

# Key Research Findings

This analysis was based on the pre-determined criteria and measures listed below:

Section	Description	Measures
<b>Student Demand</b>	<p>Includes an assessment of OCAS (2007 - 2011) enrolment data at other colleges in terms of mean growth rate with a specific focus on Fleming's direct competitors where appropriate (Georgian, Sheridan, Seneca and Durham)</p> <p>Trends in certificate, diploma, degree, apprenticeship and continuing education (where available).</p> <p><b>Click Below to Access Full Source Document:</b>  <a href="#">Fall Enrollment Trend</a></p>	<ul style="list-style-type: none"> <li>● Strong = Fleming enrolment growth is outpacing system and is equal to or greater than 3%</li> <li>● Moderate = Fleming enrolment growth is equivalent to system demand and is between 1.0 to 2.9%</li> <li>● Weak = Fleming enrolment growth is less than the system demand and is less than 1%</li> </ul>
<b>Labour Market</b>	<p>Includes projected employment rate growth based on a consolidation of various Ontario, Canadian, and US sources including HRSDC, Sector Council Reports US Bureau of Labour Statistics, and the MTCU Employment Profile.</p>	<ul style="list-style-type: none"> <li>● Strong = Between 5-6 positive labour market indicators</li> <li>● Moderate = Between 3-5 positive labour market indicators</li> <li>● Weak = Between 1-2 or no positive labour market indicators</li> </ul>
<b>Competitive Analysis</b>	<p>Includes the number of actual colleges offering the program as well as the ratio of applications to acceptances at Fleming compared to other colleges and specific comment about Fleming's direct competitors where appropriate (Georgian, Sheridan, Seneca and Durham)</p> <p><b>Click Below to Access Full Source Document:</b>  <a href="#">Fall Conversion Report</a></p>	<ul style="list-style-type: none"> <li>● Strong = Fleming conversion ratio is greater than 2 below the system</li> <li>● Moderate = Fleming conversion ratio is 1 above, below or equal to the system</li> <li>● Weak = Fleming conversion ratio is greater than 2 above than the system</li> </ul>
<b>Financial Analysis</b>	<p>Includes a review of Contribution to Overhead (CTO) for existing programs (2010-11)</p> <p><b>Click Below to Access Full Source Document:</b>  <a href="#">Costing Analysis</a></p>	<ul style="list-style-type: none"> <li>● Strong = CTO is greater than 35%</li> <li>● Moderate = CTO is between 30 - 34%</li> <li>● Weak = CTO is between 20 – 30%</li> </ul> <p><b>No Contribution = 19% or less</b></p>

## Key Research Findings

<b>Key Performance Indicators</b>	<p>Includes KPI trends from the Key Performance Indicator Summary 5 Year Historical Overview KPI Data from Reporting Years 2008-2012.</p> <p><b>Click Below to Access Full Source Document:</b>  <a href="#">Key Performance Indicators</a></p>	<ul style="list-style-type: none"> <li>● Strong = Above system average in 6-7 indicators</li> <li>● Moderate = Above system average in 3-5 indicators</li> <li>● Weak = Above system average in 0-2 indicators.</li> </ul>
<b>Resource Analysis</b>	<p>Requires school level assessment regarding space, technology, capital equipment and human resources. Recommendations from recent Program Review Reports included here</p>	

# Key Research Findings

## Environmental – Technician/Technology (52700/62700)

### Student Demand<sup>1</sup>

• **STRONG**

The following information consists of OCAS yearly student fall registration data as well as a mean growth rate and average student registration for each program under these categories:

#### Certificate

- Georgian offers a 1 year certificate program called Environmental Techniques

#### Diploma

- Thirteen colleges offer this certificate program, including three of Fleming's main competitors
- Fleming has a **11%** mean growth rate, higher than the system rate of **8%**
- Out of the key competitors, Georgian has the highest mean growth rate of **21%**
- Overall, Sault has the highest mean growth rate (**67%**) and Loyalist has the lowest rate (**-24%**)
- Fleming has the highest average registration with **93 students** and Northern has the lowest with **8 students**

#### Advanced Diploma

- Eight colleges offer this certificate program, including three of Fleming's main competitors
- Fleming has a **42%** mean growth rate
- Out of the key competitors, Seneca has the highest mean growth rate of **17%**
- Overall, Fleming has the highest mean growth rate (**42%**) and Georgian has the lowest rate (**2%**)
- Georgian has the highest average registration with **70 students** and Sault has the lowest with **17 students**

#### Graduate Certificate

- Cambrian has the highest growth rate (**9%**) however their program started in 2009 and experienced a drop in 2010 so Niagara has had the steadiest growth of **5%** and also has the highest 5 year student registration average of **43 students**

<sup>1</sup> Registration data obtained from the Program Counts by Applicant Type Report (RPT0050P) in the OCAS Reporting and Analytics Cube December 7, 2011.

Some programs/colleges may not be included because they were missing MCU codes in the OCAS dataset

Prepared by Fleming Data Research (07-2012)

# Key Research Findings

## Diploma

Program: 52700 - RESOURCES/ENVIRONMENTAL TECHNICIAN

	2007	2008	% Change (07-08)	2008	2009	% Change (08-09)	2009	2010	% Change (09-10)	2010	2011	% Change (10-11)	% Mean Growth Rate (07-11)	5 Year Average Reg. Students
CANADORE	27	16	-41	16	26	63	26	27	4	27	28	4	7	25
CENTENNIAL	17	26	53	26	20	-23	20	16	-20	16	14	-13	-1	19
CONFEDERATION	28	32	14	32	31	-3	31	31	0	31	37	19	8	32
FLEMING	68	84	24	84	95	13	95	120	26	120	97	-19	11	93
GEORGIAN							28			28	34	21	21	31
LOYALIST	18			34			34	18	-47	18	18	0	-24	22
MOHAWK	50	58	16	58	91	57	91	59	-35	59	42	-29	2	60
NIAGARA	37	46	24	46	49	7	49	48	-2	48	43	-10	5	45
NORTHERN	10			8			8			5				8
SAULT	7	8	14	8	32	300	32	32	0	32	17	-47	67	19
SENECA	22	20	-9	20	37	85	37	32	-14	32	24	-25	9	27
SHERIDAN	8	14	75	14	22	57	22	14	-36	14	9	-36	15	13
ST. LAWRENCE	19	23	21	23	34	48	34	24	-29	24	27	13	13	25
<b>Total</b>	<b>311</b>	<b>327</b>	<b>5</b>	<b>327</b>	<b>479</b>	<b>46</b>	<b>479</b>	<b>449</b>	<b>-6</b>	<b>449</b>	<b>395</b>	<b>-12</b>	<b>8</b>	<b>392</b>

## Advanced Diploma

Program: 62700 - RESOURCES/ENVIRONMENTAL TECHNOLOGY

	2007	2008	% Change (07-08)	2008	2009	% Change (08-09)	2009	2010	% Change (09-10)	2010	2011	% Change (10-11)	% Mean Growth Rate (07-11)	5 Year Average Reg. Students
CENTENNIAL	31	30	-3	30	39	30	39	33	-15	33	35	6	4	34
DURHAM	29	33	14	33	42	27	42	54	29	54	39	-28	10	39
FANSHAWE	34	41	21	41	55	34	55	51	-7	51	45	-12	9	45
FLEMING	13	25	92	25	47	88	47	38	-19	38	40	5	42	33
GEORGIAN	58	64	10	64	79	23	79	95	20	95	52	-45	2	70
HUMBER														
SAULT				17			17	22	29	22	12	-45	-8	17
SENECA	22	21	-5	21	36	71	36	31	-14	31	36	16	17	29
<b>Total</b>	<b>187</b>	<b>214</b>	<b>14</b>	<b>214</b>	<b>315</b>	<b>47</b>	<b>315</b>	<b>324</b>	<b>3</b>	<b>324</b>	<b>259</b>	<b>-20</b>		

# Key Research Findings

## Graduate Certificate

Program: 72700 - ENVIRONMENTAL CONTROL														
	2007 2008 % Change (07-08)			2008 2009 % Change (08-09)			2009 2010 % Change (09-10)			2010 2011 % Change (10-11)			% Mean Growth Rate (07-11)	5 Year Average Reg. Students
CAMBRIAN				23			23	12	-48	12	20	67	9	18
CONESTOGA	25	26	4	26	26	0	26	27	4	27	27	0	2	26
NIAGARA	37	44	19	44	45	2	45	45	0	45	44	-2	5	43
SENECA				15			15			7				11
Total	62	70	13	70	109	56	109	84	-23	84	98	17	16	85

## Labour Market

• MODERATE

### Employment Ontario<sup>2</sup>

#### Civil Engineering Technologists and Technicians (NOC – 2231)

- Employment Ontario Rating (2009-2013):
  - **Average**
- Education and Training
  - “Completion of a three-year or equivalent program for civil engineering technologists or a two-year or an equivalent program for civil engineering technicians is usually required. Several closely related backgrounds can provide entrance to an occupation within this classification. Certification in civil engineering technology or in a related field is available through provincial associations of engineering and applied science. In Ontario, the Ontario Association of Certified Engineering Technicians and Technologists (OACETT) certifies civil engineering technologists and technicians. The certification process includes a period of supervised work experience, usually up to two years, and a professional practice examination.”
- Demand
  - “Opportunities for employment in this occupation are expected to be average over the period from 2009 to 2013. Employment for these workers often moves in tandem with the construction sector which is vulnerable to labour market conditions. Occupational overlap between civil engineers and civil engineering technologists and technicians in process control and project management will increase the demand for technologists and technicians in the long run.”
  - “Due to rapidly changing technology in this field, people in these occupations should plan on periods of retraining and professional development. New entrants with co-op experience, highly developed computer expertise and strong managerial skills are likely to enjoy the best employment prospects. Employers place significant emphasis on solid managerial abilities as they regard this skill to be the predominant function of technologists.”

<sup>2</sup>“2231 Civil Engineering Technologists and Technicians.” *Employment Ontario*. N.p., n.d. Web. 23 July 2012. <[http://www.tcu.gov.on.ca/eng/labourmarket/ojf/pdf/2231\\_e.pdf](http://www.tcu.gov.on.ca/eng/labourmarket/ojf/pdf/2231_e.pdf)>.

# Key Research Findings

## HRSDC<sup>3</sup>

### Civil Engineering Technologists and Technicians (NOC – 2231)

- Job Openings (2011/2020): **29,027**
- Job Seekers(2011/2020): **31,896**
- Post-Secondary Education Graduates: **26,067 (82%)**
- “Based on projections and considering that labour supply and demand in this occupation were balanced, it is expected that the labour market conditions for this occupation will remain balanced over the 2011-2020 period. The majority of job openings will result from retirements. The retirement rate will be similar to the average rate for all occupations. Although expansion demand will not create as many job openings as retirements, it will still be slightly higher than average. Just like engineers, technical occupations will benefit from the large amounts that will be invested in public and private infrastructure in the coming years. With regard to labour supply, the majority of job seekers will come directly from the school system. Analysis shows that, although the number of school leavers will be high, the number of school leavers in related fields of study is even higher. Hence, if all these school leavers decide to seek employment in this occupation over the 2011-2020 period, the number of job seekers will greatly exceed the number of job openings. In the projection period, immigrants will also represent a significant proportion of job seekers since knowledge and experience in engineering gained abroad is more easily transferable than knowledge and experience gained in other occupations.”

## US Bureau of Labour<sup>4</sup>

### Environmental Engineering Technicians (SOC – 17-3025)

- Employment Growth (2010/2020): **Increase 24%**
  - **18,800(2010) to 23,300(2020)**
- “Employment of environmental engineering technicians is projected to grow 24 percent from 2010 to 2020, faster than the average for all occupations.”
- “Employment in this occupation is typically tied to projects created by environmental engineers. State and local governments are expected to focus efforts and resources on efficient water use and wastewater treatment, which will support the demand for environmental engineering technicians.”
- “The increasing call to clean up contaminated sites, as mandated by Congress and directed by the Environmental Protection Agency, is expected to help sustain demand for these technicians’ services. In addition, wastewater treatment is becoming a larger concern in areas of the country where new methods of drilling for shale gas require the use and disposal of large volumes of water. Environmental engineering technicians will continue to be needed to help utilities and water treatment plants comply with new federal or state environmental regulations.”

<sup>3</sup>“Technical Occupations In Civil, Mechanical And Industrial Engineering (223).” *Human Resources and Skills Development Canada*.N.p., n.d. Web. 23 July 2012. <<http://www23.hrsdc.gc.ca/occupationsummarydetail.jsp?&tid=40>>.

<sup>4</sup>Bureau of Labor Statistics, U.S. Department of Labor, Occupational Outlook Handbook, 2012-13 Edition, Environmental Engineering Technicians, on the Internet at <http://www.bls.gov/ooh/architecture-and-engineering/environmental-engineering-technicians.htm> (visited July 23, 2012).

# Key Research Findings

## Employment Profile<sup>5</sup>

- In 2010-2011, **74%** of graduates were employed in a full time position which related to this program of study provincially (this includes both programs)

### Resources

<b>Total Graduates:</b>	<b>948</b>	<b>Total Graduates in Survey:</b>	<b>684</b>	<b>Response Rate:</b>	<b>72.7%</b>
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594 graduates were reported after the survey window had closed. While program information for these graduates has been included wherever possible, these graduates are not included in survey results, such as response rates.

### Programs in Resources

Programs	Duration	Total Grads	Total in Survey	Total in Labour Force	Colleges
Blasting Techniques	1 Year	18	15	12	Sir Sandford Fleming
Ecosystem Surveys-Field Skills	1 Year	2	2	2	Sault
Environmental Control	Post Diploma	103	81	72	Conestoga, Niagara, Seneca, Sheridan
Environmental Studies	Post Diploma	38	29	26	Niagara
Environmental Technician	2 Years	217	138	94	Canadore, Centennial, Loyalist, Mohawk, Niagara, Northern, Sault, Seneca, Sheridan, Sir Sandford Fleming, St. Lawrence
Environmental Techniques	1 Year	25	18	13	Georgian
Environmental Technology	3 Years	134	94	84	Centennial, Durham, Fanshawe, Georgian, Humber, Loyalist, Seneca, Sir Sandford Fleming
Fish And Wildlife Technician	2 Years	105	76	32	Boréal, Northern, Sault, Sir Sandford Fleming
Fish And Wildlife Technology	3 Years	22	18	9	Boréal, Sir Sandford Fleming
Forest Management Technology	3 Years	34	29	22	Sault, Sir Sandford Fleming
Forest Recreation Technician	2 Years	6	5	3	Sault
Forestry Technician	2 Years	94	66	51	Algonquin, Confederation, Sault, Sir Sandford Fleming
Forestry Technology	3 Years	4	2	2	Boréal
Integrated Environmental Site Remediation – Bachelor Of Applied Technology	4 Years	1	1	1	Seneca
Renewable Resource Technician	2 Years	59	46	25	Sir Sandford Fleming
Resources Technician – Drilling	2 Years	37	26	26	Sir Sandford Fleming
Water And Waste Water Technician	2 Years	49	38	31	Algonquin, Durham

<sup>5</sup>"Employment Profile." Ontario. N.p., 2011. Web. 19 July 2012.

<<http://www.tcu.gov.on.ca/pepg/audiences/colleges/serials/eprofile09-10/profile10.pdf>>.

# Key Research Findings

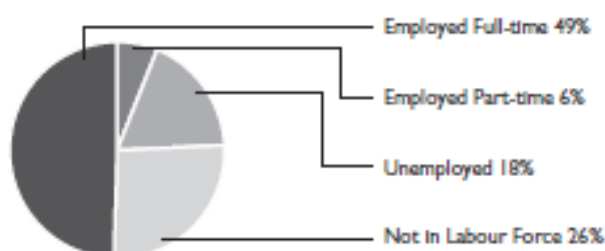
## Resources

### Summary of Survey Data

	Program Cluster	All Programs
Survey Population	684	50,622
Labour Force Participation	74%	74%
Employment Rate <sup>a</sup>	75%	83%
Employed Part-time <sup>a</sup>	9%	18%
Employed Full-time <sup>a</sup>	67%	65%
Average Annual Earnings – Total	\$36,549	\$33,199
Average Annual Earnings – Female	\$33,231	\$31,897
Average Annual Earnings – Male	\$38,403	\$34,607
Graduate Satisfaction	71%	79%
Employer Satisfaction	95%	93%

a. As a percentage of graduates in the labour force.

### Graduate Outcomes for Program Cluster (as a percentage of all respondents)



### Top Five Industries of Employment

	#	%
Professional, Scientific and Technical Services	76	20.7%
Utilities	28	7.6%
Administrative and Support Services	25	6.8%
Federal Government Public Administration	18	4.9%
Local, Municipal and Regional Public Administration	18	4.9%

### Top Five Occupational Categories

	#	%
Civil Engineering Technologists and Technicians	29	7.8%
Water and Waste Plant Operators	19	5.1%
Inspectors in Public and Environmental Health and Occupational Health and Safety	15	4.1%
Forestry Technologists and Technicians	14	3.8%
Natural and Applied Science Policy Researchers, Consultants and Program Officers	13	3.5%



# Key Research Findings

## Resources

### Summary of Graduate Outcomes by Program

	Full-time Employed, Program Related		Full-time Employed, Program Unrelated		Part-time Employed, Program Related		Part-time Employed, Program Unrelated		Unemployed		Not in Labour Force	
	#	%	#	%	#	%	#	%	#	%	#	%
Blasting Techniques	2	13.3	6	40.0	1	6.7	1	6.7	2	13.3	3	20.0
Environmental Control	29	35.8	22	27.2	2	2.5	4	4.9	15	18.5	9	11.1
Environmental Studies	18	62.1	5	17.2	1	3.4	—	—	2	6.9	3	10.3
Environmental Technician	31	22.5	30	21.7	1	0.7	9	6.5	23	16.7	44	31.9
Environmental Techniques	4	22.2	3	16.7	—	—	1	5.6	5	27.8	5	27.8
Environmental Technology	43	45.7	15	16.0	2	2.1	6	6.4	18	19.1	10	10.6
Fish And Wildlife Technician	10	13.2	11	14.5	1	1.3	1	1.3	9	11.8	44	57.9
Fish And Wildlife Technology	4	22.2	2	11.1	—	—	—	—	3	16.7	9	50.0
Forest Management Technology	9	31.0	3	10.3	2	6.9	—	—	8	27.6	7	24.1
Forestry Technician	16	24.2	18	27.3	—	—	1	1.5	16	24.2	15	22.7
Renewable Resource Technician	8	17.4	3	6.5	2	4.3	2	4.3	10	21.7	21	45.7
Resources Technician – Drilling	20	76.9	2	7.7	1	3.8	1	3.8	2	7.7	—	—
Water And Waste Water Technician	11	28.9	7	18.4	1	2.6	2	5.3	10	26.3	7	18.4
<b>All Programs in Cluster*</b>	<b>205</b>	<b>30.4</b>	<b>127</b>	<b>18.8</b>	<b>14</b>	<b>2.1</b>	<b>28</b>	<b>4.2</b>	<b>123</b>	<b>18.2</b>	<b>177</b>	<b>26.3</b>

\* Does not include 4 programs with fewer than 5 graduates in the labour force.

### Earnings of Full-time Employed Participants

Program	Average – Females	Average – Males	Median – Females	Median – Males	Average for Program	Median for Program
Blasting Techniques	—	\$41,683	—	\$38,064	\$41,683	\$38,064
Environmental Control	\$41,980	\$38,268	\$38,554	\$37,000	\$39,994	\$38,000
Environmental Studies	\$32,889	\$36,705	\$27,375	\$37,543	\$34,103	\$31,384
Environmental Technician	\$31,121	\$36,900	\$28,288	\$35,457	\$34,467	\$30,034
Environmental Techniques	—	\$42,222	—	\$41,537	\$42,222	\$41,537
Environmental Technology	\$33,478	\$38,248	\$29,200	\$34,800	\$36,054	\$31,494
Fish And Wildlife Technician	\$25,249	\$29,979	\$19,374	\$27,114	\$28,665	\$26,854
Fish And Wildlife Technology	—	—	—	—	—	—
Forest Management Technology	\$29,296	\$33,126	\$26,072	\$35,457	\$30,892	\$31,000
Forestry Technician	\$24,480	\$34,193	\$22,291	\$34,545	\$32,479	\$33,632
Renewable Resource Technician	\$28,392	\$42,875	\$20,759	\$43,018	\$34,975	\$30,243
Resources Technician – Drilling	—	\$54,525	—	\$50,839	\$54,525	\$50,839
Water And Waste Water Technician	—	\$36,000	—	\$36,500	\$38,996	\$39,107
<b>All Programs in Cluster*</b>	<b>\$33,526</b>	<b>\$38,475</b>	<b>\$31,286</b>	<b>\$37,413</b>	<b>\$36,671</b>	<b>\$35,197</b>

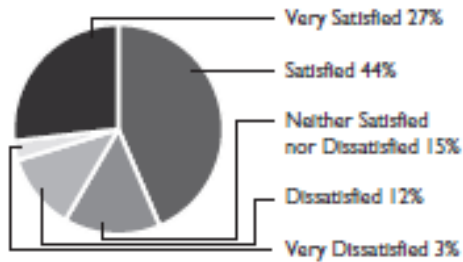
\* Does not include 4 programs with fewer than 5 graduates in the labour force.

# Key Research Findings

## Resources

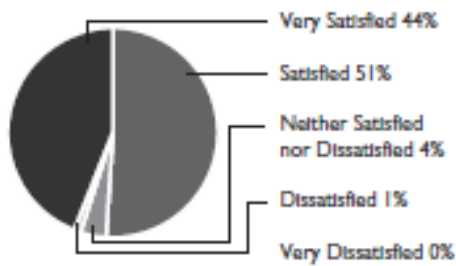
### Program Cluster Satisfaction

Graduate Satisfaction with the usefulness of his/her college education in achieving his/her goals after graduation:\*



\* 650 graduates participated in this question.

Employer Satisfaction with employee overall college preparation for the type of work he/she was doing:\*



\* 73 employers participated in this survey.

### Program Cluster Historical Data

	00-01 Grads	01-02 Grads	02-03 Grads	03-04 Grads	04-05 Grads	05-06 Grads	06-07 Grads	07-08 Grads	08-09 Grads	09-10 Grads
Percentage Employed	81.4%	81.9%	80.2%	80.6%	80.3%	83.5%	86.1%	81.2%	74.2%	75.2%
Percentage Employed Full-time	75.3%	73.5%	73.7%	74.1%	75.1%	75.5%	78.5%	75.8%	63.5%	66.7%
Percentage Employed Full-time Related Jobs	49.9%	49.2%	50.9%	47.2%	49.1%	48.7%	56.5%	52.3%	38.1%	41.2%
Average Annual Salary Full-time Related Jobs	\$31,073	\$31,781	\$31,524	\$33,431	\$34,855	\$34,372	\$37,034	\$38,831	\$38,526	\$40,526

# Key Research Findings

## Working in Canada<sup>6</sup>

### Civil Engineering Technologists and Technicians (NOC – 2231)

- Environmental technicians are part of this larger occupational group, which includes some of the following:
  - Air pollution field Technician
  - Environmental Technician
  - Pollution Control Technician
  - Soil Testing Technologist
  - Ontario Rating: **Not Available**
- **Wage Range by Region:**

Location	Wage (\$/hr)		
	Low	Median	High
Ontario	13.00	24.85	38.46
Hamilton--Niagara Peninsula Region	13.00	24.85	38.46
Kingston - Pembroke Region	13.00	24.85	38.46
Kitchener--Waterloo--Barrie Region	13.00	24.85	38.46
London Region	13.00	24.85	38.46
Muskoka-Kawartha Region	13.00	24.85	38.46
Northeast Region	13.00	24.85	38.46
Northwest Region	13.00	24.85	38.46
Ottawa Region	13.00	24.85	38.46
Stratford--Bruce Peninsula Region	N/A	N/A	N/A
Toronto Region	13.00	24.85	38.46
Windsor-Sarnia Region	13.00	24.85	38.46

## Competitive Analysis<sup>7</sup>

• **STRONG**

The following information consists of OCAS yearly fall application and registration data as well as a conversion ratio for each program under this category:

### Diploma

- Fleming over 5 years has consistently had one of the lowest conversion ratios never going over **5:1**

<sup>6</sup>"Civil Engineering Technologists and Technicians (NOC 2231)." *Working in Canada*. N.p., n.d. Web. 23 July 2012.

<[http://www.workingincanada.gc.ca/report-eng.do?area=8792&lang=eng&noc=2231&action=final@ionKeyword=Peterborough%2C+Ontario&s=1&source=0&titleKeyword=civil+engineering+technologist#report\\_tabs\\_conta](http://www.workingincanada.gc.ca/report-eng.do?area=8792&lang=eng&noc=2231&action=final@ionKeyword=Peterborough%2C+Ontario&s=1&source=0&titleKeyword=civil+engineering+technologist#report_tabs_conta)>."

<sup>7</sup> Application data obtained from OCAS College Count Cube October 19, 2011

Registration data obtained from the Program Counts by Applicant Type Report (RPT0050P) in the OCAS

Reporting and Analytics Cube December 7, 2011.

Some programs/colleges may not be included because they were missing MCU codes in the OCAS dataset

Prepared by Fleming Data Research (07-2012)

# Key Research Findings

- Fleming's program is also in the highest demand with the highest number of applications every year

## Advanced Diploma

- Fleming had a **4:1** conversion ratio in 2011, which is lower than the system's ratio (**5:1**)
- Fleming's and Georgian both had the highest ratio in 2011 of **4:1**

## Graduate Certificate

- Over 5 years Niagara has had the highest applications and also the lowest registration data (compared to Conestoga which didn't report application data from 2009-2011)

## Diploma

Program: 52700 - RESOURCES/ENVIRONMENTAL TECHNICIAN

	App. 2007	Reg. 2007	Conversion Ratio	App. 2008	Reg. 2008	Conversion Ratio	App. 2009	Reg. 2009	Conversion Ratio	App. 2010	Reg. 2010	Conversion Ratio	App. 2011	Reg. 2011	Conversion Ratio
CANADORE	103	27	4:1	107	16	7:1	119	26	5:1	105	27	4:1	116	28	4:1
CENTENNIAL	105	17	6:1	120	26	5:1	191	20	10:1	158	16	10:1	117	14	8:1
CONFEDERATION	141	28	5:1	127	32	4:1	142	31	5:1	150	31	5:1	140	37	4:1
FLEMING	228	68	3:1	300	84	4:1	404	95	4:1	418	120	3:1	392	97	4:1
GEORGIAN	0			0			0			172	28	6:1	138	34	4:1
LOYALIST	84	18	5:1	97			118	34	3:1	102	18	6:1	104	18	6:1
MOHAWK	185	50	4:1	225	58	4:1	346	91	4:1	266	59	5:1	249	42	6:1
NIAGARA	129	37	3:1	181	46	4:1	207	49	4:1	203	48	4:1	173	43	4:1
NORTHERN	38	10	4:1	0			42	8	5:1	17			37	5	7:1
SAULT	36	7	5:1	40	8	5:1	181	32	6:1	189	32	6:1	136	17	8:1
SENECA	140	22	6:1	131	20	7:1	219	37	6:1	197	32	6:1	174	24	7:1
SHERIDAN	70	8	9:1	90	14	6:1	143	22	7:1	146	14	10:1	127	9	14:1
ST. LAWRENCE	85	19	4:1	69	23	3:1	100	34	3:1	89	24	4:1	103	27	4:1
<b>Total</b>	<b>1344</b>	<b>311</b>	<b>4:1</b>	<b>1487</b>	<b>327</b>	<b>5:1</b>	<b>2212</b>	<b>479</b>	<b>5:1</b>	<b>2212</b>	<b>449</b>	<b>5:1</b>	<b>2006</b>	<b>395</b>	<b>5:1</b>

# Key Research Findings

## Advanced Diploma

Program: 62700 - RESOURCES/ENVIRONMENTAL TECHNOLOGY															
	App. 2007	Reg. 2007	Conversion Ratio	App. 2008	Reg. 2008	Conversion Ratio	App. 2009	Reg. 2009	Conversion Ratio	App. 2010	Reg. 2010	Conversion Ratio	App. 2011	Reg. 2011	Conversion Ratio
CENTENNIAL	190	31	6:1	193	30	6:1	244	39	6:1	220	33	7:1	189	35	5:1
DURHAM	161	29	6:1	159	33	5:1	223	42	5:1	221	54	4:1	218	39	6:1
FANSHAWE	209	34	6:1	219	41	5:1	305	55	6:1	265	51	5:1	224	45	5:1
FLEMING	88	13	7:1	147	25	6:1	180	47	4:1	161	38	4:1	158	40	4:1
GEORGIAN	184	58	3:1	192	64	3:1	224	79	3:1	232	95	2:1	184	52	4:1
HUMBER	2			0			0			0			0		
SAULT	0			0			69	17	4:1	74	22	3:1	72	12	6:1
SENECA	136	22	6:1	191	21	9:1	204	36	6:1	217	31	7:1	191	36	5:1
Total	970	187	5:1	1101	214	5:1	1449	315	5:1	1390	324	4:1	1236	259	5:1

## Graduate Certificate

Program: 72700 - ENVIRONMENTAL CONTROL															
	App. 2007	Reg. 2007	Conversion Ratio	App. 2008	Reg. 2008	Conversion Ratio	App. 2009	Reg. 2009	Conversion Ratio	App. 2010	Reg. 2010	Conversion Ratio	App. 2011	Reg. 2011	Conversion Ratio
CAMBRIAN	0			0			71	23	3:1	62	12	5:1	77	20	4:1
CONESTOGA	50	25	2:1	47	26	2:1	0	26	0:1	0	27	0:1	0	27	0:1
NIAGARA	128	37	3:1	138	44	3:1	156	45	3:1	175	45	4:1	167	44	4:1
SENECA	0			0			97	15	6:1	92			16	7	2:1
Total	178	62	3:1	185	70	3:1	324	109	3:1	329	84	4:1	260	98	3:1

## Financial Analysis

• **STRONG** / • **WEAK**

Source: Program Costing Analysis 2010/2011

### Environmental Technician

Contribution to Overhead: 36.5%

Program Weight: 1.30

Funding Unit: 2.40

### Environmental Technology

Contribution to Overhead: 24.9%

Program Weight: 1.30

Funding Unit: 3.30

# Key Research Findings

## Key Performance Indicators

• **STRONG**

Source: Key Performance Indicator Summary 5 Year Historical Overview KPI Data from Reporting Years 2008-2012

### Environmental Technician

KPI1-Graduation Rate	+11% above system
KPI2-Working	+3% above system
KPI3-Working Related	+1% above system
KPI4-Grad. Satisfaction	+5% above system
KPI8-Student Satisfaction-Learning	+7%above system
KPI9-Student Satisfaction- Teachers	+5% above system
KPI11-Grad. Satisfaction-Program	+7% above system

### Environmental Technology

KPI1-Graduation Rate	+23% above system
KPI2-Working	-4% below system
KPI3-Working Related	+1% above system
KPI4-Grad. Satisfaction	+5% above system
KPI8-Student Satisfaction-Learning	+10% above system
KPI9-Student Satisfaction- Teachers	+8% above system
KPI11-Grad. Satisfaction-Program	+7% above system

## Resource Analysis

### Equipment

The following information was extracted from the 2010 program review:

- Increase the budget to maintain/upgrade equipment.
- Improve the process for equipment renewal/maintenance (i.e. one that addresses an increase in the purchasing limit beyond the \$1,000.00 minimum).

### Staffing

### Space

The following information was extracted from the 2010 program review:

- Renovate the Room 134/Loading Dock area.

# Key Research Findings

## Appendix

**The following is the original environmental scan conducted by the Library Researchers to form the basis of the previous summary of Key Research Findings Report.**

Environmental technicians are part of a larger work group of 75 difference occupations called **Civil Engineering Technologists and Technicians (NOC 2231)**

*Note: Wherever possible, I tried to find specific information for the occupation “Environmental Technician”. When only the broader work group was covered, I inserted the information in a box to distinguish from more specific information. In some cases, I was able to find more specific information from other sources than those in our template.*

### Overview of the Profession:

#### NOC: 2231

<http://www.workingincanada.gc.ca/report-eng.do?lang=eng&noc=2231&area=8792&titleKeyword=environmental+technician&regionKeyword= Lindsay,+Ontario&source=1&action=final>

Environmental technicians are part of a larger work group of 75 difference occupations called **Civil Engineering Technologists and Technicians (NOC 2231)**

Includes the following

- Air pollution field Technician
- Environmental Technician
- Pollution Control Technician
- Soil Testing Technologist

<http://www.workingincanada.gc.ca/report-eng.do?lang=eng&noc=2231&area=8792&titleKeyword=environmental+technician&regionKeyword= Lindsay,+Ontario&source=1&action=final>

#### Job Duties (from Working in Canada)

Civil engineering technologists perform some or all of the following duties:

- Develop engineering designs and drawings from preliminary concepts and sketches
- Prepare construction specifications, cost and material estimates, project schedules and reports
- Supervise or conduct field surveys, inspections or technical investigations of topography, soils, drainage and water supply systems, road and highway systems, buildings and structures to provide data for engineering projects
- Conduct or supervise inspection and testing of construction materials
- May supervise, monitor and inspect construction projects.

Civil engineering technicians perform some or all of the following duties:

- Assist in developing engineering specifications and drawings
- Participate in field surveys, inspections or technical investigations of topography, soils, drainage and water supply systems, road and highway systems, buildings and structures to provide data for engineering projects
- Perform other technical functions in support of civil engineering activities.

# Key Research Findings

More specific information can be found at [Eco.ca](http://Eco.ca)

## **Job Duties for Environmental Technician/Technologist From Eco Canada**

Duties vary significantly from job to job, but the following list includes typical job duties one might encounter as an environmental technician/technologist:

- Gather air, water, and soil samples to determine contamination level and assess environmental conditions.
- Perform chemical, physical, and biological tests on air, water, and soil samples and document results.
- Participate in and lead field investigations and inspections.
- Trace chemical, physical, and biological pathways of environmental pollutants.
- Review and process applications for environmental permits or certification, for example waste disposal sites or water and wastewater treatment plants.
- Issue instructions for corrections necessary to comply with federal and provincial regulations.
- Explain and interpret regulations and procedures for environmental licensing applicants.
- Relate economic, health, political, and social issues to the management of environmental systems in both industrial and municipal applications.
- Design methodologies for environmental sampling and analysis.
- Implement quality control and quality assurance protocols for testing materials for conformity and compliance.
- Measure field characteristics, properties, and composition of soils, river channels, and biological systems.
- Prepare reports of findings for clients and supervisors.

## **Where to Work**

There are a number of places environmental technicians/technologists can find employment. They include:

- Environmental and engineering consulting firms
- Federal, provincial/territorial, or municipal government departments
- Colleges, universities, and research institutes
- Municipal and industrial treatment facilities
- Firms in other industries such as manufacturing, mining, forestry, and transportation
- Self-employed consultant
- Not-for-profit and non-governmental organizations

## **Labour Market**

### **Working in Canada**

1. Employment potential for the Kawartha Region is “Not Available” (Working in Canada)

[http://www.workingincanada.gc.ca/report-eng.do?lang=eng&noc=2231&area=8792&titleKeyword=environmental+technician&regionKeyword=Lindsay,+Ontario&source=1&action=final](http://www.workingincanada.gc.ca/report-eng.do?lang=eng&noc=2231&area=8792&titleKeyword=environmental+technician&regionKeyword= Lindsay,+Ontario&source=1&action=final)

### **HRDSC**

2. National Outlook – 10-Year Projection (2011-2020)

<http://www23.hrsdc.gc.ca/occupationsummarydetail.jsp?&tid=40>

This occupation (**Environmental Technician/Technologist**) is part of a larger occupational group called Civil Mechanical & industrial Engineering (**NOC 223**).



## Key Research Findings

<b>Occupations in this group</b>	Civil Engineering Technologists and Technicians and Construction Estimators (2231) Mechanical Engineering Technologists and Technicians (2232) Industrial Engineering and Manufacturing Technologists and Technicians (2233) Construction Estimators (2234)
<b>Employment (non-student) in 2010</b>	68,841
<b>Median Age of workers in 2010</b>	39.2 years old
<b>Average Retirement Age in 2010</b>	59 years old

- For **Technical Occupations In Civil, Mechanical And Industrial Engineering**, over the 2011-2020 period, job openings (arising from expansion demand and replacement demand) are expected to total **29,000** and **31,896** job seekers (arising from school leavers, immigration and mobility) are expected to be available to fill the job openings.
- According to Employment Ontario, over the 2008-2010 period, this occupation group (Civil, Mechanical & Industrial Engineering Technicians experienced very strong employment growth and a slight decrease in the unemployment rate. However, the hourly wage increased little. According to key labour market indicators, the number of job seekers was sufficient to fill the job openings in this occupation.
- According to Employment Ontario, opportunities for employment in this occupation group (Civil, Mechanical & Industrial Engineering Technicians are expected to be average over the period from 2009 to 2013. Employment for these workers often moves in tandem with the construction sector which is vulnerable to labour market conditions. Occupational overlap between civil engineers and civil engineering technologists and technicians in process control and project management will increase the demand for technologists and technicians in the long run.
- According to Employment Ontario the Opportunities for employment in this occupation group of Civil, Mechanical & industrial Engineering Technicians) are expected to be average over the next 5 years .
- According to Employment Ontario (Estimates 2006), 4% of workers in this occupation group were self-employed, and 90% Full-Time
- Local wage for Muskokas/Kawartha Region
  - Low \$13.00      Median \$24.85      High \$38.46

### US Bureau of Labour

<http://www.bls.gov/ooh/architecture-and-engineering/environmental-engineering-technicians.htm>

### Job Prospects

Employment of environmental engineering technicians is projected to grow 24 percent from 2010 to 2020, faster than the average for all occupations.

## Key Research Findings

Employment in this occupation is typically tied to projects created by environmental engineers. State and local governments are expected to focus efforts and resources on efficient water use and wastewater treatment, which will support the demand for environmental engineering technicians. The increasing call to clean up contaminated sites, as mandated by Congress and directed by the Environmental Protection Agency, is expected to help sustain demand for these technicians' services. In addition, wastewater treatment is becoming a larger concern in areas of the country where new methods of drilling for shale gas require the use and disposal of large volumes of water. Environmental engineering technicians will continue to be needed to help utilities and water treatment plants comply with new federal or state environmental regulations.

Occupational Title	SOC Code	Employment, 2010	Projected Employment, 2020	Change, 2010-20		Employment by Industry
				Percent	Numeric	
SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program						
Environmental Engineering Technicians	17-3025	18,800	23,300	24	4,600	

### Professional Associations:

Eco Canada

[www.Eco.ca](http://www.Eco.ca)

Canadian Water & Wastewater Association

<http://www.cwwa.ca/>

Ontario Water Works Association

<http://www.owwa.com/hm/>

Water Environment Association of Ontario

<http://www.weao.org/>

### Employment requirements

Information below is for broader occupation group of Civil Engineering Technologists & Technicians

<http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/QuickSearch.aspx?val65=2231>

- Completion of a two- or three-year college program in civil engineering technology or a closely related discipline is usually required for civil engineering technologists.
- Completion of a one- or two-year college program in civil engineering technology is usually required for civil engineering technicians.
- Certification in civil engineering technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required for some positions.
- A period of supervised work experience, usually two years, is required before certification.
- In Quebec, membership in the regulatory body for professional technologists is required to use

# Key Research Findings

the title "Professional Technologist."

## Additional information

- There is mobility to related occupations, such as drafting technologists and technicians and construction inspectors and estimators.
- Progression to construction supervisors or construction managers is possible with experience.

## Education/Training

**Information below is for broader occupation group of Civil Engineering Technologists & Technicians**

### Civil Engineering Technologists & Technicians

<http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/QuickSearch.aspx?val65=2231>

Completion of a three-year or equivalent program for civil engineering technologists or a two-year or an equivalent program for civil engineering technicians is usually required. Several closely related backgrounds can provide entrance to an occupation within this classification. Certification in civil engineering technology or in a related field is available through provincial associations of engineering and applied science. In Ontario, the Ontario Association of Certified Engineering Technicians and Technologists (OACETT) certifies civil engineering technologists and technicians. The certification process includes a period of supervised work experience, usually up to two years, and a professional practice examination.

## From ECoCanada specifically for Environmental Technician/Technology

### Education

If you are a high school student considering a career as an environmental technician/technologist, you should have strong marks or an interest in:

- Biology
- Chemistry
- Mathematics
- English
- Physics
- Calculus
- Computer Science

In most cases, the minimum education requirement to work as an environmental technician/technologist is a college technical diploma.

If you are a post-secondary student considering a career as an environmental technician/technologist, the following programs are most applicable:

- Environmental Technology
- Environmental Science
- Environmental Engineering Technology
- Environmental Protection

# Key Research Findings

Most environmental technicians/technologists are required to become certified as technicians or technologists through their provincial association. Requirements for certification vary among provinces.

## Employment Requirements

### Information for broader workgroup of Civil, Mechanical & Industrial Engineering

<http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/QuickSearch.aspx?val65=2231>

#### Employment requirements

- Completion of a two- or three-year college program in civil engineering technology or a closely related discipline is usually required for civil engineering technologists.
- Completion of a one- or two-year college program in civil engineering technology is usually required for civil engineering technicians.
- Certification in civil engineering technology or in a related field is available through provincial associations of engineering/applied science technologists and technicians and may be required for some positions.
- A period of supervised work experience, usually two years, is required before certification.
- In Quebec, membership in the regulatory body for professional technologists is required to use the title "Professional Technologist."

## Educational Programs Leading to this Occupation

(Specific information for Environmental Technician from Eco.ca)

If you are a post-secondary student considering a career as an environmental technician/technologist, the following programs are most applicable:

- Environmental Technology
- Environmental Science
- Environmental Engineering Technology
- Environmental Protection

Most environmental technicians/technologists are required to become certified as technicians or technologists through their provincial association. Requirements for certification vary among provinces.

## Educational Competitors

### Fleming College – Environmental Technician

<http://flemingcollege.ca/programs/environmental-technician>

### Fleming College – Environmental Technician – Advanced Standing

<http://flemingcollege.ca/programs/environmental-technician-advanced-standing>

### Fleming College – Environmental Technology

<http://flemingcollege.ca/programs/environmental-technology>

### Algonquin College - Environmental Technician – 4 semesters – Optional Co-Op

<http://www2.algonquincollege.com/pembroke/program/environmental-technician/>

### Algonquin College – Water & Wastewater Technician – 3 semesters (12 accelerated months) diploma

<http://www2.algonquincollege.com/sat/program/water-and-waste-water-technician/>

# Key Research Findings

**Cambrian College – Environmental Monitoring & Impact Assessment Graduate Certificate – Post Diploma – 3 semesters –**

<http://www.cambriancollege.ca/Programs/Programs/201209EMPD.HTM>

**Canadore – Environmental Management – Post-Diploma - Certificate**

<http://www.canadorec.on.ca/programs-courses/environmental-management-%E2%80%93-new>

**Canadore – Environmental Technician – Protection & Compliance – 2 year diploma**

<http://www.canadorec.on.ca/programs-courses/environmental-technician-%E2%80%93-protection-and-compliance>

**Centennial College – Environmental Protection Technician – 4 semesters – diploma**

<http://www.centennialcollege.ca/Programs/ProgramOverview.aspx?Program=4201>

**Centennial College – Environmental Protection Technician – Post Diploma Fasttrack – 2 semesters - diploma**

<http://www.centennialcollege.ca/Programs/ProgramOverview.aspx?Program=4221>

**Centennial College – Environmental Protection Technology – Advanced Diploma**

**3 years – 6 semesters**

<http://www.centennialcollege.ca/Programs/ProgramOverview.aspx?Program=4202>

**Centennial College – Environmental Protection Technology – Advanced Diploma - Fasttrack - 4 semesters**

<http://www.centennialcollege.ca/Programs/ProgramOverview.aspx?Program=4232>

**Conestoga – Environmental Engineering Applications (Post-Graduate) (Co-op)**

Ontario College Graduate Certificate

<http://www.conestogac.on.ca/fulltime/8870C.jsp>

**Conestoga College – Environmental Civil Engineering Technology 6 semesters**

(mostly Civil Engineering in the first 4 semesters but some environmental courses in the 5<sup>th</sup> & 6<sup>th</sup> semesters)

<http://www.conestogac.on.ca/fulltime/1021.jsp>

**Confederation College – Environmental Technician – 2 years Diploma**

<http://www.confederationnc.on.ca/environmental/>

**Durham College – Environmental Technology – 3 year Advanced Diploma**

<http://www.durhamcollege.ca/programs/environmental-technology/>

**Durham College – Environmental Technology – Compressed, Fast Track. (Post degree)**

<http://www.durhamcollege.ca/programs/environmental-technology-compressed-fast-track/>

**Fanshawe College – Environmental Technology - 3 year Advanced diploma with co-op work terms**

<http://www.fanshawec.ca/programs-courses/full-time-programs/ent1>

**Georgian – Environmental Technician – 2 years – 4 semesters + 1 work term**

# Key Research Findings

<http://www.georgianc.on.ca/programs/ENTN/outline/>

**Georgian – Environmental Technology – 3 years – 6 semesters + 2 work terms**

<http://www.georgianc.on.ca/programs/ENVR/outline/>

**Loyalist College – Environmental Technician/Technology – 2 & 3 year diplomas**

<http://www.loyalistcollege.com/programs-and-courses/full-time-programs/environmental-techniciantechnologist>

**Mohawk College – Environmental Technician Diploma – 2 years – 4 semesters**

[http://www.mohawkcollege.ca/engineering-technology-programs/environmental-technician-diploma.html?utm\\_source=ontariocolleges&utm\\_medium=linkback&utm\\_campaign=2011-2012](http://www.mohawkcollege.ca/engineering-technology-programs/environmental-technician-diploma.html?utm_source=ontariocolleges&utm_medium=linkback&utm_campaign=2011-2012)

**Niagara College – Environmental Technician Field & Lab – 2 years – 5 semesters – 3 semester summer co-op**

<http://www.niagaracollege.ca/content/Programs/EnvironmentalStudies/EnvironmentalTechnicianFieldLabCoop.aspx>

**Niagara College – Environmental Management & Assessment – Post Diploma – Certificate**

<http://www.niagaracollege.ca/content/Programs/EnvironmentalStudies/EnvironmentalManagementandAssessment.aspx>

**Northern College – Environmental Technician – Water & Waste Water Systems Operations Co-Op – 2 year 4 semesters school 2 semesters co-op placement**

<http://www.northernc.on.ca/environmental-technician>

**Ridgetown Campus of University of Guelph**

**Associate Diploma in Environmental Management**

**4 semesters**

[http://www.ridgetownc.uoguelph.ca/future/programs\\_denm\\_courses.cfm](http://www.ridgetownc.uoguelph.ca/future/programs_denm_courses.cfm)

“Use advanced standing credits and you can earn 2 diplomas in 3 years!

Students who complete the [Associate Diploma in Horticulture](#) or [Environmental Management](#) are eligible to complete the [Associate Diploma in Agriculture](#) with one additional year of study. You can earn two Associate Diplomas in three years, expanding your knowledge base and opening up many more potential career options.”

**Sault College – Environmental Technician – Water**

<http://www.saultcollege.ca/Programs/Programs.asp?progcode=5062&cat=overview&groupcode=NRS#bd-header>

**Seneca College – Environmental Technician - 4 semesters**

<http://www.senecacollege.ca/fulltime/ETM.html>

**Seneca College – Environmental Technician Fast Track –**

<http://www.senecacollege.ca/fulltime/ETM.html>

# Key Research Findings

**Seneca College – Environmental Technician – Sampling & Monitoring – 4 semesters – 16 consecutive months**

<http://www.senecacollege.ca/fulltime/ESM.html>

**Seneca College – Environmental Technology**

<http://www.senecacollege.ca/fulltime/EMT.html>

**Seneca College – Environmental Technology fasttrack**

<http://www.senecacollege.ca/fulltime/EMT.html>

**Sheridan College – Environmental Control - Certificate – 8 months**

(Postsecondary diploma or degree in science or engineering)

<http://www.sheridancollege.ca/Programs%20and%20Courses/Full-Time%20Programs/Programs%20A-Z%20Index/Environmental%20Control.aspx>

**Sheridan College – Environmental Technician - Diploma**

<http://www.sheridancollege.ca/Programs%20and%20Courses/Full-Time%20Programs/Programs%20A-Z%20Index/Environmental%20Science%20Technician.aspx>

**St. Lawrence – Environmental Technician – 4 semesters**

<http://www.stlawrencecollege.ca/index.aspx?iPageID=139&iMenuID=6&progId=458>

College	APS	APS Title	MTCU	MTCU Title	WT	FU	TF
ALGO	1423	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
ALGO	1378	Water And Waste Water Technician	52705	Water And Waste Water Technician	1.20	2.00	2.00
CAMB	1279	Environmental Monitoring & Impact Assessment	72700	Environmental Control	1.20	1.40	1.00
CANA	1057	Environmental Technician - Protection And Compliance	52700	Environmental Technician	1.30	2.40	2.00
CENT	1127	Environmental Protection Technician	52700	Environmental Technician	1.30	2.40	2.00
CENT	1145	Environmental Protection Technology	62700	Environmental Technology	1.30	3.30	3.00
CONF	1175	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
CONF	1131	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00
CONS	1089	Environmental Engineering Applications	72700	Environmental Control	1.20	1.40	1.00
DURH	1088	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00
FANS	1094	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00

## Key Research Findings

FANS	1151	Environmental Waste Management	72700	Environmental Control	1.20	1.40	1.00
FANS	1201	Environmental Assessment And Management	72700	Environmental Control	1.20	1.40	1.00
GEOR	1213	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
GEOR	1172	Environmental Techniques	42700	Environmental Techniques	1.30	0.80	1.00
GEOR	1169	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00
HUMB	1286	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00
LACI	1079	Environmental Science Technician	52700	Environmental Technician	1.30	2.40	2.00
LACI	1160	Technologie de l'environnement	62700	Environmental Technology	1.30	3.30	3.00
LAMB	1079	Environmental Technology - Industrial Health And Safety	62700	Environmental Technology	1.30	3.30	3.00
LOYT	1037	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
LOYT	1071	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00
MOHA	1124	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
NIAG	1157	Environmental Technician - Field And Laboratory	52700	Environmental Technician	1.30	2.40	2.00
NIAG	1176	Environmental Management And Assessment	72700	Environmental Control	1.20	1.40	1.00
NORT	1203	Environmental Technician – Water and Waste Water Systems Operations	52700	Environmental Technician	1.30	2.40	2.00
SAUL	1088	Environmental Technician - Water	52700	Environmental Technician	1.30	2.40	2.00
SAUL	1181	Natural Environment Technician - Conservation and Management	52700	Environmental Technician	1.30	2.40	2.00
SAUL	1182	Natural Environment Technologist - Conservation Management	62700	Environmental Technology	1.30	3.30	3.00
SENE	1070	Environmental	52700	Environmental	1.30	2.40	2.00



## Key Research Findings

		Technician		Technician			
SENE	1087	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00
SHER	1162	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
SHER	1224	Water Distribution And Wastewater Collection	42700	Environmental Techniques	1.30	0.80	1.00
SLAW	1171	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
SSFL	1110	Environmental Technician	52700	Environmental Technician	1.30	2.40	2.00
SSFL	1111	Environmental Technology	62700	Environmental Technology	1.30	3.30	3.00

### Employment Postings:

#### Environmental Technician

Job Order #: 5213409

**Employer Name:** CH2M HILL CANADA LTD.

**PostedDate:** 06-Jul-2012

**Location:** WEYBURN

**# of Positions:** 1

**Employment Terms:** Full Time

**Education:** Technical/Applied Science Diploma

**Experience:** 3-5 Years

#### Description

CH2M HILL Environmental Technician - Weyburn, SK

Developing People through Challenging Projects

CH2M HILL Weyburn, Saskatchewan Project Roles

CH2M HILL is ranked as the top Program Management firm for the past 7 years (Engineering News-Record). Fortune Magazine also recently rated CH2M HILL as one of the country's Best places to work. With more than \$6.3 billion in revenue last year, CH2M HILL is 100% employee owned with more than 30,000 employees worldwide.

We are looking for Environmental professionals with backgrounds in Management, Engineering and Field to support numerous remediation projects in the Southern Saskatchewan area, to be based out of our Weyburn Project office. At CH2M HILL, the greatest challenges provide the biggest rewards. Each day, your drive and creative ideas will be providing solutions that help build a better tomorrow. Whether it is the pride that comes with accomplishment,

# Key Research Findings

personal growth or making a difference in the world, you will discover true success in a career that brings out the best in you at CH2M HILL. Ready? Let's get to work. Apply at [www.careers.ch2m.com](http://www.careers.ch2m.com). Please view requisition 45428BR for full job description.

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## environmental technician

Number of position(s) to fill : 1

Offer N° : 3327771

In-house job name (if different) : Technicien en environnement

In-house reference (competitive examination n°, code, etc.) : IRC98977

### VILLE DE LAVAL Work place

1333 boulevard Chomedey

Laval (Québec)

### H7V3Z4 Main functions

(The following information has not been translated.): Joignez-vous à Ville de Laval, une des plus importantes villes au Québec, dynamique, soucieuse de son efficacité et reconnue pour être à l'écoute de ses citoyens ! Pour son service de l'environnement, Ville de Laval est à la recherche de candidats pour occuper des postes de: TECHNICIEN EN ENVIRONNEMENT Poste temporaire (2 postes) Effectue divers travaux de nature technique et analytique comportant des études, enquêtes ou inspections nécessaires à l'élaboration et à la réalisation de projets relatifs à la protection de la qualité de l'environnement.

### Requirements and working conditions

Educational level : Collegial (Diploma)

Years of experience related to the job offer : 4 year(s) of experience

Description of qualifications : (The following information has not been translated.): - Diplôme d'étude collégial (DEC) en Assainissement de l'eau; - Posséder quatre (4) années d'expérience pertinente en procédés, équipements et entretien préventif liés au traitement des eaux potable et usée; -

Connaissances générales en informatique ; - Posséder un permis de conduire classe 5 (obligatoire) et un véhicule (si possible); - Très bonnes habiletés à communiquer en français verbalement et par écrit, l'anglais est un atout;

Languages asked for : spoken languages : French and English

written languages : French and English

Salary offered : to be discussed

Number of hours per week : 33,00

Various terms : Salaire offert : Selon l'échelle salariale en vigueur.

Job status : casual or temporary

full time

day

Length of the employment : To be determined

Job start date : 2012-08-15

Means of

communication :

Web site : <http://www.ville.laval.qc.ca>

## Key Research Findings

Additional information : (The following information has not been translated.): Horaire de travail : de 8h15 à 17h30 à raison de 4 jours par semaine pour un total de 33 heures. Salaire offert : Selon l'échelle salariale en vigueur. Ville de Laval est continuellement à la recherche de professionnels compétents et dynamiques qui désirent se joindre à une organisation entreprenante. La Ville s'engage à vous offrir un milieu de travail stimulant ! Ainsi, si ce défi vous intéresse et que vous répondez aux exigences du poste, postulez en ligne, avant le 15 juillet 2012, en vous rendant dans la section CVLaval-Carières de notre site internet : [www.ville.laval.qc.ca](http://www.ville.laval.qc.ca) À compétence égale, Ville de Laval donne priorité aux candidats demeurant sur son territoire et applique un programme d'accès à l'égalité en emploi.

### environmental technician

Number of position(s) to fill : 1

Offer N° : 3294087

In-house job name (if different) : Technicien (ne) en traitement des eaux

In-house reference (competitive examination n°, code, etc.) : 2012-7779

### GOLDER ASSOCIES LTEE

#### Work place

9200 Bouk. de l'Acadie

Montréal (Québec)

H2T2N2

Details of work place territory : Possibilité de déplacement au Québec.

#### Main functions

(The following information has not been translated.): Golder construction offre un ensemble de services d'entrepreneur spécialisé et de gestion de projets dans les domaines de la géo-ingénierie et de la réhabilitation environnementale. GC est une filiale à part entière de Golder Associés Ltée ([www.golder.com](http://www.golder.com)), un des plus importants groupes mondiaux d'experts conseils en géotechnique et en environnement appartenant à ses employés. L'entreprise se distingue par son mode de gestion dynamique (actionnariat interne), ainsi que par la qualité de son milieu de travail, la plaçant parmi les 50 meilleurs employeurs au Canada. Depuis ses débuts en 1997, Golder Construction a étendu ses opérations à travers le Canada et a bâti une équipe dédiée de professionnels hautement motivés. La personne retenue sera appelée à : Faire de l'opération et de la maintenance de l'usine de traitement des eaux (industrielles); Collaborer à du suivi environnemental et de l'échantillonnage d'affluent et d'effluent; Vérifier les différentes installations de traitement d'eau sanitaire; Inspecter les différents types d'équipement pétrolier et de contrôle des déversements; Faire des tournées piézométriques; Accomplir du travail manuel varié (menuiserie, plomberie, électro-mécanique, mécanique, etc).

#### Requirements and working conditions

Educational level : Collegial (Diploma)

level : Completed

Years of experience related to the job offer : 1 to 2 years experience

Description of qualifications : (The following information has not been translated.): Le candidat devra répondre aux exigences suivantes : Technique génie civil ou traitement des eaux ou domaine connexe; De 0 à 2 ans d'expérience; Doit posséder un intérêt pour l'automatisation, le contrôle à distance de systèmes et la technologie en général; Avoir des connaissances en mécanique, hydraulique et électrique; Avoir la certification de l'ASP Construction pour la sécurité sur les chantiers de construction ; Personne autonome, fiable et organisée; Détenir un permis de conduire valide.

Languages asked for : spoken languages : French and English

written languages : French and English

Salary offered : to be discussed

Number of hours per week : 37,50

## Key Research Findings

Job status : permanent  
full time  
day

Job start date : 2012-07-20

**Job Number:** 6518145

**Title:** Environmental technician (Air Quality Monitoring Field Technician) ([NOC: 2231](#))

**Terms of Employment:** Permanent, Full Time, Overtime

**Salary:** \$18.00 Hourly for 40 hours per week, Medical Benefits, Dental Benefits, Disability Benefits, Life Insurance Benefits, Group Insurance Benefits, RRSP Benefits, Vision Care Benefits

**Anticipated Start Date:** As soon as possible

**Location:** Edmonton, Alberta (1 vacancy)

**Skill Requirements:**

**Education:** Completion of high school, Completion of college/CEGEP/vocational or technical training, Some university

**Credentials (certificates, licences, memberships, courses, etc.):** Not required

**Experience:** No experience

**Languages:** Speak English, Read English, Write English

**Transportation/Travel Information:** Willing to travel

**Work Site Environment:** Outdoors

**Work Conditions and Physical Capabilities:** Fast-paced environment, Attention to detail, Combination of sitting, standing, walking

**Essential Skills:** Reading text, Document use, Numeracy, Oral communication, Problem solving, Critical thinking, Job task planning and organizing, Computer use

**Other Information:** post secondary education in electronics, electrical, programming, IT or communications (experience may be considered).

**Employer:** AGAT Laboratories

**How to Apply:**

Please apply for this job only in the manner specified by the employer. Failure to do so may result in your application not being properly considered for the position.

**Online:** <http://www.agatlabs.com>

**Web Site:** <http://www.agatlabs.com>

**Advertised until:** 2012/07/26

**Job Number:** 6508222

**Title:** Technician, environmental (Surveyor/AutoCAD/Field Specialist) ([NOC: 2231](#))

**Terms of Employment:** Permanent, Full Time

**Salary:** \$38,000.00 to \$42,000.00 Yearly for 40 hours per week

# Key Research Findings

**Anticipated Start Date:** As soon as possible

**Location:** Mississauga, Ontario (1 vacancy)

**Skill Requirements:**

**Education:** Completion of college/CEGEP/vocational or technical training, Completion of university

**Credentials (certificates, licences, memberships, courses, etc.):** Not applicable

**Experience:** No experience

**Languages:** Speak English, Read English, Write English

**Specific Skills:** Assist in design development, Prepare working drawings, Conduct field surveys

**Additional Skills:** Know and use computer hardware and software

**Essential Skills:** Reading text, Document use, Numeracy, Writing, Oral communication, Working with others, Problem solving, Decision making, Critical thinking, Job task planning and organizing, Significant use of memory, Finding information, Computer use, Continuous learning

**Other Information:** Please visit [www.parishgeomorphic.com](http://www.parishgeomorphic.com) for further details regarding the job description.

**Employer:** PARISH Geomorphic Limited

**How to Apply:**

Please apply for this job only in the manner specified by the employer. Failure to do so may result in your application not being properly considered for the position.

**By E-mail:** [employment@parishgeomorphic.com](mailto:employment@parishgeomorphic.com)

**Web Site:** <http://www.parishgeomorphic.com>

**Advertised until:** 2012/07/20

HYDROTECHNICAL TECHNOLOGIST

LOG INBECOME A MEMBER

JOB LOCATION: Saskatoon, SK

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DATE POSTED: Monday, July 09, 2012

CLOSING DATE: Wednesday, August 08, 2012

APPLY BY: - Company Website

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**ORGANIZATIONAL INFORMATION** The purpose of this position is to support the activities of the professional staff within Rescan's Water Resources group. The group is part of the company's Engineering-Geoscience Department.

**QUALIFICATIONS:** • Diploma from recognized technical or technological institution or B.Sc. degree from a recognized earth science or engineering program is required.

• Registered or eligible for registration with the Applied Science Technologists and Technicians of BC (ASTTBC).

• Strong practical skills & experience in surveying (Differential GPS, transit, rod & level, compass & chain

## Key Research Findings

techniques) is essential. Experience with total station data collection and transfer procedures would be an asset.

- Strong practical skills & experience in mapping and drafting associated with GIS and CAD-related software would be an asset
- Minimum of 3 years of experience in hydrotechnical and water resources related work would be an asset

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**JOB DUTIES:**

- The person will be required to carry out extensive field work associated with ongoing water resource related investigations. The person should enjoy working in the outdoors, and be prepared to work under adverse weather conditions when necessary;
- The person should have a genuine interest in engineering and the earth sciences as it relates to applied water resource activities;
- The person should have practical experience & knowledge of hydrologic methods and techniques, this is a requirement;
- The person should be mechanically inclined and should be able to participate in the construction, operation, inspection and maintenance of hydrometric stations;
- The person should be able to understand the limitations of instruments, equipment, and materials used in the implementation of hydrometric stations and monitoring
- The person will also be required to assist in the inspection, servicing, maintenance and operation of hydrological instruments, devices, and equipment in the field, laboratory, or office;
- Office based activities will be related to computing, adjusting, and processing of hydrometric data; preparing tables, figures, maps, drawings, charts and report writing where necessary;

INTERMEDIATE/SENIOR ENVIRONMENTAL TECHNOLOGIST



LOG IN/BECOME A MEMBER

JOB LOCATION: Fort St. John, BC

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DATE POSTED: Friday, June 22, 2012

CLOSING DATE: Sunday, July 22, 2012

APPLY BY: - Company Website

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EMPLOYMENT TYPE: Full-time employment

EDUCATION REQUIREMENTS: College Diploma / CEGEP

WORK EXPERIENCE: 3 years

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**ORGANIZATIONAL INFORMATION** Explore a different kind of company. EBA, A Tetra Tech Company (EBA), has progressively expanded since its inception in 1966 and, today, clients are served by more than 700 engineers, scientists, technologists, and support staff from offices predominantly across western and northern Canada. EBA is a values-based consulting engineering and sciences company that offers

## Key Research Findings

exciting challenges and fulfilling rewards to our employees. Since 2010, we are part of the Canadian family of Tetra Tech (NASDAQ: TTEK) companies, with over 3,800 employees working from 56 offices across the country, and over 13,000 employees worldwide.

**QUALIFICATIONS:** The successful candidate will possess the following skills and attributes:

Successful completion of Civil Engineering Technology Diploma Program, or a bachelor's degree in appropriate discipline. Holds or working towards certification from ASTTBC is preferred.

Minimum 3 years of experience in contaminated sites investigations/monitoring and remediation/reclamation programs.

Previous experience in environmental consulting and a strong familiarity with the Oil and Gas Commission (OGC) guidelines and BC Ministry of Environment (MOE) standards.

Possess strong time management, interpersonal skills, communication skills and be able to work as a member of a multi-disciplinary team and independently.

Progressive project management including remediation programs.

Preference will be given to local candidates; however, qualified individuals willing to relocate to Fort St. John, BC will be considered as well.

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**JOB DUTIES:** EBA, A Tetra Tech Company (EBA) is looking for an Intermediate/Senior Environmental Technologist to join EBA's dynamic Contaminated Sites Division in our Fort St. John, BC office. We serve clients in the public and private sectors, focusing on the oil and gas, mining, and transportation industries. The successful candidate can expect a combination of field and office work including environmental site assessments, site remediation, groundwater surface water, and soil sampling. Field work may involve remote locations, some sites that are only accessible by air, working away from home base for one or two weeks at a time, working in rough terrain and fieldwork in all seasons. This is an excellent growth opportunity; we offer our employees the opportunity to challenge their abilities in a dynamic work environment and your efforts will be recognized through a competitive compensation program.

**INTERMEDIATE/SENIOR ENVIRONMENTAL TECHNOLOGIST**



LOG IN/BECOME A MEMBER

JOB LOCATION: Calgary, AB

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DATE POSTED: Monday, June 11, 2012

CLOSING DATE: Wednesday, July 11, 2012

APPLY BY: - Company Website

EDUCATION REQUIREMENTS: College Diploma / CEGEP

# Key Research Findings

WORK EXPERIENCE: 7 years

ORGANIZATIONAL INFORMATION EBA, A Tetra Tech Company (EBA) has a strong and growing group of environmental professionals located across Northern and Western Canada. Our Calgary office is seeking an Intermediate or Senior Technologist to join our team.

QUALIFICATIONS: • Applicants should have a diploma from an accredited university/college and work experience with specialization in environmental sampling.

- A minimum of seven (7) years experience in soil sampling, flow measurements, contaminated sites investigations, contaminated sites remediation (both in-situ and ex-situ), groundwater and surface water sampling.

- Excellent communication skills and the ability to work well as part of a team are essential to this position.

- Previous experience in environmental consulting and knowledge of current industry related codes of practice and regulations (both provincial and federal) is required

- A satisfactory driver's abstract (5 year history minimum) OR your own vehicle suitable for field work (mileage reimbursed).

- You should also possess exceptional time management skills, be flexible, and adapt well to change.

- Certification from ASET is required as a minimum, with preference given to those with P.Tech designation. (Other professional designations may also be considered.)

In addition to these technical qualifications, candidates should have the proven ability to manage fieldwork and junior staff, and deliver projects on time and on budget.

JOB DUTIES: The successful candidate can expect a combination of field and office work including environmental site assessments, site remediation, groundwater surface water, and soil sampling. Field work may involve remote locations, some sites that are only accessible by air, working away from home base for one or two weeks at a time, working in rough terrain and fieldwork in all seasons.

The successful candidate would be responsible for fieldwork and data management. There is potential for the applicant to become involved in proposal preparation, designing field programs, data interpretation, reporting, and project management for small projects. The successful applicant would liaise with other environmental professionals on a wide variety of interesting and challenging projects in western and northern Canada.

## CONTRACT ENVIRONMENTAL FIELD TECHNICIANS

LOG INBECOME A MEMBER

JOB LOCATION: Alberta, AB

DATE POSTED: Tuesday, June 12, 2012

CLOSING DATE: Thursday, July 12, 2012

APPLY BY: - Email

EMPLOYMENT TYPE: A contract position

EDUCATION REQUIREMENTS: College Diploma / CEGEP

WORK EXPERIENCE: 1 years



## Key Research Findings

**ORGANIZATIONAL INFORMATION** Clear Environmental Solutions, the environmental division of Canadian Energy Services, is part of a dynamic and growing based oilfield services entity listed on the TSX under CEU.

As such, Clear Environmental Solutions focuses on the environmental management and disposal of drilling fluids used in oil and gas exploration throughout Western Canada. In doing so we offer a wide range of consulting services aimed to provide our clients with the ability to proactively plan and develop the disposal methods and processes applicable to project based oil and gas development in conjunction with landowners and regulatory agencies. For more information please see our web-site at [www.clearenv.com](http://www.clearenv.com).

**QUALIFICATIONS:** Qualifications:

B.Sc in Science and / or applicable environmental fields are preferred. Those with a minimum 2 year technical diploma in an earth/water science, related environmental program, or in the area of Biology/Chemistry may also apply.

Relevant experience in previous sectors of Oil & Gas Development is an asset.

Valid safety and general competency certificates – Valid Drivers License, HS Alive, and Standard First Aid are essential.

Required equipment includes a reliable vehicle (with off road capabilities), a GPS, camera and a laptop computer.

Must be willing to work away from home.

Legally eligible to work in Canada.

**JOB DUTIES:** Responsibilities include, but are not limited to;

Water / soil sample collection and analysis for proposed new well and existing well site locations.

Drilling waste disposal sampling and assessments.

Supervision of disposal operations.

Comprehensive pre & post site inspections.

Landowner liaisons.

# Key Research Findings

## INTERMEDIATE/SENIOR ENVIRONMENTAL TECHNOLOGIST



LOG IN/BECOME A MEMBER

JOB LOCATION: Calgary, AB

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DATE POSTED: Monday, June 11, 2012

CLOSING DATE: Wednesday, July 11, 2012

APPLY BY: - Company Website

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EDUCATION REQUIREMENTS: College Diploma / CEGEP

WORK EXPERIENCE: 7 years

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## Key Research Findings

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