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

Section	Description	Measures
Student Demand	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) Trends in certificate, diploma, degree, apprenticeship and continuing education (where available).	 Strong = Fleming enrolment growth is outpacing system and is equal to or greater than 3% Moderate = Fleming enrolment growth is equivalent to system demand and is between 1.0 to 2.9% Weak = Fleming enrolment growth is less than the system demand and is less than 1%
	Click Below to Access Full Source Document: Fall Enrollment Trend	
Labour Market	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.	 Strong = Between 5-6 positive labour market indicators Moderate = Between 3-5 positive labour market indicators Weak = Between 1-2 or no positive labour market indicators
Competitive Analysis	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) Click Below to Access Full Source Document: Fall Conversion Report	 Strong = Fleming conversion ratio is greater than 2 below the system Moderate = Fleming conversion ratio is 1 above, below or equal to the system Weak = Fleming conversion ratio is greater than 2 above than the system
Financial Analysis	Includes a review of Contribution to Overhead (CTO) for existing programs (2010-11) Click Below to Access Full Source Document: Costing Analysis	 Strong = CTO is greater than 35% Moderate = CTO is between 30 - 34% Weak = CTO is between 20 - 30% No Contribution = 19% or less

Key Performance Indicators	Includes KPI trends from the Key Performance Indicator Summary 5 Year Historical Overview KPI Data from Reporting Years 2008-2012. Click Below to Access Full Source Document: Key Performance Indicators	 Strong = Above system average in 6-7 indicators Moderate = Above system average in 3-5 indicators Weak = Above system average in 0-2 indicators.
Resource Analysis	Requires school level assessment regarding space, technology, capital equipment and human resources. Recommendations from recent Program Review Reports included here	

Urban Forestry/Urban Forestry Technician (43906/54203)

_	_	T	
Student Deman	d^1	• 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

- The Urban Forestry program is a subcategory of the MTCU category Urban Arboriculture
- For <u>Urban Arboriculture</u>, Fleming is the only college to the program, which has experienced steady growth throughout the past 5 years with a mean growth rate of 36% and an average registration of 37 students
- For <u>Forestry Worker</u>, La Cite is the only school to offer a certificate program, which began in 2009
- They have a mean growth rate of 25%, but a low average registration of 3 students

Diploma

- Currently there are five colleges offer this program, none of which are direct competitor to Fleming
- Fleming's registrations grew between 2007-2009, however experienced a slight decrease in 2010; the school's mean growth rate (17%) is still higher than the system's (12%)
- Sault has the highest mean growth rate (38%) and Algonquin has the lowest (4%)
- Fleming has the highest average registration of 48 students and Sault has the lowest of 14 students

Certificate

43906 - URBAN ARBORICULTURE Program: % Mean % Chang 2009 2010 2010 2011 (10-11) (07-11)Students 2007 2008 2008 2009 (09-10) **FLEMING** 18 24 33 24 42 75 42 45 7 45 29 37 Total 24 33 24 42 42 45 7 45 58 29 36 37 18 75

3

¹ 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)

Program: 4420	3 - FORESTRY WOR	KER								
	% Change 2007 2008 (07-08)	% Charge 2008 2009 (06-09)	2009		% Change (09-10)	2010		% Change (10-11)	% Mean Growth Rate (07-11)	5 Year Average Reg. Studenti
LA CITÉ COLLÉGIAL		2	2	3	50	3	3	0	25	3
Total		2	2	3	50	3	3	0	25	3

Diploma

	2007	2008	% Change (07-08)	2008	2009	% Change (08-09)	2009		% Change (09-10)	2010	2011	% Change (10-11)	% Mean Growth Rate (07-11)	5 Year Average Reg. Student
ALGONQUIN	34	39	15	39	37	-5	37	39	5	39	40	3	4	38
CONFEDERATION	23	16	-30	16	37	131	37	31	-16	31	28	-10	19	27
FLEMING	31	41	32	41	62	51	62	53	-15	53	53	0	17	48
LA CITÉ COLLÈGIAL	18				19	i j	19	27	42	27	29	7	25	23
SAULT	6	16	167	16	17	6	17	19	12	19	13	-32	38	14
Total	112	112	0	112	172	54	172	169	-2	169	163	-4	12	146

Labour Market

• WEAK

Employment Ontario²

Forestry Technologists and Technicians (NOC – 2223)

- Employment Ontario Rating (2009-2013):
 - Limited
- Education/Training
 - "Completion of a three-year or equivalent program for forestry technologists or a two-year or an equivalent program for forestry technicians is usually required. Several different educational backgrounds can provide entrance to an occupation within this classification. Certification in forestry 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 forestry technologists and technicians. The certification process includes a period of supervised work experience, usually up to two years, and a professional practice examination. Certification or licensing as a scaler is required for some positions."

4

² "2223 Forestry Technologists and Technicians." *Employment Ontario*. N.p., n.d. Web. 5 July 2012. http://www.tcu.gov.on.ca/eng/labourmarket/ojf/pdf/2223_e.pdf.

Demand

- Opportunities for employment in this occupation are expected to be limited over the period from 2009 to 2013. Increased mechanization of logging operations particularly in harvesting and site preparation and improvements in logging equipment will continue to depress demand for forestry technologists and technicians. However demand for forestry technologists and technicians may increase in the areas of forest conservation as more land is set aside to protect natural resources or wildlife habitats."
- "People working in these fields should plan on periods of retraining and professional development to learn new technologies. Increasingly, they will need certification from a professional organization in their field."

HRSDC³

Forestry Technologists and Technicians (NOC – 2223)

Job Openings (2011/2020): 18,000
Job Seekers(2011/2020): 15,255

Post Secondary Education Graduates: 14,988

US Bureau of Labour⁴

Forest and Conservation Technicians (SOC – 19-4093)

- Employment Growth (2010/2020): -1%
 - o **36,500** (2010) to **36,100** (2020)
 - "Heightened demand for American timber and wood pellets will help increase overall job prospects for forest and conservation technicians. Most growth in employment over the next 10 years for forest and conservation technicians is expected to be in federally owned forest lands. Jobs in private forests should grow alongside the demand for timber and pellets, but ongoing fiscal crises will likely lessen the number of available positions in state and local governments."

5

³ "Technical Occupations In Life Sciences (222)." *Human Resources and Skills Development Canada*. N.p., n.d. Web. 5 July 2012. http://www23.hrsdc.gc.ca/occupationsummarydetail.jsp?&tid=39.

⁴ "Forest and Conservation Technicians." *Bureau of Labor Statistics, U.S. Department of Labor*. N.p., n.d. Web. 5 July 2012. http://www.bls.gov/ooh/life-physical-and-social-science/forest-and-conservation-technicians.htm.

Employment Profile⁵

• In 2010-2011, **24.2**% of graduates were employed in a full time position which related to this program of study provincially

Total Graduates:	948	Total Graduates in Survey:	684	Response Rate: *	72.7%
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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	l Year	2	2	2	Sault
Environmental Control	Post Diploma	103	81	72	Conestoga, Nagara, 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	l Year	25	18	13	Georgian
Environmental Technology	3 Years	134	94	84	Centennial, Durham, Fanshawa, Georgian, Humber, Loyalist, Seneca, Sir Sandford Fieming
Fish And Wildlife Technician	2 Years	105	76	32	Boréal, Northern, Sault, Sir Sandford Reming
Fish And Wildlife Technology	3 Years	22	18	9	Boreal, Sir Sandford Fleming
Forest Management Technology	3 Years	34	29	22	Sault, Sir Sandford Flaming
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	Boresi
Integrated Environmental Site Remediation – Bachelor Of Applied Technology	4 Years	-1	f2	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

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Employment Profile: 2009-2010 Graduates

 $^{^{\}rm 5}$ "Employment Profile." $\it Ontario.$ N.p., 2011. Web. 19 July 2012.

 $<\!\!\!\text{http://www.tcu.gov.on.ca/pepg/audiences/colleges/serials/eprofile09-10/profile10.pdf}\!\!>\!.$

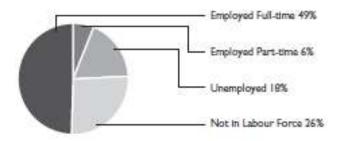
Resources

Summary of Survey Data

	Program Cluster	All Programs
Survey Population	684	50,622
Labour Force Participation	74%	74%
Employment Rate ^a	75%	83%
Employed Part-time ^a	9%	18%
Employed Full-time®	67%	65%
Average Annual Earnings - Total	\$36,549	\$33,199
Average Annual Earnings - Female	\$33,231	\$31,997
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%

Resources

Summary of Graduate Outcomes by Program

	Empl	time loyed,		1-time		-time	E API	-time				
	Program	Balatad	Employed, Employed,			7	loyed,			No	ot in	
	44	rogram Related P			Program	Related	Program	Unrelated	Unen	nployed	Labor	IP FORCE
Decree of the second of the se	17	%	#	%	#	%	#	%	#	- %	#	%
Blasting Techniques	2	13.3	6	40.0		6.7	.1:	6.7	. 2	13.3	. 3	20.0
Environmental Control	79	35.8	22	27.2	2	2.5	4	4.9	15	18.5	9	13.4
Environmental Studies	18	67.1	. 5	17,2	1.0	3.4		-	2	6,9	. 3	10.3
Environmental Technician	31	22.5	30	21.7	- 10	0.7	9	6.5	23	16.7	44	31.9
Environmental Techniques	4	22.2	3	16.7	-		1.	5.6	- 5	17.8	5	27.B
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	H	14.5	13	1.3	1	1.3	9	11.8	44	57.9
Fish And Wildlife Technology	4	22.2	2	11.1	721	-	-	1.7	3	16.7	9	50,0
Forest Management Tachnology	9	31.0	3	10.3	2	6.9	-	8	9	27.6	7	24.1
Forestry Technician	16	24.2	18	27.3	-	VIE.	1.	1.5	16	24.2	15	22.7
Renewable Resource Technician	8	17.4	3	6.5	2	43	2	43	10	21.7	21	45.7
Resources Technician — Ording	20	76.9	2	7.7	10	3.8	1	3.8	2	7.7	-	
Water And Waste Water Tachnician	.00	28.9	7	18.4	- 65	2.6	2	5.3	10	26.3	7	18.4
All Programs in Cluster*	205	30.4	127	18,8	14	2.1	28	4.2	123	18.2	177	26.3

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

Earnings of Full-time Employed Participants

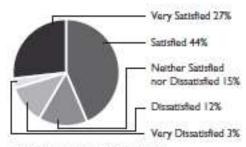
Program	Average – Females	Average - Males	Median – Females	Median - Males	Average for Program	Median for Program
Blasting Techniques	-	\$41,683	-	\$38,064	\$41,693	\$38,064
Environmental Control	\$41,980	\$38,268	\$38,554	\$37,000	\$39,994	\$38,000
Environmental Studies	\$32,889	\$36,705	\$27,375	\$37,543	\$34,103	\$31,384
Environmental Technician	\$31,121	\$36,900	\$28,288	\$35,457	\$34,467	\$30,034
Environmental Techniques		\$42,222	- 1	\$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	55		-			-
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	\$29,392	\$42,875	\$20,759	\$43,018	\$34,975	\$30,243
Resources Technician - Drilling	-	\$54,525	- 10	\$50,839	\$54,525	\$50,839
Water And Waste Water Technician	1) -	\$36,000		\$36,500	\$38,996	\$39,107
All Programs in Cluster*	\$33,526	\$38,475	\$31,286	\$37,413	\$36,671	\$35,197
		4 Page 1 - 1				

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

Resources

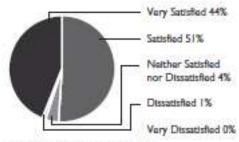
Program Cluster Satisfaction

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 the 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

Working in Canada⁶

Forestry Technologists and Technicians (NOC - 2223)

o Ontario Rating: Not Available

• Wage Range by Region:

Location	Wage (\$/	hr)	
	Low	Median	High
Ontario	13.00	24.00	38.49
HamiltonNiagara Peninsula Region	N/A	N/A	N/A
Kingston - Pembroke Region	16.00	20.71	25.00
KitchenerWaterlooBarrie Region	N/A	N/A	N/A
London Region	13.00	24.00	38.49
Muskoka-Kawarthas Region	17.97	22.70	29.56
Northeast Region	13.00	24.00	38.49
Northwest Region	13.00	24.00	38.49
Ottawa Region	N/A	N/A	N/A
StratfordBruce Peninsula Region	N/A	N/A	N/A
Toronto Region	15.44	20.16	25.71
Windsor-Sarnia Region	N/A	N/A	N/A

Competitive Analysis ⁷	• STRONG
dompetitive imarysis	Sillone

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

Certificate

- Fleming has an advantage over its competitors as it is the only one to offer this program, which has been steadily growing and currently has a high conversion ratio of 2:1
- La Cite's conversion ratio has been improving steadily throughout the last two years, but is still fairly low at its current **7:1** ratio

Diploma

- Fleming's conversion ratio (5:1) is equal to the system's
- La Cite has the best conversion ratio (2:1) and Sault has the lowest (9:1)

eng.do?lang=eng&noc=2223&area=8792&titleKeyword=2223®ionKeyword=Peterborough,+Ontario&source=0&action=final>.

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)

⁶ "Working In Canada." Forestry Technologists and Technicians (NOC 2223). N.p., n.d. Web. 5 July 2012.

http://www.workingincanada.gc.ca/report-

⁷ Application data obtained from OCAS College Count Cube October 19, 2011

Certificate

	Program: 43906 - URBAN ARBORICULTURE															
			Reg. 2007		App. 2008		Conversion Ratio	App. 2009					Conversion Ratio	App. 2011		Conversion Ratio
. [FLEMING	49	18	3:1	55	24	2:1	116	42	3:1	113	45	3:1	134	58	2:1
	Total	49	18	3:1	55	24	2:1	116	42	3:1	113	45	3:1	134	58	2:1

Program: 4420	Program: 44203 - FORESTRY WORKER													
	App. Reg. Conversion 2007 2007 Ratio	App. Reg. Conversion 2008 2008 Ratio	App. Reg. Conversion 2009 2009 Ratio	App. Reg. Conversion 2010 2010 Ratio	App. Reg. Conversion 2011 2011 Ratio									
LA CITÉ COLLÉGIAL	12	10	21 2 11:1	25 3 8:1	22 3 7:1									
Total	12	10	21 2 11:1	25 3 8:1	22 3 7:1									

Diploma

	App. 2007					Conversion Ratio			Conversion Ratio			Conversion Ratio	App. 2011		
ALGONQUIN	151	34	4:1	161	39	4:1	193	37	5:1	178	39	5:1	219	40	5:1
CONFEDERATION	99	23	4:1	99	16	6:1	132	37	4:1	144	31	5:1	115	28	4:1
FLEMING	201	31	6:1	230	41	6:1	272	62	4:1	297	53	6:1	278	53	5:1
LA CITÉ COLLÉGIAL	40	18	2:1	28		- 1	51	19	3:1	53	27	2:1	52	29	2:1
SAULT	73	6	12:1	100	16	6:1	96	17	6:1	115	19	6:1	114	13	9:1
Total	564	112	5:1	618	112	6:1	744	172	4:1	787	169	5:1	778	163	5:1

12

Key Research Findings

Financial Analysis	• STRONG
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Source: Program Costing Analysis 2010/2011

Contribution to Overhead: 40.5%

Program Weight: 1.30Funding Unit: 2.20

Key Performance Indicators • **WEAK**

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

KPI1-Graduation Rate
 KPI2-Working
 KPI3-Working Related
 KPI4-Grad. Satisfaction
 KPI8-Student Satisfaction-Learning
 KPI9-Student Satisfaction-Teachers
 KPI11-Grad. Satisfaction-Program

Resource Analysis

Equipment

The following information was extracted from the 2008 program review:

Aging equipment in need of replacement

Staffing

Space

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.

Overview of the Profession: Landscape and Horticulture Technicians and Specialists (NOC 2225)

http://www.workingincanada.gc.ca/report-

eng.do?lang=eng&noc=2225&area=8792&titleKeyword=arborist®ionKeyword=Peterborough,+Ontario&source =1&action=final

Description

This unit group includes those who survey and assess landscapes; draw sketches and build models of landscape designs; construct and maintain gardens, parks, golf courses and other landscaped environments; advise clients on issues related to horticulture; breed, cultivate and study plants; and treat injured and diseased trees and plants. They are employed by landscape designers and contractors, lawn service and tree care establishments, golf courses, nurseries and greenhouses, and municipal, provincial and national parks, or they may be self-employed. Included Job Titles

- arborist,
- golf course superintendent,
- greenskeeper,
- horticultural technician,
- horticulture specialist,
- horticulturist,
- hydroponics technician,
- landscape architectural technician,
- landscape designer,
- landscape gardener,
- landscape technician,
- landscaper,
- lawn care specialist,
- tree service technician.

Job Duties

The following is a summary of the main duties for some occupations in this unit group:

- Arborists and tree service technicians examine trees and shrubs to diagnose problems and disease, and apply various treatments such as pruning, spraying, repairing damaged areas and injecting with treatment solutions.
- Golf course superintendents direct crews who maintain the health and appearance of golf courses and their surrounding landscapes, plant and move trees, and apply fertilizers, fungicides, herbicides and pesticides.
- Horticulturists plan and co-ordinate the growth and use of plants for landscaping, ornamental uses and other purposes.
- Landscape designers and landscape architectural technicians and technologists survey and assess sites, prepare drawings, sketches and reports and perform other duties to assist landscape architects in designing landscaped environments.
- Landscape gardeners plant and maintain private and public lawns and gardens.

- Landscapers plan and construct landscaped environments which may include trees, shrubberies, lawns, fences, decks, patios and other landscape structures.
- Lawn care specialists visit clients, assess the health of lawns, and apply fertilizer, pesticides and other lawn care products.

Related Occupations

- **Biological Technologists and Technicians**
- **Biologists and Related Scientists**
- **Forestry Technologists and Technicians**
- **Landscape Architects**
- Landscaping and Grounds Maintenance Contractors and Managers
- Nursery and Greenhouse Operators and Managers
- **Nursery and Greenhouse Workers**
- Supervisors, Landscape and Horticulture

Overview of the Profession:

NOC: 2223 Forestry Technician / Technologist

http://www.workingincanada.gc.ca/print report-eng.do?noc=2223&area=8792

Job Duties

Forestry technologists and technicians perform some or all of the following duties:

- Conduct, supervise and participate in forest inventory cruises, surveys and field measurements following accepted scientific and operational procedures
- Assist and perform technical functions in the preparation of forest management and harvest plans using photogrammetric and mapping techniques and computerized information systems
- Assist in planning and supervise construction of access routes and forest roads
- Implement, supervise and perform technical functions in silvicultural operations involving site preparation, planting, and tending of tree crops
- Co-ordinate activities such as timber scaling, forest fire suppression, disease or insect control or precommercial thinning of forest stands
- Supervise and perform technical functions in forest harvesting operations
- Monitor activities of logging companies and contractors and enforce regulations such as those concerning environmental protection, resource utilization, fire safety and accident prevention
- Provide forestry education, advice and recommendations to woodlot owners, community organizations and the general public
- Develop and maintain computer databases
- Supervise forest tree nursery operations
- Provide technical support to forestry research programs in areas such as tree improvement, seed orchard operations, insect and disease surveys or experimental forestry and forest engineering research.

Included Job Titles

conservation technician – forestry, cruising technician – forestry, enforcement officer – forestry, extension ranger – forestry, fire suppression officer – forestry, forest fire technician, forest survey technician, forest technician, forestry technician, forestry technologist, resource officer, forest inventory, resource technician - forestry, scaler technician - logging, scaling co-ordinator - logging, silviculture technician.

Common Job Titles

Conservation Technician - Forestry Extension Ranger - Forestry Fire Suppression Officer - Forestry Forestry Technician Forestry Technologist

Scaler Technician - Logging

Typical Employers

federal, provincial and municipal governments electric power companies pulp and paper companies forestry services firms logging companies

Overview of the Profession:

NOC: 8255 Contractos & Supervisors, Landscaping, Grounds Maintenance & Horticulture services

This unit group includes landscaping and grounds maintenance contractors, who own and operate their own businesses. This group also includes supervisors who supervise and co-ordinate the activities of workers in the following unit groups: *Nursery and Greenhouse Workers* (8432) and *Landscaping and Grounds Maintenance Labourers* (8612). They are employed by landscaping companies, cemeteries, lawn care and tree service companies, nurseries and greenhouses and by landscaping operations of public works departments and private establishments.

Example Titles

greenhouse supervisor
grounds maintenance contractor
groundskeeping supervisor
horticulture workers supervisor
interior plantscaping contractor
landscaping contractor
landscaping foreman/woman
landscaping supervisor
lawn care contractor
nursery foreman/woman
park maintenance supervisor
tree service contractor

Main duties

Contractors and supervisors in this unit group perform some or all of the following duties:

- Supervise and co-ordinate the activities of workers who maintain lawns, gardens, athletic fields, golf courses, cemeteries, parks, interior plantscapes and other landscaped areas
- Tender bids on contracts for landscaping and grounds maintenance work
- Plan and estimate the materials and labour requirements for individual contracts
- Organize the planting and maintenance of trees, gardens, lawns, shrubs and hedges and the construction and installation of fences, decks, patios, walkways and retaining walls
- Establish work schedules and procedures and co-ordinate activities with other work units
- Resolve work-related problems and prepare and submit progress and other reports
- Requisition supplies and materials
- Maintain financial and personnel records
- Hire staff and train workers in job duties and company policies
- May manage operations of own company
- May provide snow removal services during winter months
- May perform the same duties as workers supervised.

Labour Market
Working in Canada

1. Employment potential for Landscape & Horticulture in the Muskoka-Kawarthas Region is "Not available' (Working in Canada)

http://www.workingincanada.gc.ca/report-

eng.do?area=8792&lang=eng&noc=2225&action=final®ionKeyword=Lindsay%2C+Ontario&s=2&source=1&title
Keyword=arborist#report tabs container2

Median wage "not available"

Working in Canada

2. Employment potential Forestry Technicians for the Kawartha Region is "Not Available' (Working in Canada) http://www.workingincanada.gc.ca/print report-eng.do?noc=2223&area=8792

HRDSC

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

This occupation (Arborists) is part of a larger occupational group called Technical Occupations In Life Sciences (222)

Skill Level:

Occupations Usually Requiring College or Apprenticeship Training

Occupations in this group	Biological Technologists and Technicians (2221),
	Agricultural and Fish Products Inspectors (2222),
	Forestry Technologists and Technicians (2223),
	Conservation and Fishery Officers (2224),
	Landscape and Horticultural Technicians and Specialists
	(2225)
Employment (non-student) in 2010:	39,195
Median Age of workers in 2010:	39.5 years old
Average Retirement Age in 2010:	59 years old

- 4. For **Technical Occupations In Life Sciences**, over the period of 2011-2020, job openings are expected to total **17,703**. It is expected that **15,255** job seekers will be available to fill these job openings. Nearly all job seekers will come from the school system 98% with 10% from immigration
- 5. Over the 2006 2008 period, employment in this occupation grew slightly more rapidly than the occupational average; however, the unemployment rate, already high, also increased substantially.
- 6. According to Employment Ontario the Opportunities for employment in the occupations of Forestry Technician are expected to be limited over the period from 2009 to 2013.

Opportunities for employment in the occupation of Landscaping & Grounds Maintenance Contractors and Managers are expected to be average over the period from 2009 to 2013.

7. According to Employment Ontario

89% of Landscaping & Grounds Maintenance Contractors & Managers are full time with 59% being self-employed. 86% of Forestry Technicians and Technologists are full-time and 8% are self-employed

8. Local wage for Peterborough/Kawartha Region 2010: were not available http://www.workingincanada.gc.ca/print report-eng.do?noc=2223&area=8792

Wage rates for Canada were

Low \$17.50 Median \$24.73 High \$35.30

Wage rates for Ontario were

Low \$13.00 Median \$24.00 High \$38.49

US Bureau of Labour

http://www.bls.gov/ooh/home.htm

Under Conservation Scientists and Foresters: "Urban foresters live and work in larger cities and manage urban trees. They are concerned with quality-of-life issues, including air quality, shade, and storm water runoff."

Job Outlook

Employment of forest and conservation technicians is expected to experience little or no change from 2010 to 2020.

Heightened demand for American timber and wood pellets will help increase overall job prospects for forest and conservation technicians. Most growth in employment over the next 10 years for forest and conservation technicians is expected to be in federally owned forest lands. Jobs in private forests should grow alongside the demand for timber and pellets, but ongoing fiscal crises will likely lessen the number of available positions in state and local governments.

Employment Change/Job propects:

Forest and Conservation Technicians

Percent change in employment, projected 2010-20 Total, All Occupations 14% Life, Physical, and Social Science Technicians 11% Forest and Conservation Technicians -1%

Note: All Occupations includes all occupations in the U.S. Economy.

Source: U.S. Bureau of Labor Statistics, Employment Projections program

Employment of forest and conservation technicians is expected to experience little or no change from 2010 to 2020.

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Employment projections data for forest and conservation technicians, 2010-20

Forest & Conservation Technicians

Employment 2010 36,500

Projected Employment 2020 36,100 Change, 2010 – 2020 -1%

SOURCE: U.S. Bureau of Labor Statistics, Employment Projections program

http://www.bls.gov/oco/ocos211.htm#outlook

Grounds Maintenance Workers Duties

Tree trimmers and pruners, also called *arborists*, cut away dead or excess branches from trees or shrubs to clear utility lines, roads, and sidewalks. Although many workers strive to improve the appearance and health of trees and plants, some specialize in diagnosing and treating tree diseases. Others specialize in pruning, trimming, and shaping ornamental trees and shrubs. Tree trimmers and pruners use chainsaws, chippers, and stump grinders while on the job. When trimming near power lines, they usually work on truck-mounted lifts and use power pruners.

Quick Facts: Grounds Maintenance Workers	
2010 Median Pay	\$23,740 per year
	\$11.41 per hour
Entry-Level Education	See How to Become One
Work Experience in a Related Occupation	None
On-the-job Training	See How to Become One

Number of Jobs, 2010	1,249,700
Job Outlook, 2010-20	20% (Faster than average)
Employment Change, 2010-20	254,600

Job Outlook

Job prospects. Overall employment of grounds maintenance workers is projected to grow 20 percent from 2010 to 2020, faster than the average for all occupations. More workers will be needed to keep up with increasing demand for lawn care and landscaping services from institutions and individual homeowners. Overall job opportunities should be very good, particularly in regions with year-round warm climates.

Professional Associations:

For more information about tree trimmers and pruners, including certification, visit

<u>International Society of Arboriculture</u>

Ontario Chapter http://isaontario.com/

Tree Care Industry Association

Canadian Council of Technicians and Technologists www.cctt.ca

Ontario Association of Certified Engineering Technicians and Technologists www.oacett.org

Ontario Forestry Association www.oforest.on.ca

Ontario Professional Foresters Association http://www.opfa.ca/

Canadian Institute of Forestry http://www.cif-ifc.org/

Employment Requirements

Employment Requirements For Forestry Technician

- Completion of a one- to three-year college program in forestry technology or in a renewable resource program or forest ranger program is usually required.
- Certification by, or registration with, a provincial association as a forestry technologist or technician may be required.
- Certification or licensing as a scaler is required for some positions.
- In Quebec, membership in the regulatory body for professional technologists is required to use the title "Professional Technologist."

Additional information

 Mobility may be possible to occupations in natural resource and wildlife management and in parks management.

Educational Programs Leading to this Occupation

http://www.tcu.gov.on.ca/eng/labourmarket/ojf/pdf/2223 e.pdf

Completion of a three-year or equivalent program for forestry technologists or a two-year or an equivalent program for forestry technicians is usually required. Several different educational backgrounds can provide entrance to an occupation within this classification. Certification in forestry 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 forestry technologists and technicians. The certification process includes a period of supervised work experience, usually up to two years, and a professional practice examination. Certification or licensing as a scaler is required for some positions.

Employment requirements For Arborist

- Completion of a university or college program in agronomy, arboriculture, horticulture, landscaping, landscape design or landscape technology is usually required.
- Experience as a landscape and grounds maintenance labourer may be required for golf course superintendents, landscape gardeners and landscapers.

- An apprenticeship program is available for horticulturists, arboriculturists and landscape gardeners.
- A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required.
- In Quebec, membership in the regulatory body is required to use the title of Professional Technologist.

Education/Training for Landscaping and Grounds Maintenance Contractors and Managers (8255)

- A college diploma or specialized courses in landscaping and horticulture are usually required.
- Apprenticeship training for horticulturists is also available in Ontario. Experience as a landscape or
- horticulture supervisor or as a landscape or horticulture technician is required for managers.

http://www.tcu.gov.on.ca/eng/labourmarket/ojf/pdf/8255 e.pdf

$From \ HRDC- \ \underline{http://www5.hrsdc.gc.ca/NOC/English/NOC/2011/QuickSearch.aspx?val65=8255}$

Employment requirements

- Completion of secondary school is usually required.
- A college diploma, specialized courses or industry-related training and certification in landscaping and horticulture are usually required.
- Experience as a landscape or horticulture supervisor or as a landscape or horticulture technician is required.
- Experience in the type of work supervised is required.
- A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required.

Landscape & Horitcultural Technicians & Specialists (2225)

Employment requirements for 2225 from HRDC -

- Completion of a university or college program in agronomy, arboriculture, horticulture, landscaping, landscape design or landscape technology is usually required.
- Experience as a landscape and grounds maintenance labourer may be required for golf course superintendents, landscape gardeners and landscapers.
- An apprenticeship program is available for horticulturists, arboriculturists and landscape gardeners.
- A provincial licence to apply chemical fertilizers, fungicides, herbicides and pesticides may be required.
- In Quebec, membership in the regulatory body is required to use the title of Professional Technologist.

Educational Programs Leading to this Occupation

2223 - Forestry Technician & Technologist

http://www.tcu.gov.on.ca/eng/labourmarket/ojf/pdf/2223 e.pdf

Education/Training

Completion of a three-year or equivalent program for forestry technologists or a two-year or an equivalent program for forestry technicians is usually required. Several different educational backgrounds can provide entrance to an occupation within this classification. Certification in forestry 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 forestry technologists and technicians. The certification process includes a period of supervised work experience, usually up to two years, and a professional practice examination. Certification or licensing as a scaler is required for some positions

8255 Landscaping and Grounds Maintenance Contractors and Managers

http://www.tcu.gov.on.ca/eng/labourmarket/ojf/pdf/8255 e.pdf

Education/Training

A college diploma or specialized courses in landscaping and horticulture are usually required. Apprenticeship training for horticulturists is also available in Ontario. Experience as a landscape or horticulture supervisor or as a landscape or horticulture technician is required for managers.

Educational Competitors

Fleming College - Urban Forestry Certificate

http://flemingcollege.ca/programs/urban-forestry

Fleming College - Arboriculture

http://flemingcollege.ca/programs/arboriculture

Fleming College – Urban forestry Technician (Diploma/degree) http://flemingcollege.ca/programs/urban-forestry-technician

Humber – Urban Arboriculture Tree Care (Certificate) http://www.humber.ca/program/urban-arboriculture-tree-care

Private -

Arboriculture Canada Training & Education Limited http://www.arborcanada.com/arboriculture training schedules.php

College	APS	APS Title	MTCU	MTCU Title	WT	FU	TF
HUMB	1179	Urban Arboriculture	43906	Urban Arboriculture	1.50	1.00	1.00
SSFL	1163	Arboriculture	43906	Urban Arboriculture	1.50	1.00	1.00
SSFL	1285	Urban Forestry	43906	Urban Arboriculture	1.50	1.00	1.00
		Urban Forestry		Urban Forestry			
SSFL	1251	Technician	53906	Technician	1.50	2.10	2.00

Employment Postings:

EMPLOYMENT OPPORTUNITY

Position: Natural Areas Assistant

Organization: City of Mississauga http://www.mycitycareer.ca

Location: Mississauga, Greater Toronto Area, Ontario

THE CITY OF MISSISSAUGA **COMMUNITY SERVICES DEPARTMENT** PARKS AND FORESTRY DIVISION **FORESTRY SECTION**

Requires a NATURAL AREAS ASSISTANT (1 yr contract)

JOB SPECIFICATIONS:

Post Secondary education in Environmental Science, Ecology, Urban Forestry or related discipline. Two (2) years experience related to community based restoration projects. Experience managing volunteers and directing staff. Demonstrated knowledge of ecosystem restoration, including native plant identification skills. Knowledge of group dynamics and team building. Advanced communication, customer service, and presentation skills. Proficiency in the use of computer applications; i.e. MS Office, Word, Excel. Valid Class 'G' Ontario driver's license required. Ability to operate a commercial vehicle and trailer. Emergency First Aid required. CPR A, B or C an asset. Ability to work evenings and weekends. Demonstrated ability to work with minimal supervision. Employment offer is conditional upon receipt of a Criminal Record Search, Vulnerable Sector Screening that is acceptable to the City of Mississauga.

PRIMARY RESPONSIBILITIES:

21

Key Research Findings

Assists with the coordination and implementation of the naturalization program and other related projects that involve community partners; acts as an ambassador to the City's Natural Areas Program through educational activities with schools, businesses, and community groups; coordinates and supports other City staff and volunteers on stewardship and naturalization projects, ensuring the health and safety of the participants; maintains, monitors, and provides input on stewardship and naturalization sites; in cooperation with the Natural Areas Coordinator, organizes logistics required to deliver stewardship and naturalization events; this includes scheduling events, loading and transporting plant material and equipment, preparing sites, and securing all related planting supplies; assists with ordering and tracking of plant material for naturalization events.; maintains accurate database and mapping records on events, project locations, project details and contacts; performs other related duties as assigned.

NOTE: Successful candidate will need to be prepared for increased mobility, with appropriate notice, in order to fill vacancies, provide developmental opportunities for staff and be responsive to future operational needs or to support the operational structure and its requirements.

HOURLY RATE: \$22.95 - \$30.61

Please submit your application on-line at http://www.mycitycareer.ca . Only those applications submitted on-line via http://www.mycitycareer.ca will be considered. The deadline to apply is July 29, 2012.

A Criminal Record Search will be required of the successful candidate, at their own expense, to verify the absence of a criminal record for which a pardon has not been granted.

We thank all who apply, however, only those candidates selected for an interview will be contacted. All personal information is collected under the authority of the Municipal Act. We are an Equal Opportunity Employer.

Job Number: 6547535

Title: Arborist (EXPERIENCE REQUIRED) (NOC: 2225)

Terms of Employment: Permanent, Full Time, Overtime, Weekend, Day

Salary: \$25.00 Hourly for 40 hours per week, Bonus

Anticipated Start Date: As soon as possible **Location:** CALGARY, Alberta (1 vacancy)

Skill Requirements:

Education: Completion of college/CEGEP/vocational or technical training

Credentials (certificates, licences, memberships, courses, etc.): Horticulturist Trade Certification, Arboriculturists Trade Certification, Landscape Gardener Trade Certification, Landscape Architecture Technologist Certificate, Landscape Architecture Technician Certificate, Canadian Nursery Landscape Association (CNLA) certification

Experience: 1 year to less than 2 years

Languages: Speak English, Read English, Write English

Work Setting: Landscaping company

Area of Specialization: Tree and shrub examination and treatment, Growth of ornamental plants, Tree removal, Hedge and shrub pruning, Horticultural consulting, Plant knowledge and identification, Propagation, Tree pruning

Type of Landscaping Experience: Residential projects, Commercial/industrial construction, Institutional construction, Industrial construction, Park and recreation sites, Restoration and preservation projects

Landscape Design Skills: Manage landscaping projects, Survey and assess designated sites

Additional Skills: Prepare proposals, Estimate costs, Plant care

Work Conditions and Physical Capabilities: Attention to detail, Repetitive tasks, Handling heavy loads, Physically demanding, Manual dexterity, Ability to distinguish between colours, Sitting, Combination of sitting, standing, walking, Standing for extended periods, Walking, Bending, crouching, kneeling

Work Site Environment: Work in employer's/client's home, Urban area, Various locations

Essential Skills: Reading text, Numeracy, Oral communication, Working with others, Problem solving, Decision making, Critical thinking, Job task planning and organizing, Finding information

Employer: THE URBAN FORESTER INC.

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.

In Person between 8:00 and 12:00:

47 HEALY DRIVE SW CALGARY, Alberta T2V 2Z8

By Fax: (403) 244-6027 Advertised until: 2012/08/15

Labourer, landscape

Urban Forestry - Greater Toronto Area, ON See original job posting at Canadian Job Bank »

Terms of Employment: Seasonal, Full Time Salary: \$15.00 to \$20.00 Hourly for 40 hours per week Anticipated

Start Date: As soon as possible Location: Greater Toronto Area, Ontario (1 vacancy)

Skill Requirements:

Education: Some high school, Not required Credentials (certificates, licences, memberships, courses, etc.): Not applicable, Not required Experience: No experience Languages: Speak English, Read English, Write English Work Setting: Landscape contractor, Commercial establishment, Private home, Landscape maintenance Type of Machinery or Equipment: Chain saw, Pick-up truck Work Conditions and Physical Capabilities: Fast-paced environment Work Site Environment: Outdoors Transportation/Travel Information: Own transportation, Vehicle supplied by employer, Valid driver's licence

Other Information: Hiring driver for Toronto based tree care company. Must have valid G license. Driving big truck with trailer. Must have own transportation to shop at Kennedy and stouffville road area.

Employer: Urban Forestry 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: urban forestry@hotmail.com Advertised until: 2012/07/25

Arborist I Job Type: Contract Location: Oakville, ON, CANADA; Job Category: Forestry Job Industry: Government Year(s) of Experience: 2 Number Of Positions: 3 Date Posted: May 9, 2012 CALL NO. 12-040 (CUPE136T)

This job profile reflects the general details considered necessary to perform the principle functions and shall not be construed as an interpretation of all work requirements inherent in the job. Applicants are required to demonstrate in their applications and in the interview process that their qualifications for the positions match those specified. Applicants may be required to undergo a skills assessment.

Arborist I (3 temporary positions available) Job Designation:

Department: Parks & Open Space Department

Salary Rate: \$29.23/hour (Temporary employee rate)

Pay Grade: Band 7 (Schedule A)

The duration of these contracts will be approximately 8 months. Temporary:

Note: Consideration may be given to applicants who do not possess the certification requirements highlighted below if a fully qualified candidate is not available in the applicant pool. A successful applicant without the prerequisite certifications would be expected to obtain the certifications within 24-36 months of employment, if applicable and would be compensated at the Arborist II rate at \$27.44/hour (Temporary employee rate).

These positions report to the Supervisor of Urban Forestry or Supervisor of Forest Health and is responsible for various activities related to urban forestry/arboriculture on Town properties. Principal duties include:

Job Responsibilities:

- Through a work order based system conduct assigned Tree Care including pruning, removal and cabling according to current policies and procedures and generally accepted arboricultural practice(s).
- Operate and performs maintenance of Town trees as part of a team with specialized equipment including aerial bucket trucks, chippers, chain saws and standard tree climbing equipment where required in a safe and efficient manner
- Maintain written records as required (i.e. tree maintenance work orders and activity cards).
- Duties include Hydro line clearing and grid pruning projects and woodlands tree maintenance and care, including diagnosing tree maintenance requirements.
- Required to participate on Fire Department call outs on 24/7 rotational basis, throughout the year, includes emergency storm management.
- Performs other duties as assigned.

Qualifications/Skills:

A certificate or diploma in Urban Forestry/Arboriculture or related discipline from a recognized institution. An equivalent combination of education and experience may be considered. 1-2 years of tree climbing experience and practical arboriculture work experience in addition to having a valid Crane Operator (0-8 tons) certificate and a "Safety in Line Clearing" certificate from the Electrical Utility Safety Association or equivalent such as a Line Clearing Awareness certificate from Hydro One. An ISA Certified Tree Worker designation, certificate in the Trade of Arborist (Provincial designation) and Certificate in the Trade of Utility Arborist are also requirements. Candidates must be knowledgeable in current accepted industry practices and be physically fit and able to work in varying climate conditions. Demonstrations of the foregoing qualifications may be required through written, oral and practical examinations. Candidates must also demonstrate effective communication skills, both oral and written, time management skills, flexibility in adjusting between a variety of duties and ability to work with minimal supervision and as part of a team in addition to possessing an understanding of the Highway Traffic Act and knowledge of the Occupational Health and Safety Act. Candidates must hold and provide a copy of a valid and unrestricted Ontario Driver's License Class DZ minimum (standard and automatic transmission) with a driving record that demonstrates responsible and safe driving behaviour. Note: Applicants with 6 or more points are ineligible for consideration. The successful applicant, who is a new hire, will be required to provide the Corporation with a current drivers abstract (no older than 30 days) and pass a Town administered road test prior to assuming the position.

Applications will be accepted on-line at www.oakville.ca in the current opportunities section no later than midnight on Thursday May 31, 2012.

DATED: Wednesday May 9, 2012

We thank all applicants and advise that only those selected for an interview will be contacted.

Successful candidates will abide by Ontario Health & Safety Legislation and follow Corporate Health & Safety **Policies**

The Town of Oakville is an Equal Opportunity Employe

(Job ID: 1166)

Plant health care Technician Eastern Ontario Arborists Inc

Date Posted: June 26, 2012 11:59PM

Application Deadline: Jul 26, 2012 11:59PM

Application Method: Position Type: Summer

Job Title: Plant health care Technician

International posting?: No Job Location: Ottawa

Number of Positions: 2 Duties/Responsibilities:

Operate Deep root fertilizing truck for trees and shrubs. Opportunity for advancement and commision. Tree Identification and pest and disease diagnosis. We offer competitive wages and apprenticeship opportunities to the right person.

Qualifications & Experience:

Must be a student in Forestry, Arboriculture or horticulture. Salary reflects qualifications.

Salary: hourly

Working Hours: 5-7 days a week

Wheelchair Access: No **Application Procedure:**

Email

Company Website

If by email, send to: dave@easternontarioarborists.ca

If by Website, go to: www.treefeed.ca

Application Material Required:

Cover Letter

Resume

Organization: Eastern Ontario Arborists Inc

Division / Department: Treefeed.ca Job Contact First Name: Dave Job Contact Last Name: Buttivant

Contact Title: Director **Phone:** 613-668-3283 Website: www.treefeed.ca

Email: dave@easternontarioarborists.ca

Address Line One: 15 Dignard

City: Embrun

Province / State: Ontario

Postal Code / Zip Code: K0A 1W1

Country: Canada