Report #09

Forestry Technologists and Technicians

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Introduction

Following the Clearinghouse report on the forest sector, partners have expressed an interest in more specific aspects of the industry. In response, the Clearinghouse has prepared a series of reports including those on silviculture workers, woodworking machine operators and this one on forestry technologists and technicians.

The information in this report comes from earlier research as well as from Alberta Advanced Education and Career Development profiles and interviews with a number of experts from industry and government.

Job Descriptions and Employment

Forestry technologists and technicians typically work for large forestry companies such as pulp mills or sawmills who are responsible for forest management, or for smaller contractors who specialize in such area as site preparation, silviculture or reforestation. Work in these fields tends to be seasonal. Technicians often have to work in the industry for several years before obtaining year-round employment. Forestry skills are also applicable to work in provincial and national parks and in the oil and gas industry.

Different employers have different biases in their hiring of forestry personnel. Some large mills prefer to hire university trained foresters while others are more open to technologists and technicians. Contractors vary in their hiring depending on their area of expertise and the market they serve. Some specialized forestry contractors hire mostly experienced forest technologists. Logging contractors hire few technologists or technicians, training their staff on the job.

Rough estimates from the Alberta Forestry Technologists Association put the number of forestry technologists in Alberta at 800 to 1000 and the number of forestry technicians at well over 500.

Forestry technologists perform a number of different functions within the harvesting and reforestation areas of the forest sector. Their duties include:

X Surveying and mapping forest areas, cut blocks and access roads.
X Inventory surveys.
X Recording the amount and condition of the wood harvested.
X Assessing disease and insect damage.
X Supervising harvesting and primary processing.
X Log scaling.
X Supervising forestry technicians.
X Nursery work, site preparation, supervision of tree planting and tree improvement.

Forestry technologists also work in the Provincial Forest Service as Forest Officers. As such their duties include:

X Managing forest protection activities, including various aspects of fire control.
X Issuing permits and licenses.
X Supervising commercial, agricultural and recreational land use.

Forestry technicians generally assist foresters and forestry technologists in their work. In addition their jobs include:

X Marking trees for harvesting.
X Using chainsaws and other tools for tree thinning, weed control and related tasks.
X Working in fire control on lookout towers, in initial attack crews or in other capacities.

In spite of the differences in training and generally expected duties, technicians and technologists often compete with each other for the same jobs, sometimes with university-trained foresters as well. The province is considering restrictive practices legislation which might reduce this competition.

Training

Forest Technologists require a two- or three-year college level diploma. There is currently just one program training forestry technologists in Alberta, offered by NAIT in Edmonton. One year is spent in class and one year at the Environment and Training Centre at Hinton. Demand from prospective students for this program is growing. In 1995 NAIT received 226 qualified applications, up from 167 in 1994. The program only has 75 students enrolled at any one time in order to avoid overtraining for the industry.

Two Alberta colleges offer training programs for forestry technicians. AVC - Lac La Biche and AVC - Lesser Slave Lake both offer 33-week Forestry Technician Certificate courses. Together these programs enroll some 40 students per year. Both schools turn away many applicants.

Fairview College used to offer a 20-week Forest Operations Certificate course at the High Level campus. This program and skill-specific modules such as surveying are now available on an "ad hoc" basis. The college is currently developing a Silviculture Technician program which will focus on forest renewal.

In addition to these training programs, summer field work is considered necessary for employment.

Demand Factors

The recent drop in the price of pulp demonstrates the forest industry's vulnerability to fluctuations in demand and in commodity prices. Nevertheless, the forest sector in northern Alberta is generally quite healthy. While they recognize the uncertainty of the industry, forestry contractors are generally optimistic about future business prospects. They see several reasons to expect their businesses to thrive over the next few years.

X Harvest operations will probably expand over the next few years as the annual harvest climbs from just over 13 million m3 in 1994 to an estimated 20 million m3 or more by the year 2000. This increase in harvest activity will create room for more companies to enter the field, opening up more positions for forestry technologists and technicians.

X Many forestry companies hold the rights to timber through Timber Quotas which leave the provincial government responsible for forest management. Over the next few years, many of these companies will switch to Forest Management Agreements (FMAs) in which the companies will be responsible for all aspects of forest management. This will increase the market for the contractors who serve those companies.

X While there may be an increase in government regulation of the environmental aspects of the forest industry, the Alberta Forest Service is doing fewer environmental audits leaving that task to the companies who hold the FMAs.

X The oil and gas industry provides work for forest contractors to help with seismic cut lines as well as with the reclamation of land used for oil and gas extraction.

X The late 1980s was a period of growth in the forest sector in northern Alberta. Many of the mills built then are still maturing and expanding their operations. For example, Daishowa Marubeni International's Peace River operation is just beginning to enter the field of silviculture.

In addition to the positive outlook for employers, there are signs that point to a strong demand for forest technologists and technicians.

X British Columbia's Forest Practices Code has a significant effect on the demand for Alberta-trained forestry technologists and technicians. Both government and industry are hiring foresters and forestry technologists from across Canada to ensure that forestry companies are operating within the province's stringent guidelines. Forestry technicians are finding jobs in the increased survey and reforestation work. This is making it more difficult for many Alberta companies to find forestry personnel with the training and experience that they want. Many Alberta firms look beyond provincial borders to find employees.

X The Alberta Forest Products Association's Forest Care program encourages forest companies to make sure that their harvest and processing operations show due care for the sustainability of the forests as resources and as ecosystems. Forestry technologists and technicians will be needed to ensure compliance with set standards.

X As the vast majority of the commercial forest land in Alberta has already been allotted, future growth in the industry will depend on companies' ability to obtain more fibre from their allocated land. This may lead to more intensive silviculture programs, which would lead to an increase in the demand for forestry technologists and technicians.

X The Alberta government is moving toward a forest conservation strategy based on the principles of ecosystem-based management. While any new regulations are not likely to be as stringent as those in B.C. they will likely have some similar results for the workforce. Many contractors anticipate an increase in the demand for pre-harvest surveys and post-harvest reforestation. Contrary to what was stated by informants for the December 1995 forest sector overview, this will probably increase the demand for forestry technicians in Alberta. Technologists will also be in demand to enforce any new regulations.

X Technological changes such as the increased use of Geographical Information Systems (GIS) in the forest sector increase the demand for technologists with strong computer skills.

X Many contractors are expanding their range of activities. For example, reforestation contractors may add surveying to their repertoire. This will extend their operating season by at least two months.

Not all of the signs for the future point to a higher demand for forestry technologists and technicians however. A number of factors suggest that the demand for new graduates may be limited even with growth in the industry.

X Employment in the Forest Service is declining. The number of Forest Officers has dropped by half since 1984. As Officers retire their positions are not filled. Private sector industries are hiring many people away from the Forest Service. The combination of training and experience received there is highly valued.

X The Forest Practices Code may not survive the next provincial election in British Columbia. If this legislation is repealed, hundreds of foresters, technologists and technicians will be looking for work across Canada.

X The competitive nature of the forestry contracting business makes it very hard to predict future employment levels. In seasonal work the workforce requirements are often not known until two or three weeks before the season begins.

X Restrictive practices legislation may reduce the number of jobs open to forestry technologists and technicians.

Employer Comments Regarding Training

X Among employers interviewed there was a general preference for technologists over technicians. The additional training that technologists have makes them more valuable to many employers in spite of their higher cost (some employers did point out that contractors who emphasize low-cost service may hire more technicians).

X There is a shortage of aboriginal people trained as forestry technologists and technicians.

X One industry informant suggested strongly that it would be better to improve the existing training programs than to add new programs.

Training Implications

The student demand for training in this field appears to be strong enough to support additional programs at both the technologist and technician levels. However, the job market, while growing, is not secure in the long term. The increase in harvest levels cannot continue indefinitely and external factors such as the current demand for forestry technologists in British Columbia are subject to change.

Grande Prairie Regional College is currently developing a Bachelor of Applied Science program in forestry. This program includes two terms of supervised work in the industry. This will likely fulfill the needs of employers who would consider applications from either foresters or forestry technologists, especially given the expressed desire for employees with a high level of technical training as well as field experience. Graduates from Fairview College=s new silviculture technician certificate program will probably find work with those contractors who are expanding their services to meet the increased interest in silviculture.

Given these new programs and the uncertainties in the job market, new programs for forestry technologists and technicians should not be introduced until the long-term job market picture is clearer (i.e. after the next provincial election in British Columbia).

Meanwhile, there is an interest in upgrading courses. As forestry contractors expand their services, their current employees will need to learn new surveying or silviculture skills. Many working forestry technologists and technicians will need to upgrade their computer skills over the next few years as GIS and other technologies become more widespread in the industry. These needs along with the seasonal nature of the work make modular, competency-based courses the best opportunity for new training in this field at the moment.

Sources

Alberta Advanced Education and Career Development, Occupational Profiles: Forest Technologist and Forestry Technician, 1995.

Northern Labour Market Information Clearinghouse, "The Forest Sector in Northern Alberta: An Overview". December, 1995.

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