

Silviculture Worker

Opportunity Report

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Labour Market Information Clearinghouse

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Definition and Job Responsibilities

Silviculture workers may be defined as: "individuals providing services in forest renewal, site preparation, stand tending, or nursery operations". They are an important component of the overall forest management labour force engaged in the provision of services which includes silviculture, forest access, forest protection and forest planning and development.

Silviculture workers are classified in the National Occupational Classification (NOC) under 8422 - Silviculture and Forestry Workers. The main activities of workers in this category include the following:

- assess site, select seedlings and plant trees using manual planting tools in reforestation areas;
- operate power thinning saw to thin and space trees in reforestation areas;
- operate chainsaw to thin young forest stands;
- control weeds and undergrowth in regenerating forest stands using manual tools and chemicals;
- fight forest fires under direction of fire suppression officer or forestry technician;
- operate a skidder, bulldozer or other prime mover to pull a variety of scarification or site preparation equipment over areas to be regenerated; and
- perform other silviculture duties such as collecting seed cones, pruning trees and marking trees for subsequent operations.

Most of the activities cited above relate to the definition of silviculture worker, except perhaps fighting forest fires. Occupations that are more concentrated in any one of these activities are classified elsewhere. For example, chainsaw and skidder operations are classified elsewhere, as well as logging and forestry labourers. Therefore the NOC group is a good description of the activities of silviculture workers.

Training Requirements

According to the NOC, completion of a college or other specialized program for silviculture workers or forestry crew workers may be required. There are a variety of training requirements depending on the specific job duties. A chemicals application licence is required. Workplace

Hazardous Materials Information System (WHMIS) and Transportation of Dangerous Goods (TDG) certificates may be required. Companies usually provide formal training in power saw operation combined with on-the-job training.

Industry contacts were aware of 12 to 14 week courses for silviculture workers offered by Fairview College and AVC (Grouard). Courses in silviculture are also available in programs leading to work as forest technician or forest technologist. The forest technician program at AVC Lac La Biche, for example, includes a 100 hour course which includes "the principles of silviculture, reforestation, and stand treatments". There is a two day certificate course in regeneration surveying offered by the Environmental Training Centre in Hinton (Pat Guidra 865-8230). This course is required by Lands and Forestry Service and is designed for workers who already have some experience in silviculture. A longer course is being considered for those without experience.

Demand Indicators

Area	Avg. U.I. Claimants ¹		CEC Job Orders ²		1991 Census ³	
	1993	1994	1994	1995	Employed	Unemployed
Slave Lake	1	2	1	1	85	45
Grande Prairie	13	9	1	1	120	100
St. Paul	8	22	0	0	45	25
Fort McMurray	4	2	0	0	65	35
Edmonton	29	26	3	3	110	10

¹ Average U.I. Claimants over the year for the area specified, rounded to the nearest whole number.

² The number of vacancies placed through the Canada Employment Centre in the area. The 1994 and 1995 figures are year-to-date, from January to July.

³ Randomly rounded in increments of five.

The 1991 Census data indicate high levels of unemployment in northern Alberta; however, there may have been a work stoppage during the month of June when the census was taken. (The spring tree planting work is often completed by mid-month). More current U.I. claimant data suggests much lower unemployment in the northern Alberta regions, with St. Paul being the possible exception. The ratio of job orders to U.I. claimants indicates reasonable job opportunities. (Job orders represent the "visible" job market; they are a fraction of the "hidden" job market).

Current Demand and Outlook

Employment in the silviculture field is seasonal. One report states that "the biological and climatic conditions necessary to undertake and complete a particular silviculture activity such as tree planting largely influences the employment duration and subsequently, the number of jobs."¹ However, the long-term employment prospects appear to be favourable. "Because the health of the forest and the industry will depend more and more on quality and cost-effective silviculture, the demand for well-trained silviculture workers will most certainly rise."² There was an increase in the silviculture operations in the late 1980s. Excerpts from a literature search on periodicals seem to confirm that this trend is continuing:

It will be increasingly difficult for pulp and paper companies to obtain an adequate supply of competitively priced fibre in the 1990s because of fewer Crown timberlands and growing public demand for setting aside areas for wildlife protection, parks, and recreation... [In B.C.] annual allowable cuts (AAC) have also been reduced in a number of areas. Industry believes the provinces should set a specific harvest objective based partly on more intensive silviculture, rather than assuming continuation of current forest management practices. (Canadian Papermaker, October, 1994, p. 37)

Workers who lose their jobs because of reduced harvests will be retained in tree management. (Globe and Mail Metro Edition, April 16, 1994, p. B4)

Forest Sector Advisory Council's (FSAC) study on Canada's forestry industry reports that Canada's competitive advantage in low wood costs is no longer true because of higher stumpage fees and transportation expenses... FSAC recommends increasing the spending on silviculture from less than five cents per dollar to 30 cents per dollar. It also wants the costs of integrated forest management to be covered by the industry, other users, and Government rather than just the industry. (Canadian Papermaker, September/October, 1992, p. 43).

Jim Bowersock, president and CEO of Repap Enterprises Inc., advises that industry to raise its potential yearly allowable cut by enhancing silviculture on which he believes industry growth depends. (Pulp & Paper Journal, March, 1991, p. 25)

Alberta Advanced Education and Career Development do not provide information on silviculture workers in their Occupational Profiles; however the forestry technician profiles states that employment prospects in the industry are good in general.

¹Understanding the Canadian silviculture labour market, Lorenzo Rugo (1991), p. 143.

²Ibid., p. 143.

A contact with the provincial government (Land and Forest Service, Forest Management Division) indicated that there is definitely a demand for silviculture workers and the demand is likely to increase for two reasons: (1) the Land and Forest Service is being contracted out more than in the past and (2) the level of harvesting is rising. Demand is for region surveyors, planting checkers, planters, etc.

Human resource managers and contractors from various companies confirmed that the demand for silviculture workers will continue to rise because of supply shortages and government regulations. Regulation introduced in 1991 placed greater reforestation demands on industry, and this is beginning to result in more emphasis on silviculture. Daishowa-Marubeni International (DMI), for example, is just starting its silviculture program as this year marks the fifth year since it began cutting. In terms of economics, the fibre supply is expected to tighten up, and silviculture will be seen more as an opportunity to secure source of supply rather than as a cost of complying with regulations.

Currently a large portion of the work done by contractors is tree planting. However, silviculture work will diversify as the industry matures: there will be more work required for manual brushing, matting, pre-commercial thinning, etc. This will eventually result in less seasonality and better serve the local labour force. Some employers see year-round work for silviculture workers in the near future, while others noted that it will change only gradually over the next 20 years. However, the transient nature of the work was identified as an issue causing high turnover. Because forestry companies are at various stages in forest management, contractors and the workers they hire often have to move around the province, i.e. there is "regional demand" for work outside of tree planting.

One employer decided to move to a 4 day course provided by a contractor rather than a 14 week training course. The former focuses on safety and practical training related to the silviculture work required at the time. They find the longer courses too expensive because of high turnover. Many of those who have an interest in silviculture went on to pursue technical training. Another employer commented that the 14 week training course was excellent at preparing workers in the field, but a lack of numeracy skill prevented some of them from working elsewhere in the firm.

Conclusion

Based on preliminary results of a literature search and interviews with government and business there appears to be a demand for silviculture workers and the demand is expected to grow as harvesting levels increase. Along with demand for workers will come a demand for training. However, a module approach to training seems to be more attractive to employers given the high turnover in the occupation. Involving employers in the recruiting and training of students may help to connect training to longer-term employment. A need to train local/aboriginal people in management aspects involved in contracts for silviculture work was also identified.

Contacts

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