of MEIA and completed in November 2002.

## Terminology

The following terms are used throughout the report:

- *Business member*: MEIA members presently employed in an environmental position in Manitoba.
- *Student member*: MEIA members presently attending an educational institution and not yet employed in the environmental sector.

## Executive summary

### Association review

In 2002, during MEIA's first membership study, members believed MEIA's mandate was to provide industry networking opportunities. Today, MEIA members continue to see MEIA primarily as a forum for networking within the industry. Events such as the Annual Emerging Issues Conference, the MEIA Annual General Meeting and the Annual MEIA Golf Tournament are among the most popular networking activities that were tested in this membership study. MEIA should continue to develop and program networking opportunities for its membership.

In addition to providing a valuable industry networking forum, however, members also want MEIA to play an active role in a wide array of industry-related areas. Perhaps most important among these are collaborating with government and promoting member interests to shape policy, regulations and standards that will allow the industry to flourish. Members also expect MEIA to keep them up-to-speed on issues and policy changes relevant to the industry. MEIA is in a unique position to perform these roles but may need to adopt a more activist stance and work to improve communications channels, both with governmental agencies and with its own members.

MEIA also has a small but active student membership, evidence of nascent links with educational institutions. MEIA should seek to build on these connections and utilize an expanding student membership in order to help promote co-operative programs and other initiatives beneficial to both students and business members alike. More generally, MEIA should continue its work to increase the profile of the environmental industry with the wider public through all available channels. Targeted public relations initiatives can help to build a positive atmosphere for Manitoba's environmental industry to grow and will also bring more new entrants into the industry (in terms of students and entrepreneurial business).

Members are generally willing to support MEIA in its initiatives. Most members already show willingness to volunteer time and effort, and substantial portions indicate they will donate in-kind contributions, advertising space and even funding. Marketing of MEIA initiatives should always emphasize, first and foremost, the benefits to members in order to maximize their buy-in.

### Human resources

Fully three quarters (76%) of MEIA business members are currently hiring. Although employee turnover naturally accounts for some portion of this activity, the high demand for qualified labour seems to indicate growth in the sector. In addition, a clear majority (72%) of business members also expect their operation to expand over the next five years, suggesting that this demand is likely to continue in the short term.

Many organizations are seeking to fill mid-management or expert positions (77% of those currently hiring) or even upper management positions (43%), pointing to high demand and potentially fierce competition for experienced industry professionals and the continuing need to recruit those from other industries with applicable skills. New entrants with little or no industry experience will also be in high demand; 69% of business members who are currently hiring are filling entry-level positions. Recent graduates will provide an important pool of labour, and internships, co-ops and online recruitment, already in use by most industry organizations, are effective ways to recruit this cohort. However, findings suggest that students pursuing degrees in related fields (e.g., engineering or business) may assume they are not qualified for a career in the environmental industry: over half of student members think they need an environmental degree to get hired, but only 22% of business members expect their environmental employees to have one. Students and recent graduates in related fields should be made aware at every available opportunity that specific technical degrees or certifications are not required for many positions in the industry.

Nearly half (47%) of business members believe that Manitoba's educational institutions are not adequately preparing graduates for careers in the environmental industry, and many students themselves (over half of student members) seem to agree that their educational needs are not being met. When asked specifically about skills, even fewer (28%) business members report that their existing workforce has all the knowledge required to fulfill their job duties. The need for essential skills training in areas such as writing, critical thinking and continuous learning is also clear: more than one in five (22%) business members say their environmental employees lack some or all of the nine essential skills needed, and many more admit their current environmental workforce needs at least some training in the nine essential skills.

In terms of industry-specific educational needs for both occupational and essential skills, MEIA's voice can carry significant weight. The environmental industry clearly needs to communicate its needs more directly to educational institutions and government, and MEIA can act as a key intermediary and advocate. Generally speaking, essential skills gaps are a problem in many industries, and more can be undertaken at the provincial and national levels to address this issue; in short, it should be on everyone's radar, and MEIA should always seek to highlight the importance and availability of essential skills training.

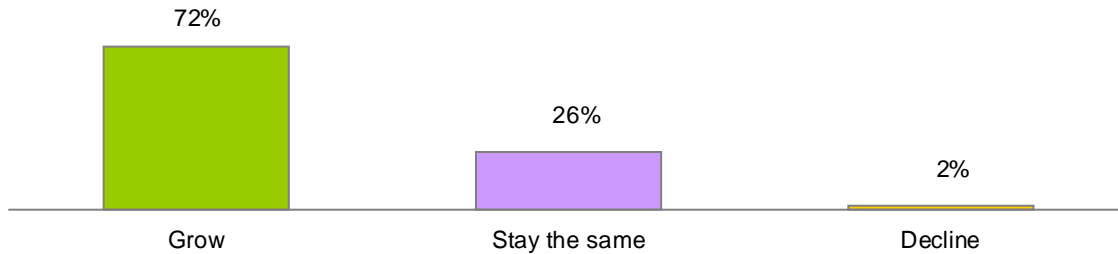
MEIA can also play a tangible role in professional development for Manitoba's environmental workforce by offering short courses or seminars in key areas. Indeed, most business members feel MEIA should be involved in offering HR services such as training, and the 2002 study found that training offered by industry or professional associations is the most preferred training delivery method. Such training opportunities are especially important for smaller employers, which make up a substantial portion of Manitoba's environmental industry, as these organizations do not typically have the resources to offer in-house training. The top professional development needs identified by business members, in 2002 and today, involve environmental monitoring and environmental risk assessment, and courses in these areas will likely experience the greatest uptake. In fact, those employed in environmental consulting comprise the largest single bloc of MEIA members. One-day courses are likely to be most popular and half-day or evening courses should also be considered where appropriate.

## Study findings

### Member profile

MEIA members appear optimistic about the future of the environmental industry in Manitoba: the majority (72%) expect their operation to grow within the next five years, as shown in Figure 2.

**Figure 2 FIVE-YEAR OUTLOOK**



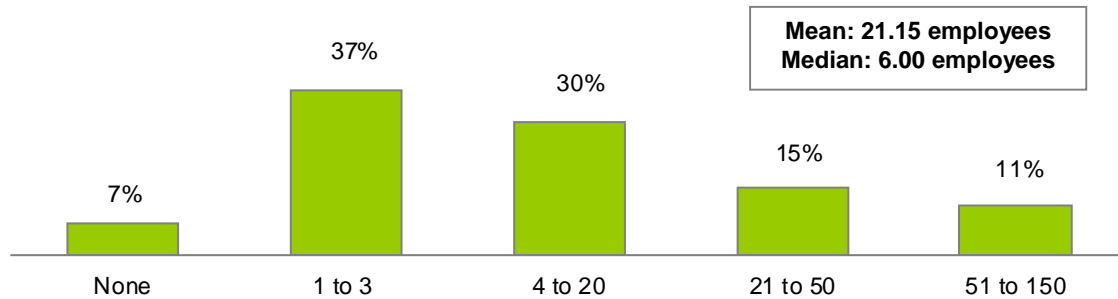
Note: Data derived from Q25.

### Industry business member employment

As illustrated in Figure 3, the number of full-time environmental employees employed by MEIA members ranges from none to 150. Many businesses (37%) employ between one and three employees while one quarter (26%) employ more than 20 for an average of 21 and a median of 6 environmental employees per organization.

Only five business members interviewed employ part-time environmental workers; this number ranges from one to 107.

**Figure 3 SIZE OF OPERATION, BUSINESS MEMBERS**



Note: Data derived from Q2.

Business members were asked how many of each environmental position they employ and whether they will increase the number employed in that position in the next five years.

As shown in Figure 4, one third or more business members employ environmental supervisors/managers (39%), coordinators, directors, professionals or planners (37%) and technicians or analysts (33%). Chemical engineers (2%) and civil engineering technicians (4%) are employed by the lowest proportion (Note: due to low n-sizes, mean scores are not statistically reliable for these positions).

Three in ten (30%) expect to increase the number of technicians or analysts employed at their company in the next five years; although other positions are employed by a higher proportion of business members, the ratio of members who employ this position (35%) to employers expecting an increase is high for this occupation. Other occupations with high ratios include highly specialized jobs such as: geologists, geochemists and geophysicists and biological or chemical technologists and technicians.

**Figure 4 ENVIRONMENTAL POSITIONS EMPLOYED**

Environmental position	% employ	Mean	% expecting increase*
Environmental Supervisors or Managers	39%	3.56	22%
Coordinators, Directors, Professionals or Planners	37%	10.65	28%
Technicians or Analysts	35%	10.63	30%
Biologists and Related Sciences	33%	4.00	27%
Sales and Marketing	24%	3.00	13%
Geologists, Geochemists and Geophysicists	22%	2.40	18%
Inspectors in Public and Environmental Health and Occupational Health and Safety	22%	4.70	11%
Biological or Chemical Technologists and Technicians	17%	5.50	15%
Chemists	15%	2.43	7%
Environmental Educators	15%	32.57	7%
Legal and Financial Services	15%	3.86	9%
Architecture and Science Managers	11%	5.00	7%
Natural and Applied Science Policy Researchers, Consultants and Program Officers	11%	4.60	7%
Agricultural Representatives, Consultants and Specialists	9%	5.75	4%
Civil Engineers	9%	4.50	7%
Design Engineers	7%	9.00	4%
Environmental or Mechanical Engineers/Technicians	7%	3.25	4%
Forestry Professionals	7%	8.33	4%
Urban and Land Use Planners	7%	7.33	0%
Administration/Support	5%	2.66	2%
Equipment Operators/Labourers	5%	15.00	5%
Civil Engineering Technologists and Technicians	4%	8.00	4%
Chemical Engineers	2%	1.00	0%
Other	9%	2.00	4%

Note: Data derived from Q3 to Q24. n = 46. Mean scores may not be statistically reliable due to low N-sizes.

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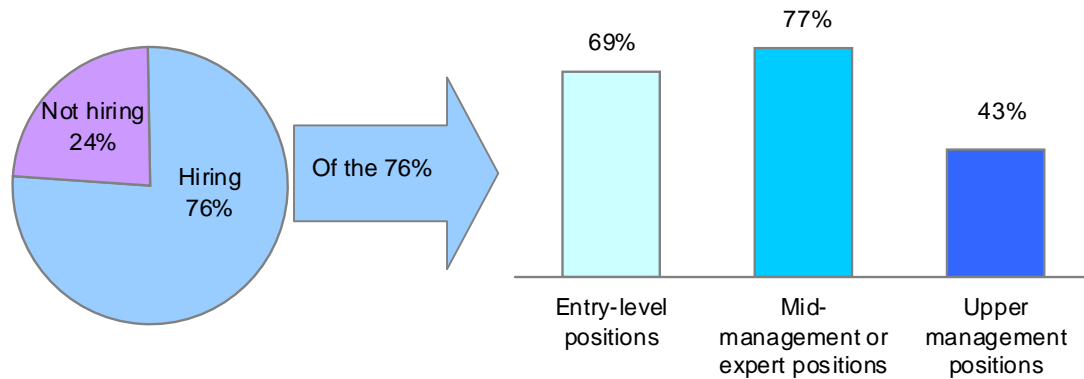


## Human resources

### Workforce expansion

Roughly three quarters (76%) of Manitoba’s environmental businesses are interested in hiring at present. Of those businesses that are interested in hiring, most are interested in filling entry-level (69%) and mid-level management or expert positions (77%). Forty-three percent are interested in hiring employees to fill upper management positions.

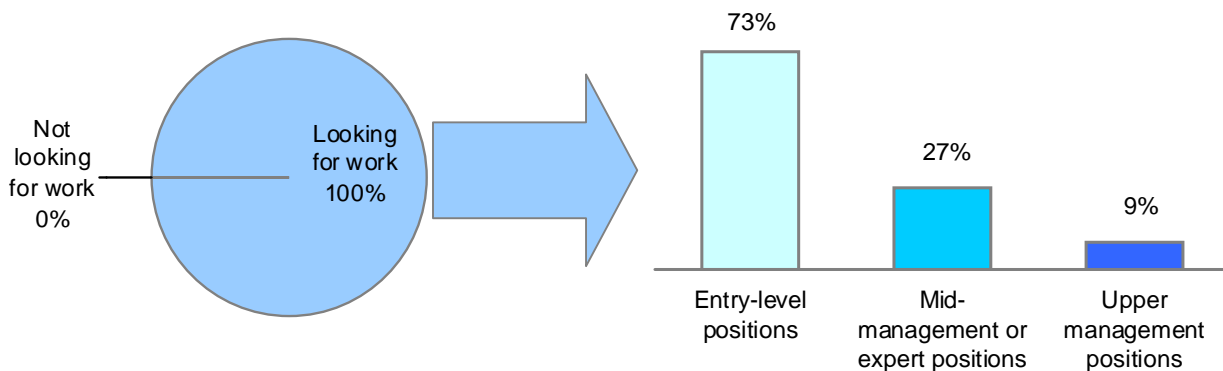
**Figure 5 AVAILABLE JOBS**



Note: Data derived from Q38. Totals do not add to 100% as multiple responses were accepted.

Student members identified the types of environmental jobs they are interested in applying for. As shown in Figure 6, all students are looking for work. The majority (73%) seek entry-level positions and roughly one quarter (27%) are looking for mid-management or expert positions. Nine percent are interested in applying for upper management positions.

**Figure 6 JOB SEEKERS**

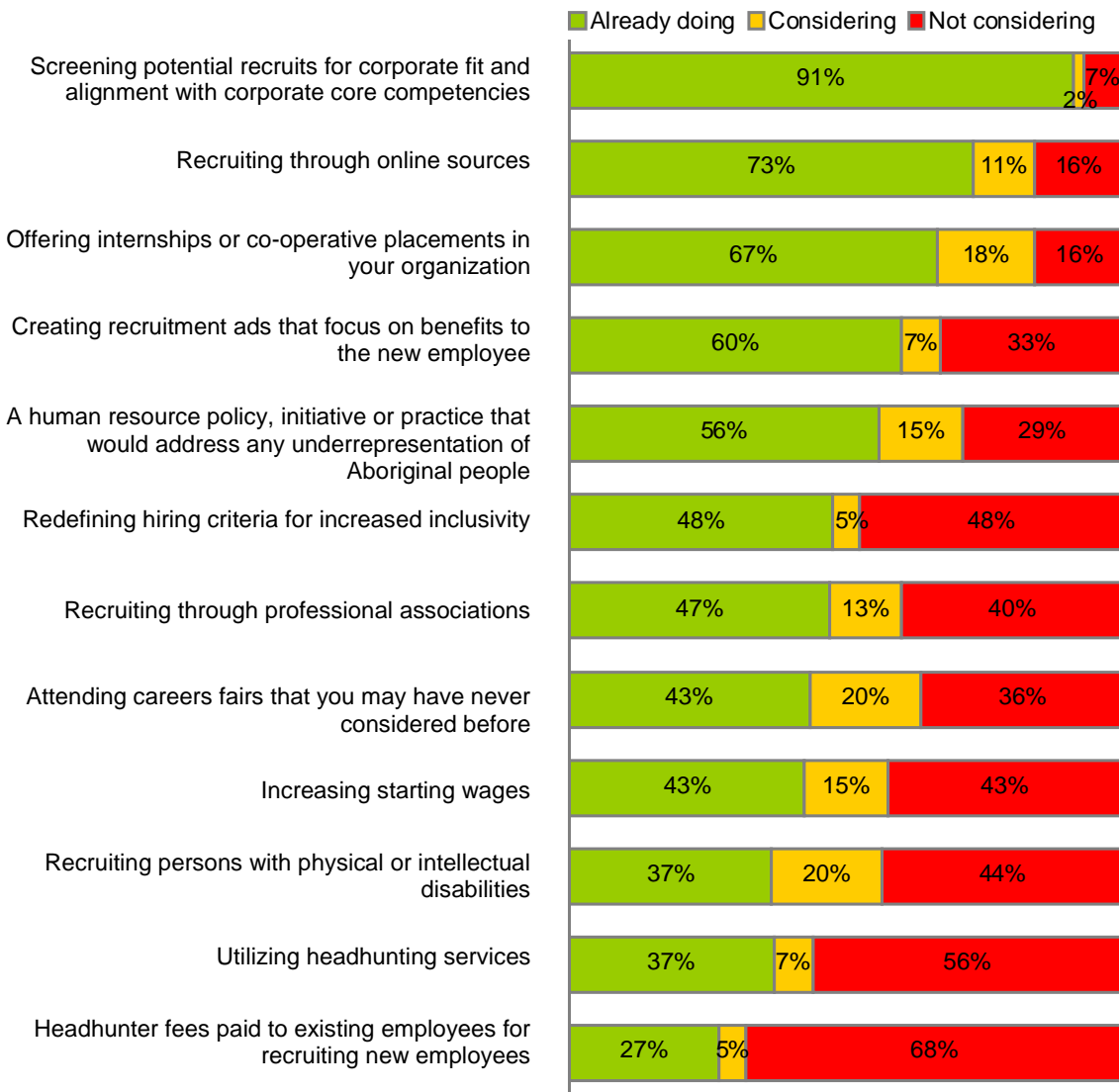


Note: Data derived from Q38. Totals exceed 100% because multiple responses were accepted.

MEIA business members were read a list of recruitment solutions. For each solution, members were asked if they already use it, are considering implementing it, or whether that solution would not be considered for their organization. As shown in Figure 7, the most frequently used recruitment solution is screening potential recruits for corporate fit and alignment with corporate core competencies (91%), followed by recruiting through online sources (73%). The least commonly used solutions are headhunter organizations (37%) and paying headhunter fees to existing employees for recruiting new employees (27%).

Compared to results from a previous **kisquared** study on recruitment solutions used in the general manufacturing sector (the Sectoral HR Needs Study for Canadian Manufacturers and Exporters, 2008), environmental employers use all tested solutions more frequently, with the exception of headhunting services.

**Figure 7 RECRUITMENT SOLUTIONS USED BY BUSINESS MEMBER ORGANIZATIONS**

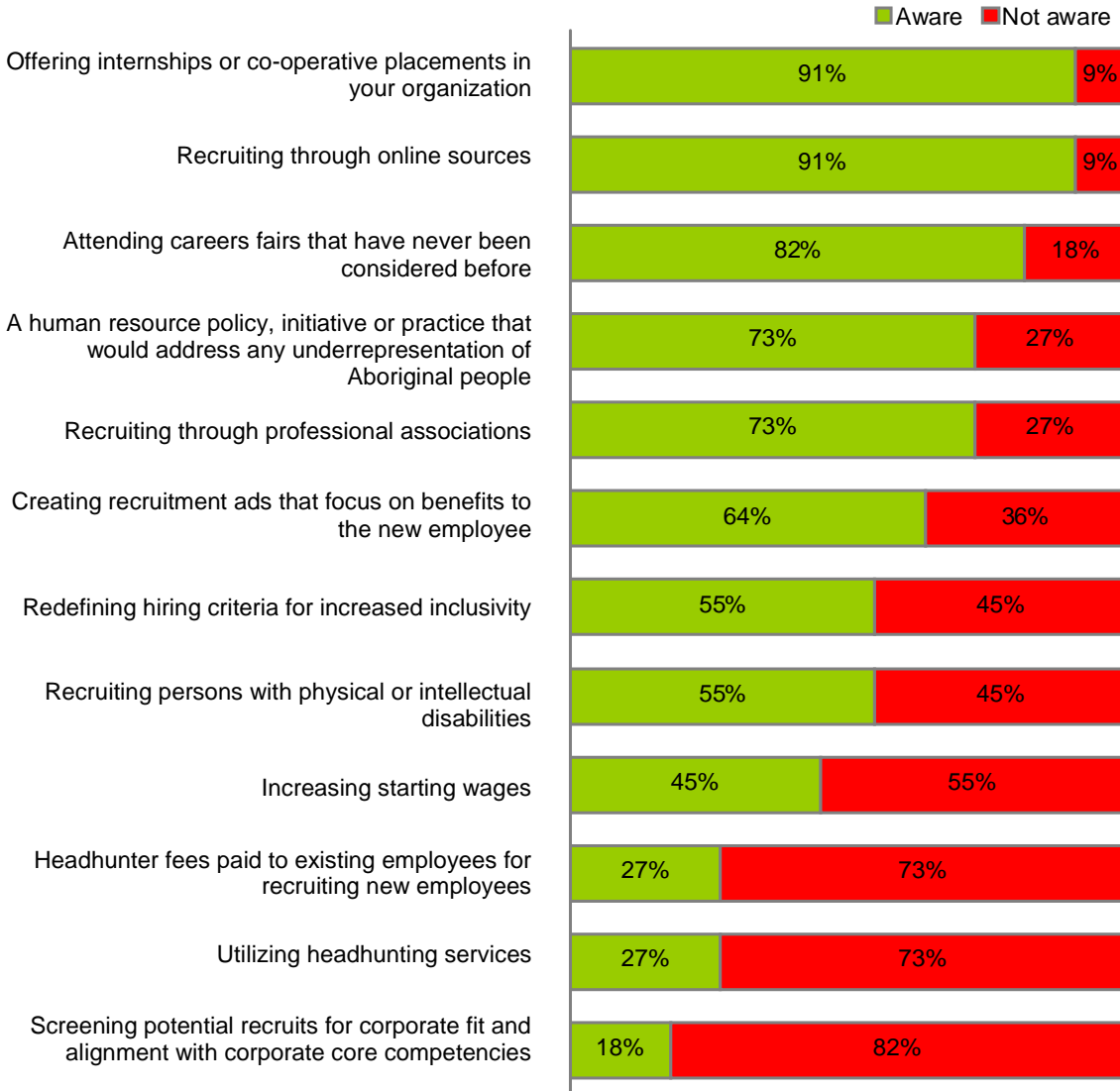


Note: Data derived from Q26 to Q37.

Student members' awareness of these recruitment strategies was also tested. As displayed in Figure 8, students are most aware of: internships and co-operative placements (91%) and recruiting through online sources (91%), solutions used by the majority of employers. Not surprisingly, careers fairs (82%) are also top-of-mind for many student members.

Solutions with the lowest awareness include headhunter fees, headhunting services and potential recruit screening. The latter (screening) is a recruitment solution that is not visible to those outside the organization; even though the majority of business members report using this recruitment method (91%), only one in five student members (18%) are aware of it.

**Figure 8 STUDENT MEMBER AWARENESS OF RECRUITMENT SOLUTIONS**



Note: Data derived from Q26 to Q37.

For the majority of solutions, student awareness is significantly higher than employer usage. For example, while 73% of student members believe that employers are recruiting via professional associations, less than one half (47%) actually are. Other solutions that share this trend include internships or co-operative placements (91% and 67%, respectively), online sources (91% and 73%), careers fairs (82% and 43%), HR policies that address underrepresentation of Aboriginal people (73% and 56%) and recruiting persons with disabilities (55% and 37%). This trend may indicate that a small number of companies are using these solutions and triggering awareness among students, while many environmental organizations are not effectively communicating with student applicants (either because they are not hiring, do not realize the advantages or have not yet implemented solutions).

## New hire qualifications

### Education

Business members identified the educational background they expect from an environmental employee, with results shown in Figure 9. Half of business members seek applicants with at least three to five years of post-secondary education, the majority preferring a bachelor's degree (particularly in an environmental field, science, engineering or business). A professional membership or designation is not typically required by business members, with the exception of those in specialized organizations, such as engineering or information technology (IT).

**Figure 9 DESIRED APPLICANT EDUCATION – BUSINESS MEMBERS**

Number of years	%
2 years or less	4%
3 to 5 years	41%
More than 5 years	9%
Degree	%
Unspecified bachelor's degree	30%
Bachelor's degree – environmental	22%
Bachelor's degree – science	15%
Unspecified degree, college diploma or certificate	15%
Bachelor's degree – engineering	9%
Master's degree / Ph. D	9%
Bachelor's degree – business	4%
Law degree	2%
Membership / designation	%
Professional membership (CTTAM, APEGM)	13%
Professional designation (P.Eng, CCEP, CEPIT)	9%
Other responses	%
Co-operative placement	2%
Nothing / not looking	2%

Note: Data derived from Q39. n = 46. Totals may exceed 100% multiple responses were accepted. Not all members responded for every category.

Student members identified their expectations of what educational background business members are looking for in an environmental employee; results are shown in Figure 10. As with business members, the most common responses are three to five years of post-secondary education, with most citing an environmental bachelor's degree.

Roughly one in five student members (18%) believe that an environmental membership (such as MEIA) is beneficial in seeking employment; however, no business members specifically seek these memberships.

**Figure 10 ANTICIPATED EDUCATION REQUIREMENT – STUDENT MEMBERS**

<b>Number of years</b>	<b>%</b>
2 years or less	9%
3 to 5 years	64%
<b>Degree</b>	<b>%</b>
Bachelor's degree – environmental	55%
Unspecified bachelor's degree	36%
Master's degree / Ph. D	18%
Bachelor's degree – science	9%
Unspecified degree, college diploma or certificate	9%
<b>Membership / designation</b>	<b>%</b>
Environmental membership (MEIA, ECO)	18%
Professional designation (P. Eng, CCEP, CEPIT)	9%

**Note: Data derived from Q39. n = 11. Total exceeds 100% because multiple responses were accepted. Not all members responded for every category.**

While student members typically say that an environmental degree is the surest way to gain employment in the environmental industry, business members cite a wider range of educational options. This gap between student perceptions and employer needs indicates an opportunity: increased communication about the variety of educational paths into the industry may lead to greater awareness of environmental job opportunities and heightened interest in the industry.

### Experience

Business members also identified the amount of experience they look for in an environmental employee. As shown in Figure 11, the highest proportion expect at least three years of experience. Roughly one in ten (11%) says that no experience is needed (likely for entry-level positions). Environmental experience such as remediation, sampling or testing (13%) and research or consulting experience (11%) are the most frequently cited types of experience desired by business members.

**Figure 11 DESIRED APPLICANT EXPERIENCE – BUSINESS MEMBERS**

<b>Field experience</b>	<b>%</b>
In-field experience	20%
Out-of-field, office or lab experience	17%
<b>Number of years</b>	<b>%</b>
2 years or less	2%
3 to 9 years	28%
10 years or more	4%
<b>Type of experience</b>	<b>%</b>
Environmental experience – remediation / sampling / testing	13%
Research or consulting experience	11%
Co-operative / internship experience	4%
Practical or hands-on experience	4%
Public-sector / government experience	4%
Renewables experience	2%
<b>Other responses</b>	<b>%</b>
Any experience	15%
Other	11%
I don't know / not applicable / not hiring	6%
No experience needed	11%

Note: Data derived from Q40. n = 46. Responses were open-ended. Total exceeds 100% because multiple responses were accepted. Not all members responded for every category.

Student members also identified their expectations of the experience required by employers for an entry-level environmental position. As shown in Figure 12, more than one half (55%) believe that in-field experience is required, although the majority (82%) did not cite a specific number of years. Similar to business members, student members most commonly believe that environmental experience such as remediation, sampling or testing is required (27%).

**Figure 12 ANTICIPATED EXPERIENCE REQUIREMENT FOR ENTRY-LEVEL POSITIONS**

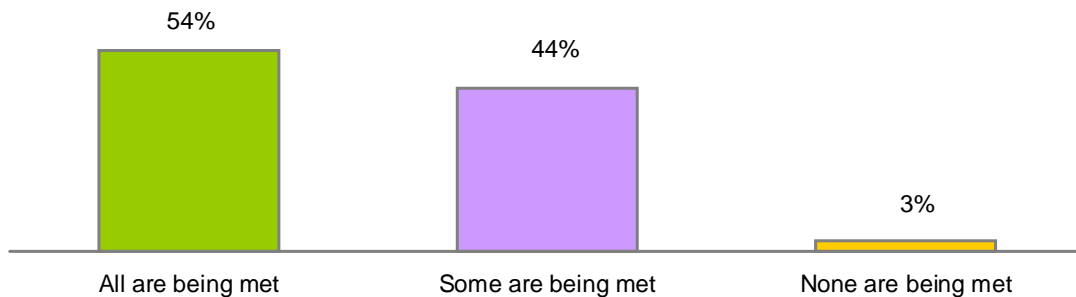
<b>Field experience</b>	<b>%</b>
In-field experience	55%
Out-of-field, office or lab experience	9%
<b>Number of years</b>	<b>%</b>
2 years or less	18%
<b>Type of experience</b>	<b>%</b>
Environmental experience – remediation / sampling / testing	27%
Co-operative / internship experience	9%
Practical or hands-on experience	9%
Research or consulting experience	9%
<b>Other responses</b>	<b>%</b>
Any experience	18%
Other	27%
No experience needed	9%

Note: Data derived from Q40. n = 11. Total exceeds 100% because multiple responses were accepted. Not all members responded for every category.

### Existing workforce

More than one half of business members say the educational needs of new hires are being met in Manitoba (54%, see Figure 13). Two fifths (44%) say only some are being met and 3% say none of the educational needs of environmental industry new hires are being met in Manitoba.

**Figure 13 EDUCATIONAL NEEDS OF NEW HIRES**



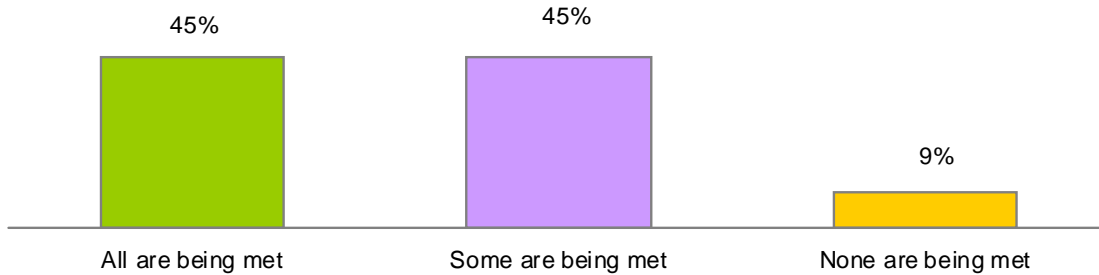
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Note: Data derived from Q41. n = 39.

A higher proportion of student members (9%) feel that none of the educational needs of new hires in the environmental industry are being met in Manitoba. Equal proportions believe that some (45%) or all needs (45%) are being met in Manitoba.

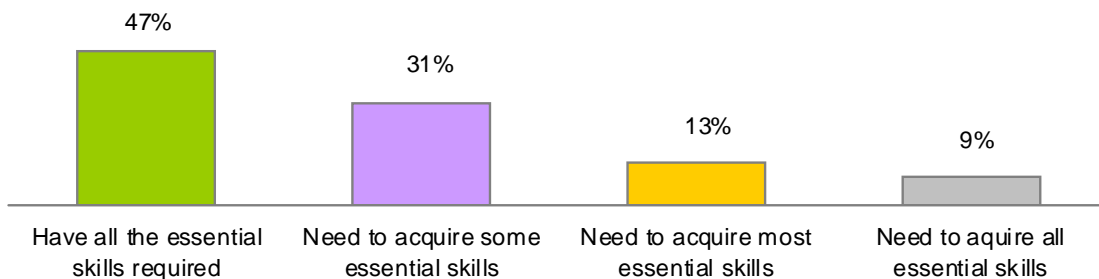
Figure 14 EDUCATIONAL NEEDS OF STUDENT MEMBERS



Note: Data derived from Q41. n = 11.

Essential skills are those used to perform a wide variety of daily life and occupational tasks, such as writing, critical thinking and continuous learning. Business members were asked whether or not environmental employees have the necessary essential skills to perform their job duties. As shown in Figure 15 below, one half of business members (47%) say that environmental employees do have all the essential skills required to perform their jobs; 31% say they need to acquire some essential skills, 13% say they need to acquire most essential skills and nearly one in ten (9%) says that environmental employees need to acquire all such skills to perform their jobs.

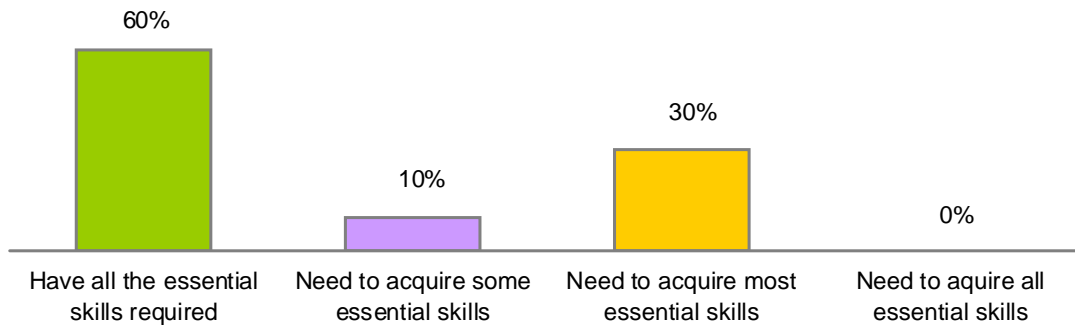
Figure 15 ESSENTIAL SKILLS OF EXISTING WORKFORCE



Note: Data derived from Q42. n = 45.

Student members are more confident about their own essential skills; when asked if they feel they have the necessary essential skills to perform their jobs, three fifths (60%) said they believe they have all of the essential skills required. One in ten say they need to acquire some essential skills, 30% say they need to acquire most essential skills and no student members believe they lack all essential skills required to perform their jobs.

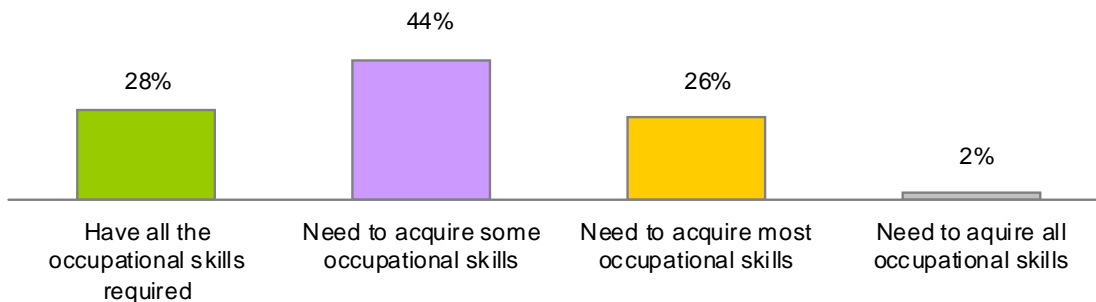
**Figure 16 ESSENTIAL SKILLS OF STUDENT MEMBERS**



Note: Data derived from Q42. n =10.

Fewer than three in ten business members (28%) report that their environmental employees have all required occupational skills, indicating a lower level of confidence in learned occupational skills than essential skills. Two fifths (44%) say that employees need to acquire some occupational skills and 26% say they need to acquire most occupational skills. Only 2% of business members say that environmental employees need to acquire all occupational skills required to perform their job duties.

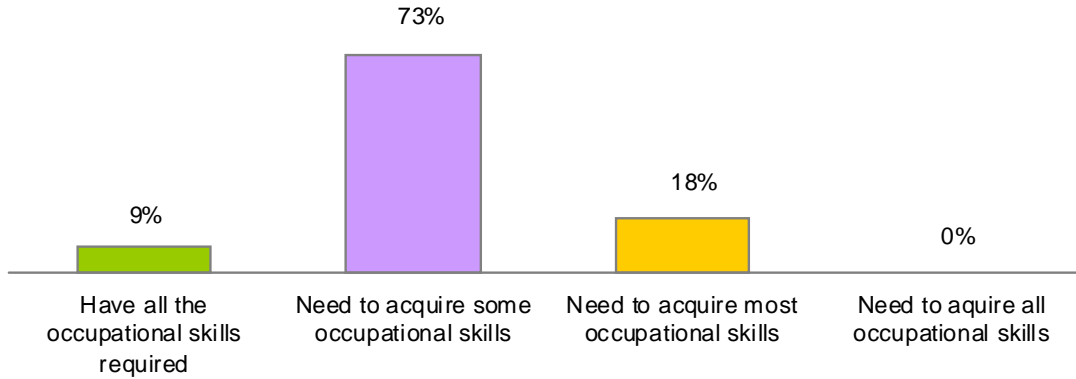
**Figure 17 OCCUPATIONAL SKILLS OF EXISTING WORKFORCE**



Note: Data derived from Q43. n = 43.

Although all student members say they have at least some occupational skills required to perform their job duties, less than one tenth (9%) believe that they have all of the occupational skills required. The majority (73%) feel they need to acquire some occupational skills and roughly one in five (18%) say they need to acquire most occupational skills to perform their jobs.

**Figure 18 OCCUPATIONAL SKILLS OF STUDENT MEMBERS**

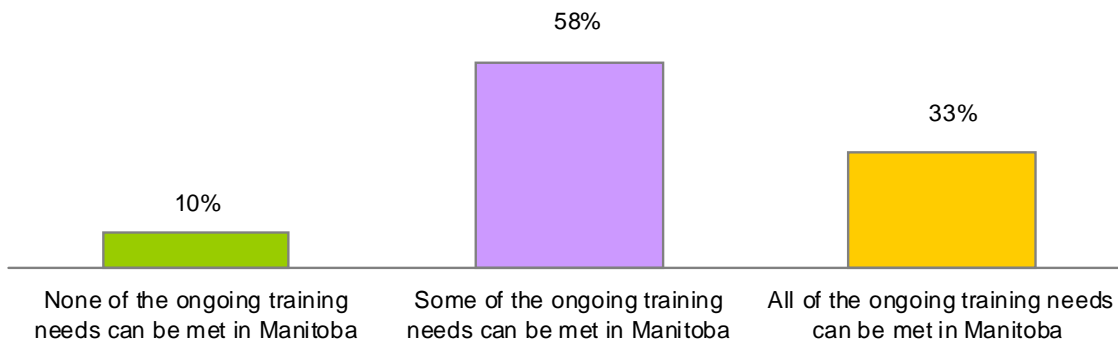


Note: Data derived from Q43. n = 11.

### Meeting training needs

Business members were asked whether the ongoing training needs of their environmental employees can be met in Manitoba. One third of business members (33%) believe that all of their employees' ongoing training needs can be met in the province and roughly three in five (58%) say that some of the needs can be met here. One in ten says that none of the ongoing training needs can be met within Manitoba.

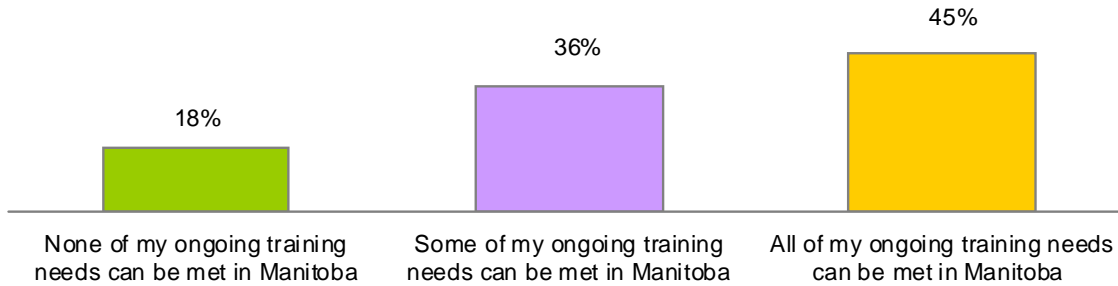
**Figure 19 ENVIRONMENTAL EMPLOYEE TRAINING NEEDS**



Note: Data derived from Q44. n = 40.

While the majority of members agree that there is room for improvement in environmental training, student members are somewhat more optimistic. A higher proportion of student members than business members (45%) say that all of their ongoing training needs can be met in Manitoba. More than one third (36%) believe that some of their needs can be met and one fifth (18%) say that none of their ongoing training needs can be met in the province, as shown in Figure 20.

**Figure 20 ENVIRONMENTAL STUDENT MEMBER TRAINING NEEDS**



**Note: Data derived from Q44. n = 11.**

Members identified certain professional development areas that are needed for the environmental employee workforce that do not already exist in Manitoba (see Figure 21). Although one third (33%) say there are no professional development courses or initiatives needed, some key areas are consistent with training needs identified in the 2002 Sector Study (*Manitoba Environmental Sector Study, 2002*).

The most frequently cited type of professional development needed is in environmental monitoring, assessing or auditing (7%). Environmental monitoring and environmental risk assessment were among the top three training needs in the 2002 study, which suggests that these areas will remain a long-term priority for many organizations.

Essential skills also continue to be a necessary professional development area for some; in 2002, specific skills such as technical and report writing and interpersonal skills were cited as a training need by a substantial portion of respondents.

Interestingly, marketing no longer appears as a significant professional development need for industry members, although it was among the top three training needs in 2002 (Note: in 2002, respondents were provided a list of possible responses, whereas in the present study, members were prompted for open-ended responses only).

**Figure 21 PROFESSIONAL DEVELOPMENT**

Professional development needed	%
Environmental monitoring / assessing / auditing	7%
Courses to become certified, licensed or accredited	5%
Fundamental knowledge / basic skills	5%
General information / communication sessions about the industry / current events	5%
Health / safety / hygiene courses	5%
Highly specialized courses (e.g., nanotechnology, mold identification)	5%
Quality system / ISO training or accreditation	5%
Renewable energy / energy management courses	4%
Technical or hands-on courses	4%
Co-operative placement programs	2%
Other	5%
I don't know / not applicable	16%
Nothing / none needed	33%

**Note: Data derived from Q45. Total exceeds 100% because multiple responses were accepted.**

Although respondents were not asked about preferred training delivery methods in the present study, results from the 2002 study are informative: training through an industry or professional association was the most preferred training delivery method (preferred by 43% of respondents), well ahead of internet / self-directed training (28%) and training through an academic institution (23%). Although internet training may be more popular today than it was in 2002 due to increased usage, these results nevertheless suggest that training opportunities offered through MEIA would enjoy substantial uptake among industry members.

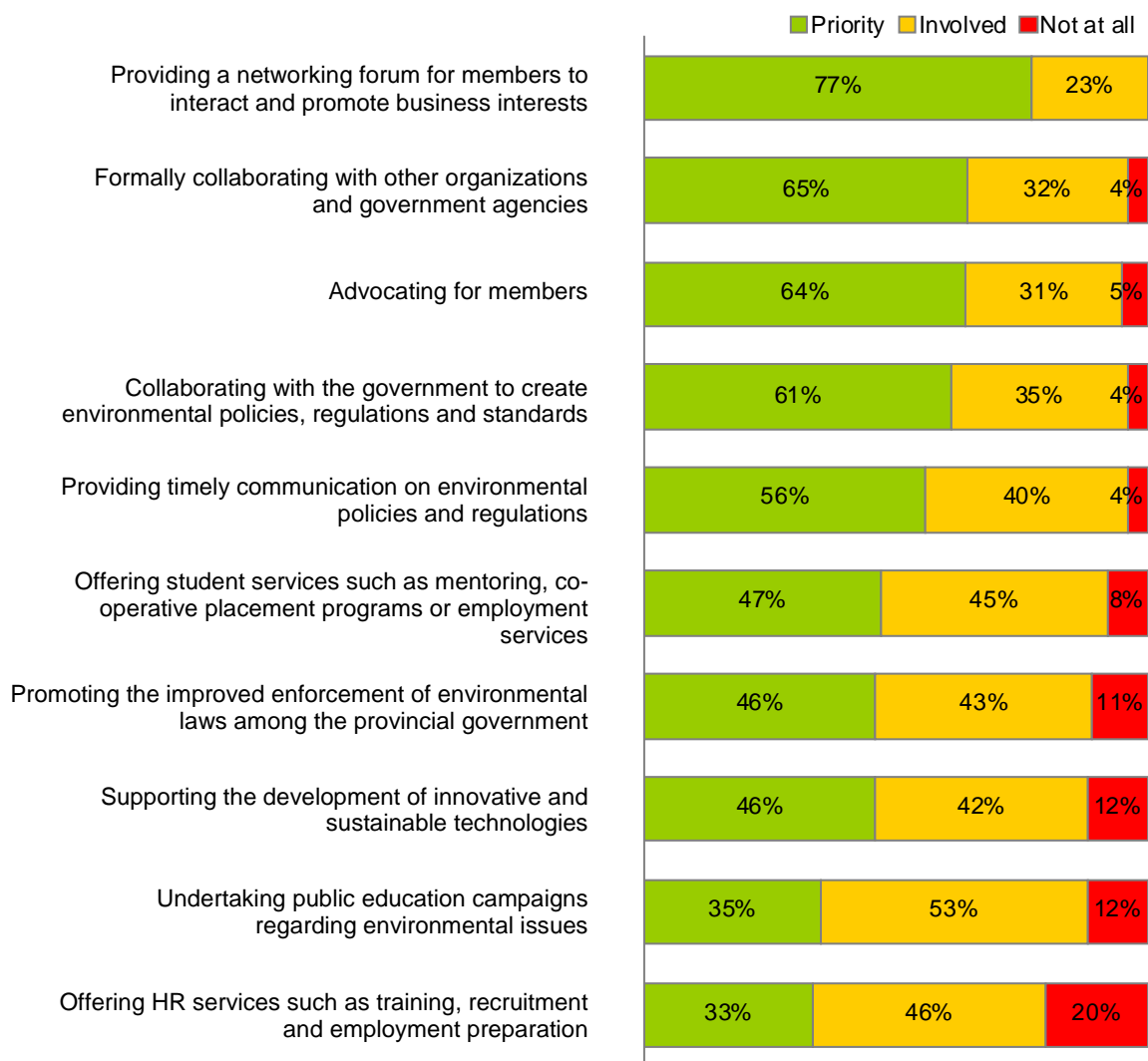
Also noteworthy from the 2002 study is the preferred length of training offerings: one-day sessions were the most popular (preferred by 35% of respondents), followed by half-day and evening sessions (19% each); two-day sessions were only preferred by six percent of respondents.

## MEIA membership opinions

MEIA members were asked if MEIA should make a number of suggested initiatives or activities a priority, if MEIA should be involved but not as a top priority, or if MEIA should not be involved at all. Members express high interest toward MEIA's involvement in most of the suggested services (see Figure 22). As in the 2002 study, members believe MEIA's top priority should be industry networking. Formal collaboration with other organizations and government agencies (65%) and advocating for members (64%) are also among the top priorities identified in the present study.

Although training, recruitment and employment preparation is currently last on the list of *top* priorities, four out of five members feel MEIA should be involved in this area in some way. In 2002, when asked how MEIA could best support their organization, professional development / training was among the top responses.

**Figure 22 MEIA PRIORITIES**

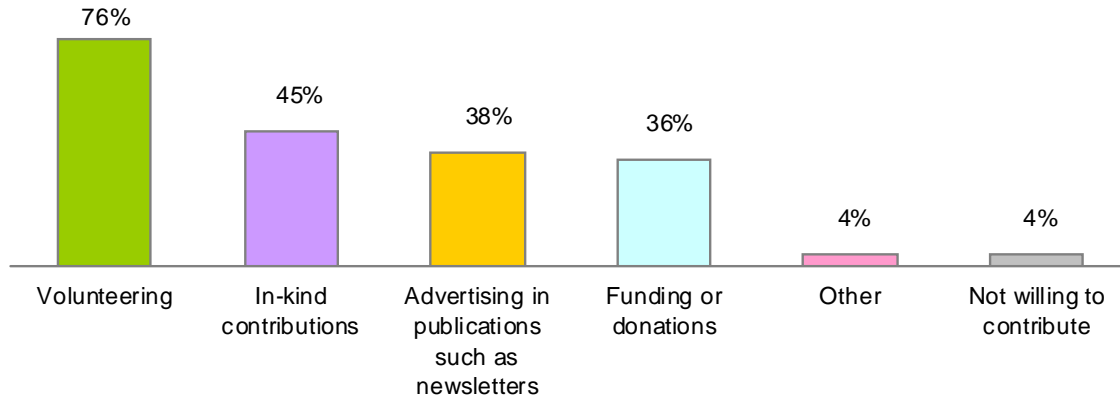


Note: Data derived from Q46 to Q55.

MEIA members were asked in what ways they were willing to support MEIA in priority areas. Nearly all members (96%) indicated that they were willing to contribute in some way. As shown in Figure 23, the majority (76%) are willing to volunteer, while substantial proportions are willing to support with in-kind contribution (45%), advertising in publications such as newsletters (38%) and funding or donations (36%).

MEIA can capitalize on members' willingness to support the organization in order to help advance the environmental industry in Manitoba.

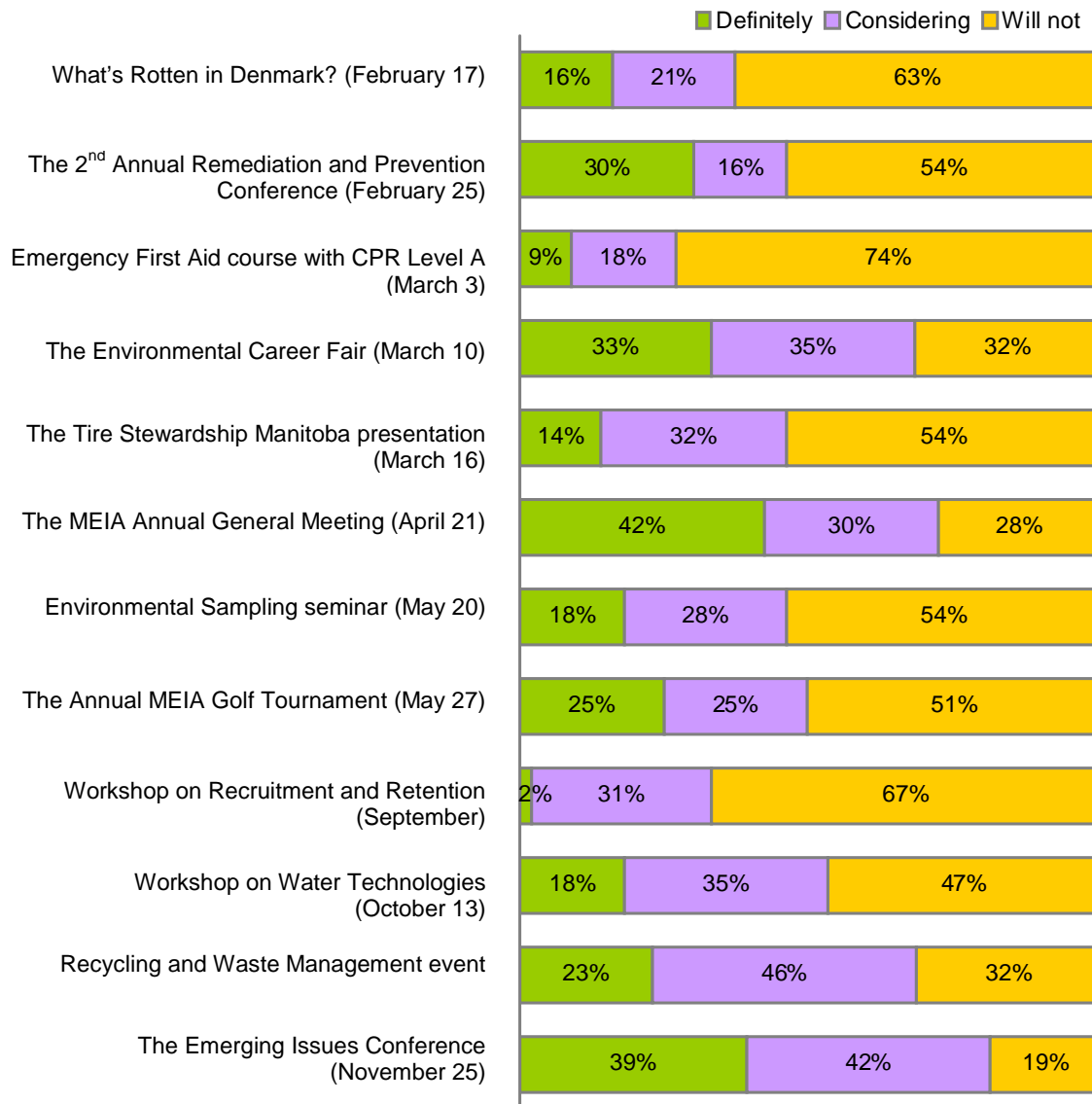
**Figure 23 SUPPORTING MEIA**



**Note: Data derived from Q56. Total exceeds 100% because multiple responses were accepted.**

MEIA members were read a list of upcoming MEIA events and asked how likely they were to attend. As shown, the proportion of those “definitely” attending is highest for annual events such as the MEIA Annual General Meeting (42%), the Emerging Issues Conference (39%), the Environmental Career Fair (33%) and the 2<sup>nd</sup> Annual Remediation and Prevention Conference (30%). Potential attendance is lowest for the Emergency First Aid course and the Workshop on Recruitment and Retention.

**Figure 24 PARTICIPATION**



Note: Data derived from Q57 to Q68. Events are shown in chronological order.

Members identified initiatives for which they feel MEIA should take a leading role to address Manitoba's environmental human resource requirements. As shown, the majority (65%) do not have suggestions for human resource initiatives. The most commonly suggested initiatives are student-business links such as co-operative programs or education (7%), increasing knowledge of the environmental industry (5%) and conducting specific environmental training or workshops (5%).

**Figure 25 HUMAN RESOURCE INITIATIVES**

Human resource initiative	%
Co-operative programs / student-business links / focus on education	7%
Make industry and its job opportunities widely known	5%
Specific environmental training or workshops	5%
Develop business / entrepreneurial skills	4%
Increase MEIA membership / benefits to membership	4%
Develop certification for environmental practitioner	2%
Liaise with other organizations to develop programs	2%
Work with policymakers / government	2%
Other	2%
I don't know	5%
No other human resource initiatives needed	65%

Note: Data derived from Q69. Total may not equal 100% as multiple responses were accepted.

Members also recommended other initiatives they felt MEIA could take a leading role in. One half (51%) say that no other initiatives are needed. Roughly one in ten say that MEIA should communicate environmental issues and regulations (12%), host conferences, workshops, tradeshows or networking events (11%) and lobby for increased environmental regulation and enforcement (11%).

**Figure 26 ENVIRONMENTAL INITIATIVES**

Environmental initiative	%
Communicate environmental issues and regulations	12%
Host conferences, workshops, tradeshows or networking events	11%
Lobby for increased environmental regulation and enforcement	11%
Develop environmental technologies, processes or products	7%
Educate or build awareness of environmental issues among the public	7%
Capitalize on trade opportunities / promote Manitoba's contribution to the environment	4%
Increase MEIA membership / benefits to membership	2%
Promote certification of environmental professionals	2%
Provide training for particular occupations	2%
I don't know	5%
No other initiatives needed	51%

Note: Data derived from Q70. Total may not equal 100% as multiple responses were accepted.

## Appendix A: Marginal results

N = 57

DATE: \_\_\_/\_\_\_/\_\_\_  
d d m m

SURVEY # \_\_\_\_\_

INTERVIEWER: \_\_\_\_\_

PHONE: ( \_\_\_\_\_ ) - \_\_\_\_\_ - \_\_\_\_\_

EXT: \_\_\_\_\_

May I please speak to \_\_\_\_\_ ?

### ANSWERING MACHINE MESSAGE

Hello this is \_\_\_\_\_ from **kisquared**. Today we're calling members of the Manitoba Environmental Industries Association, MEIA [MEE-AH], to ask some questions about MEIA membership and Manitoba's environmental industry. You may recall receiving a letter a few days ago asking you to participate in a study. I would really appreciate it if you could return my call at 989-8002 or **(IF LONG DISTANCE NUMBER ONLY)** toll free at 1-888-950-8002. Again, let me assure you I am conducting **industry research**. We are not trying to sell you anything. I look forward to speaking with you soon. And again, the number is 989-8002 or **(IF LONG DISTANCE NUMBER ONLY)** toll free at 1-888-950-8002. Thanks.

Hello, my name is **(use first and last)** and I'm calling from **kisquared** on behalf of the Manitoba Environmental Industries Association. You may recall receiving a letter a few days ago asking you to participate in a study. Do you recall receiving this letter? As the letter mentions, we're calling you as a member of the Manitoba Environmental Industries Association, MEIA, to ask questions about the future of Manitoba's environmental industry sector and your experience as a MEIA member. Are you the person in your business who would be best qualified to answer the questions?

**IF RESPONDENT DID NOT RECEIVE A LETTER:** Today we're calling MEIA members to ask you some questions about the future of Manitoba's environmental industry and your experience as a MEIA member. Are you the MEIA member in your business who would be best qualified to answer our questions?

**IF YES, PROCEED. IF NO, ASK TO SPEAK TO THAT PERSON IN THE BUSINESS WHO WOULD BE MOST QUALIFIED TO DISCUSS THE FUTURE OF THE ENVIRONMENTAL INDUSTRY SECTOR IN MANITOBA. IF PRESENTLY UNAVAILABLE, ARRANGE TO CALL BACK.**

kisquared



Just before we begin I would like to assure you that all the information gathered through this study is strictly confidential. We guarantee your anonymity. There are no names attached to the research findings or the final report that will be submitted to MEIA. I would like to inform you that this call may be monitored for quality assurance purposes.

Q1 Please tell me in what industry group your organization belongs. **READ LIST, IF MORE THAN ONE GIVEN, ASK** Which *one* is *most* relevant to your company's main activity?

Environmental Consulting Services .....	26%
Student, unemployed .....	19%
Manufacturing.....	14%
Environmental Sustainability.....	5%
Waste Management and Remediation Services.....	5%
Alternative Energy and Energy Conservation	4%
Educational Services.....	4%
Utilities .....	4%
Agriculture .....	2%
Construction.....	2%
Design or Research and Development.....	2%
Finance and Insurance .....	2%
Mining and Oil and Gas Extraction .....	2%
Professional, Scientific and Technical Services.....	2%
Public Administration.....	2%
Other .....	7%

Q2 Please tell me how many full-time and part-time environmental employees your organization employs. If your business operates nationally or internationally, please exclude external contractors and consultants and employees outside of Manitoba. **IF ASKED WHAT IS INCLUDED IN ENVIRONMENTAL EMPLOYMENT, SAY** this includes individuals who work in at least one of the sectors of the economy related to: Environmental Protection, Conservation and Preservation of Natural Resources, Environmental Remediation or Environmental Sustainability. **ENTER 9 SERIES IF DON'T KNOW / REFUSED. n=46**

**MEAN: 21.15**

- No full-time employees ..... 7%
- 1 to 3 ft employees..... 37%
- 4 to 20 ft employees..... 30%
- 21 to 50 ft employees..... 15%
- More than 50 ft employees ..... 11%
  
- No part-time employees..... 89%
- 1 pt employee..... 2%
- 10 pt employees ..... 2%
- 30 pt employees ..... 4%
- 107 pt employees ..... 2%

Now I will ask you some questions about occupations in the environmental industry. Please tell me how many individuals your organization currently employs in each of the following occupations that are *related to the environment* and where more than 50% of their employment is related to the environment. **FOR EACH RELEVANT POSITION, ASK ...** And, within the next 5 years, will you increase the number of people in these occupations? **ENTER 9 SERIES IF DK / REFUSED**

	Mean number of employees	Increase?			NA
		Yes	No	DK	
Q3 Architecture and Science Managers	5.00	60%	20%	20%	89%
Q4 Chemists	2.43	86%	0%	14%	85%
Q5 Geologists, Geochemists and Geophysicists	2.40	80%	0%	20%	78%
Q6 Biologists and Related Sciences	4.00	80%	13%	7&	67%
Q7 Coordinators, Directors, Professionals or Planners	10.65	76%	24%	0%	63%
Q8 Environmental Supervisors or Managers	3.56	56%	44%	0%	61%



	Mean number of employees	Increase?			NA
		Yes	No	DK	
Q9 Technicians or Analysts	10.63	81%	6%	13%	65%
Q10 Forestry Professionals	8.33	67%	33%	0%	93%
Q11 Agricultural Representatives, Consultants and Specialists	5.75	50%	50%	0%	91%
Q12 Civil Engineers	4.50	75%	25%	0%	91%
Q13 Chemical Engineers	1.00	0%	100%	0%	98%
Q14 Design Engineers	9.00	67%	33%	0%	93%
Q15 Environmental Educators	32.57	43%	57%	0%	85%
Q16 Urban and Land Use Planners	7.33	0%	100%	0%	93%
Q17 Sales and Marketing	3.00	55%	45%	0%	76%
Q18 Legal and Financial Services	3.86	57%	43%	0%	85%
Q19 Biological or Chemical Technologists and Technicians	5.50	88%	13%	0%	83%
Q20 Inspectors in Public and Environmental Health and Occupational Health and Safety	4.70	50%	40%	10%	78%
Q21 Natural and Applied Science Policy Researchers, Consultants and Program Officers	4.60	60%	40%	0%	89%
Q22 Civil Engineering Technologists and Technicians	8.00	100%	0%	0%	96%
Q23 Other occupation 1	5.91	55%	45%	0%	76%
Q24 Other occupation 2	2.75	50%	50%	0%	91%
Q25 Do you predict your Manitoba operation will grow, stay about the same or decline in size within the next five years?					
		Grow .....	63%		
		Stay the same .....	23%		
		Decline .....	2%		
		Don't know / refused .....	12%		

Now I will read you a number of recruitment solutions some employers are implementing to address their current and future human resource challenges.

**FOR EMPLOYERS ASK** Please tell me if you are already implementing such a solution, considering it, or whether this solution would not be considered for your organization?

**FOR STUDENTS ASK** Please tell me if you are aware of any of the following solutions currently in use by employers?

**ROTATE.**

SERIES A	EMPLOYER				DK/ Ref	STUDENT	
	Already doing	Consider ing	Not considered	N/A		Aware	Unaware
Q26 Screen potential recruits for corporate fit and alignment with corporate core competencies?	87%	2%	7%	2%	2%	18%	82%
Q27 Attending careers fairs that you may have never considered before?	41%	20%	35%	4%	0%	82%	18%
Q28 Creating recruitment ads that focus on the benefits to the new employee?	57%	7%	30%	2%	4%	64%	36%
Q29 Offering internships or co-op placements in your organization?	65%	17%	15%	2%	0%	91%	9%
Q30 Recruiting through online sources?	72%	11%	15%	2%	0%	91%	9%
Q31 Utilizing headhunting services?	35%	7%	52%	2%	4%	27%	73%
Q32 Recruiting through professional associations?	46%	13%	39%	2%	0%	73%	27%
Q33 Increasing starting wages?	37%	13%	37%	4%	9%	45%	55%
Q34 Recruiting persons with physical or intellectual disabilities?	33%	17%	39%	2%	9%	55%	45%
Q35 Redefining hiring criteria for increased inclusivity?	46%	4%	46%	2%	2%	55%	45%
Q36 A Human Resource policy, initiative or practice that would address any under representation of Aboriginal people?	50%	13%	26%	2%	9%	73%	27%
Q37 Head hunter fees paid to existing employees for recruiting new employees?	24%	4%	61%	2%	9%	27%	73%

Q38 When thinking about the types of jobs available in the environmental sector, which of the following job levels are you interested in hiring? **READ LIST, SELECT ALL THAT APPLY. FOR STUDENTS ASK ...** When thinking about the types of jobs available in the environmental sector, which of the following job levels are you interested in applying for?

**EMPLOYERS**

- Entry level positions .....52%
- Mid-management or expert positions .....59%
- Upper management positions .....33%
- Not currently interested in hiring.....24%

**STUDENTS**

- Entry level positions .....73%
- Mid-management or expert positions .....27%
- Upper management positions .....9%

Q39 What are you looking for in an environmental employee in terms of education? **PROBE FOR NUMBER OF YEARS, DESIGNATION, PROFESSIONAL MEMBERSHIP. FOR STUDENTS ASK ...** What type of education should an employer look for in an environmental employee they wish to hire?

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Q40 What are you looking for in an environmental employee in terms of experience? **PROBE FOR NUMBER OF YEARS, TYPE OF INDUSTRY, DUTIES, IN-FIELD OR NOT. FOR STUDENTS ASK ...** What type of experience should an employer look for in an entry level environmental position?

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**Q41 FOR EMPLOYERS ASK ...**When thinking about new hires entering the industry as environmental employees, please tell which of the following statements best describes your experience.

**FOR STUDENTS ASK ...**When thinking about entering the industry as an environmental employee, please tell me which of the following statements best describes your experience ...

**EMPLOYERS ...**

- None of the educational needs of new hires are being met in Manitoba..... 2%
- Some of the educational needs of new hires are being met in Manitoba..... 37%
- All of the educational needs of new hires are being met in Manitoba..... 46%
- Don't know/refused..... 15%

**STUDENTS ...**

- None of my educational needs as a new hire are being met in Manitoba..... 9%
- Some of my educational needs as a new hire are being met in Manitoba..... 45%
- All of my educational needs as a new hire are being met in Manitoba..... 45%



**Q42 FOR EMPLOYERS ASK ...**Overall, would you say your environmental employees have the necessary essential skills to perform their job duties? By essential skills, I mean skills that people use to perform a wide variety of daily life and occupational tasks, such as writing, thinking skills and continuous learning. Would you say...

**FOR STUDENTS ASK ...**Overall, would you say you have the necessary essential skills to perform your job duties? By essential skills, I mean skills that people use to perform a wide variety of daily life and occupational tasks, such as writing, thinking skills and continuous learning. Would you say...

**EMPLOYERS ...**

They have all the essential skills required to perform their jobs. .... 46%  
 They need to acquire some essential skills..... 30%  
 They need to acquire most essential skills. .... 13%  
 They need to acquire all essential skills required to perform their jobs..... 9%  
 Don't know/refused..... 2%

**STUDENTS ...**

You have all of the essential skills required to perform your job..... 55%  
 You need to acquire some essential skills..... 9%  
 You need to acquire most essential skills..... 27%  
 You need to acquire all essential skills required to perform your job. .... 0%  
 Don't know/refused..... 9%

Q43 **FOR EMPLOYERS ASK ...**And overall, would you say your environmental employees have the necessary occupational skills to perform their job duties? By occupational skills, I mean skills of a technical nature that are job-specific. Would you say...

**FOR STUDENTS ASK ...**And overall, thinking about your own environmental occupational skills, do you have the necessary job-specific technical skills to perform your job duties? Would you say...

**EMPLOYERS ...**

- They have all the occupational skills required to perform their jobs. .... 26%
- They need to acquire some of the occupational skills required. .... 41%
- They need to acquire most of the occupational skills required to do their jobs. .... 24%
- They need to acquire all of the occupational skills required to do their jobs. .... 2%
- Don't know/refused ..... 7%

**STUDENTS ...**

- You have all of the occupational skills required to perform your job..... 9%
- You need to acquire some of the occupational skills required to perform your job..... 73%
- You need to acquire most of the occupational skills required to perform your job. .... 18%
- You need to acquire all of the occupational skills required to perform your job..... 0%

**Q44 FOR EMPLOYERS ASK ...** Now, thinking about your organization’s skills requirements from your environmental employees, please tell which of the following statements best describes your experience.  
**FOR STUDENTS ASK ...** Now, thinking about your own environmental skill requirements, please tell which of the following statements best describes your experience.

**EMPLOYERS ....**

None of the ongoing training needs of my environmental employees can be met in Manitoba.....9%  
 Some of the ongoing training needs of my environmental employees can be met in Manitoba. .50%  
 All of the ongoing training needs of my environmental employees can be met in Manitoba. ....28%  
 Don’t know/refused .....13%

**STUDENTS ....**

None of my ongoing training needs can be met in Manitoba.....18%  
 Some of my ongoing training needs can be met in Manitoba.....36%  
 All of my ongoing training needs can be met in Manitoba.....45%

**Q45** In your opinion, what, if any, professional development courses that do not already exist in Manitoba, are needed for the environmental employee workforce? Any other professional development course ideas?

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For each of the following activities and initiatives, please tell me if you think it should be a top priority for MEIA, if MEIA should be involved but not as a top priority or if MEIA should not be involved in that activity or initiative at all. **ROTATE**

**SERIES B**

	Priority	Involved	Not at all	DK/Ref
Q46 Offering HR services such as training, recruitment and employment preparation	32%	44%	19%	5%
Q47 Offering student services such as mentoring, co-operative placement programs or employment services	44%	42%	7%	7%
Q48 Advocating for members	61%	30%	5%	4%
Q49 Collaborating with the government to create environmental policies, regulations and standards	61%	35%	4%	0%
Q50 Promoting the improved enforcement of environmental laws among the provincial government	46%	42%	11%	2%
Q51 Undertaking public education campaigns regarding environmental issues	35%	53%	12%	0%
Q52 Providing timely communication on environmental policies and regulations	56%	40%	4%	0%
Q53 Supporting the development of innovative and sustainable technologies	46%	42%	12%	0%
Q54 Formally collaborating with other organizations and government agencies	65%	32%	4%	0%
Q55 Providing a networking forum for members to interact and promote business interests	77%	23%	0%	0%
Q56 In what ways are you willing to contribute to MEIA’s efforts in these priority activities? <b>READ LIST, CIRCLE ALL THAT APPLY</b>				
Volunteering .....		74%		
In-kind contributions .....		44%		
Advertising in publications such as newsletters .....		37%		
Funding or donations .....		35%		
I am not willing to contribute .....		4%		
Other .....		4%		
Don’t know/refused .....		4%		



Now I will read a list of upcoming events or initiatives that MEIA is offering. For each of the following activities and initiatives, please tell me if you will definitely participate, are considering participating or will not participate.

	Definitely	Considering	Will not	DK/Ref
Q57 What's Rotten in Denmark? A lunch presentation at the Hydro Building, held on February 17 <sup>th</sup>	16%	21%	63%	0%
Q58 The 2nd Annual Remediation and Prevention conference, held on February 25 <sup>th</sup> from 8:30 a.m. to 4:30 p.m.	30%	16%	53%	2%
Q59 Emergency First Aid course with CPR Level A, held on March 3 <sup>rd</sup> from 8:30 a.m. to 4:00 p.m.	9%	18%	74%	0%
Q60 The Environmental Career Fair, held on March 10 <sup>th</sup> at the University of Manitoba	33%	35%	32%	0%
Q61 The Tire Stewardship Manitoba presentation on the challenges and opportunities of scrap tire recycling in Manitoba, held on March 16 <sup>th</sup> from 7:30 to 9:30 a.m.	14%	32%	54%	0%
Q62 The MEIA Annual General Meeting, held April 21 <sup>st</sup> from 7:30 to 9:30 a.m.	42%	30%	28%	0%
Q63 A day-long seminar on Environmental Sampling, held on May 20 <sup>th</sup> Attendance at this seminar is worth 1.5 credit hours for University of Manitoba students	18%	28%	54%	0%
Q64 The Annual MEIA Golf Tournament, held on May 27 <sup>th</sup>	25%	25%	51%	0%
Q65 Workshop on Recruitment and Retention, held in September	2%	30%	65%	4%
Q66 A day-long workshop on Water Technologies, held on October 13 <sup>th</sup>	18%	35%	47%	0%
Q67 Recycling and Waste Management event (date and type of event to be determined)	23%	46%	32%	0%
Q68 The 2 <sup>nd</sup> Annual Emerging Issues Conference, which will look at clean, alternative, renewable energy sources, held on November 25 <sup>th</sup> , 2010	39%	42%	19%	0%

Q69 Can you recommend initiatives you feel MEIA should take a leading role in to address Manitoba's environmental human resources requirements?

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Q70 Can you recommend initiatives you feel MEIA should take a leading role in other than those related to human resources?

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That concludes this survey. On behalf of MEIA, thank you very much for taking the time to participate in this study.