

**LUMBY AND DISTRICT
FOREST SECTOR
TRAINING NEEDS ASSESSMENT**

Prepared for:

Forest Renewal BC

A Community Initiative Prepared by:

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EXECUTIVE SUMMARY

This report was initiated to address both long and short term training needs for forest sector workers in the Monashee area. Global market competition, technological advancement, increased government regulation and changing production requirements are expected to significantly alter the future of the entire forest industry. These factors will have a profound impact on forest based communities such as Lumby.

The future for forest sector jobs within the Monashee area is difficult to predict. Outside influences will continue to affect this industry and its workforce. Programs to train or retrain forest workers will be vital for creating a stable environment for the forest sector workforce. Such training should provide transitional employment opportunities, increase current skills, provide opportunities for advancement and increase job opportunities within the forest sector by improving efficiencies and enhancing production.

To address community concerns, the Whitevalley Community Resource Centre, under the sponsorship of FRBC, completed a full training needs assessment for the Monashee area. A questionnaire (*The Monashee Training Needs Assessment Questionnaire*) was developed and interviews were conducted on a representative sample of workers and employers in sawmill, value-added, harvesting and silviculture operations as well as artisans, high school students, and displaced forest workers. A total of 130 interviews were conducted from a target population of approximately 1,200 individuals. Summary data and comments from those interviewed are included in this report.

Specific job skills training pertaining to stress management, time management, career development, negotiating and conflict resolution were the most highly requested. The next most requested training fell within the woodland forest sector and included forest road construction practices and procedures, road deactivation, road assessment and prescription, as well as bridge and culvert maintenance. Riparian assessment and prescription, fundamentals of mechanical site preparation, silviculture treatment recommendations, soil conservation, and use of excavators for silviculture and road building were also identified as highly important training needs for a large number of those surveyed.

Respondents from mills and value-added facilities specifically identified metal fabrication, welding, the operation and maintenance of laser scanners, moisture detectors, pneumatic systems and analyzing (alignment/vibration/temperature) equipment as strong training needs. Training in First Aid, WCB regulations, transportation of dangerous goods, emergency spill training, and WHMIS (workplace hazardous material safety) were identified as important needs for sawmill, value-added and woodlands workers alike. Air Brake Endorsement and Driver Training were identified as ongoing requirements for the workforce in this region.

Respondents expressed considerable interest in starting a small business. A significant number of those respondents (25%) would initiate a small business outside the forest sector.

Most forest workers recognized a need for computer skills for both current and future employment. Training in the use of software and hardware along with specific courses in basic computer skills and an introduction to the internet were highlighted as being very important. Upgrading of basic education skills was identified as a prerequisite to achieving training objectives.

Recommendations arising from this report are based on comments and data collected through specific interviews and/or analysis of the assessment questionnaires. The following is a summary of the recommendations:

1. The development of a community career centre to handle counselling, basic education and specific course scheduling with an emphasis on academic upgrading, life skills, business skills and computer training.
2. The development of an accredited one year natural resource management course.
3. The development and utilization of forest worker training modules to introduce or enhance worker skills.
4. Endorse advanced local training for the enhancement of marketable wood artisan skills.
5. Research and outline obstacles and opportunities for new business entrants to silviculture and harvesting activities.
6. Work with area mills on proposals or opportunities for recovering value from non-merchantable or waste wood being generated in the Monashee area.

Table of Contents

	Page
Introduction	6
Methodology	6
Target Population	8
Discussion of Findings from Data	9
Section A: General Information and Worker Profile	9
Graph: Employment Categories	
Graph: Age Categories	10
Section B: Education	11
Graph: Math Education	
Section C: Computer Skills	13
Table C1: Training Needs and Interest in Training	
Graph: Computer Training by Category	
Section D: Small Business Development	15
Graph: Interest in Developing a Small Business	
Section E: Human Resources	18
Table E1: Current Training and Skill Levels	
Table E2: Training Needs and Interest in Training	
Section F: Production Skills and Safety	19
Table F1: Current Training and Skill Levels	
Table F2: Training Needs and Interest in Training	
Section G: Apprenticeship and Technical Training	20
Table G1: Training Needs and Interest in Training	
Section H: Mobile Equipment Experience (Mill Yard)	21
Table H1: Current Training and Skill Levels	
Table H2: Training Needs and Interest in Training	
Section I: Mechanical (Mill and Value-added Only)	22
Table I1: Current Training and Skill Levels	
Table I2: Training Needs and Interest in Training	
Section J: Electrical (Mill and Value-added Interviews)	23
Table J1: Current Training and Skill Levels	
Table J2: Training Needs and Interest in Training	

Table of Contents (Continued)		Page
Section K:	Woodlands: Mobile Equipment Experience Table K1: Current Training and Skill Levels Table K2: Training Needs and Interest in Training	24
Section L:	Woodlands: Table L1: Current Training and Skill Levels Table L2: Training Needs and Interest in Training Table L3: Working knowledge of the Forest Practices Code Graph: Woods Employed Training	26
Section M:	Supervisor and Employer Table M1: Current Training, Skills and Future Training Needs Future Training Needs for Jobs Changes in the Workplace Requiring New Skills or Training	28
Section N:	Employer Table N1: Summary of Employers' Personnel by Job Category Trainers, Train the Trainer, and Training Skills	31
Section O:	Training Courses in General	33
Section P:	Observations and Initiatives	34
	Recommendations	40
	Conclusions	41
	Bibliography	42
	Appendix	

INTRODUCTION

At both east and west entrances to Lumby, a sign clearly states, "This community is proudly supported by forest dollars." Within the Okanagan Timber Supply Area, 27% of the mill capacity is within the Lumby/Lavington area. While the timber supply is assured for 20 years, current and future changes within the industry have created significant challenges for the community, employers and employees.

The purpose of the Lumby and District Forest Sector Training Needs Assessment is to identify short and long term forestry related training needs. The resulting training recommendations will increase workers' skills, enable them to move to a higher level in their occupation and provide them with a wider range of job opportunities within the forest sector. The community must initiate strategies to deal with a projected cut reduction of 10%, or 262,000 cubic meters in 20 years (Source: *Okanagan Timber Supply Area Socio-Economic Analysis, October 1994, ARA Consulting Group*). This 10% reduction would mean a loss of 92 direct and 138 indirect jobs (27% of 341 and 511 respectively). This decrease does not take into account the effect of the reduced demand for wood as a result of the United States' lumber tariff and the loss of jobs to technical advances in the workplace.

The initiative for the training needs assessment was provided by the Whitevalley Community Resource Centre in response to several proposals submitted to Forest Renewal BC regarding training needs. These proposals included training in machine operations, safety, computer skills, forestry technical and value-added skills.

METHODOLOGY

A research team of eight individuals was contracted by the Whitevalley Community Resource Centre to conduct the training needs assessment. The mandate of the research team was to develop an assessment tool, conduct interviews, assess the findings and prepare recommendations.

Background information was gathered from several sources including meeting with representatives of the Revelstoke Forest Workers Group (Cindy Pearce and Ralph Edgett). Revelstoke has spent two years assessing training needs, developing strategies and implementing recommendations for future training requirements (*Revelstoke Forest Worker and Family Public Consultation, December 1995, Debbie Bell and Leslie Kemp*). Another valuable source was the training needs assessment questionnaire developed by Weyerhaeuser Canada, Princeton division (*Results of a Training Needs Assessment, February 1997, Judy Bergot and Sharon Adams*). The research team designed the Monashee Training Needs Assessment Questionnaire (Appendix 1) from the above sources, following the terms of reference for the Whitevalley Community Resource Centre Proposal (Lumby and District Forest Renewal BC Training Needs Assessment). Interviews of a representative sample of forest sector workers were conducted in the area extending from the Coldstream Ranch to the eastern boundary of the Vernon Forest District, referred to in this report as the Monashee Area.

A total of 130 questionnaires were completed from April to June of 1997. Interviews focused on five general areas of the forest sector. Interviews also included several students enrolled in the Charles Bloom Secondary School Career Preparation Forestry class. The number of interviews by group are shown in brackets.

- woodlands harvesting, employed and displaced workers (49)
- sawmills and value-added operations, employed and displaced workers (37)
- woodland silviculture workers (16)
- forest sector employers and supervisors (17)
- wood artisans (6)
- high school students enrolled in the forestry program at Charles Bloom Secondary School (5)

The harvesting sector and employer/supervisor interviews were conducted on a one-on-one basis. Mill and silviculture employees, high school students and wood artisan interviews were carried out in either a one-on-one or focus group format as time allowed. The Monashee Training Needs Assessment Questionnaire was categorized by the following section headings:

- A: Worker profile
- B: Education
- C: Computer Skills
- D: Small Business Development
- E: Human Resources
- F: Production Skills and Safety
- G: Apprenticeship/Technical Training
- H: Mobile Equipment Experience for Mill Employees
- I: Mechanical Equipment for Mill Employees
- J: Electrical Equipment for Mill Employees
- K: Woodlands: Mobile Equipment
- L: General Woodlands
- M: Supervisor and Employer
- N: Employer

The questionnaire provided a profile of training needs, a review of the current level of training within the community forest sector and a list of individuals capable of delivering training. Respondents could select one or more of the following four categories when answering the questions:

- have training (a formal training course or program)
- have skills (skills developed through work experience)
- need training (for current job or future employment)
- interest in training (personal interest in training that may lead to future employment or job change)

TARGET POPULATION

The forest sector workforce in the Monashee area consists of approximately 1,200 individuals in the following categories:

Sawmills:	568 workers (24 interviews)
Value-added:	130 workers (29 interviewed)
Harvesting:	346 workers (54 interviewed)
Silviculture:	173 workers (17 interviewed)
Other:	6 workers (6 interviewed)

The target population for interviews was 10% or 120 interviews (130 conducted). Internal training needs assessments had previously been conducted at Tolko Industries, Lavington (Results of the Needs Assessment of Continuing Employees at Tolko Industries Ltd., Lavington Planer, March 1997, Renee Lapierre) and Gorman Brothers, Lumby (Gorman Bros. Lumber Ltd. Training Needs Assessment).

Training needs most frequently identified in the Tolko Industries assessment were welding, log scaling and Industrial First Aid. A recommendation was made to increase basic education of employees with less than grade 12 education. Respondents cited swing shifts as a barrier to attending training programs. Fifty percent of Tolko interviewees have home computers and requested computer training.

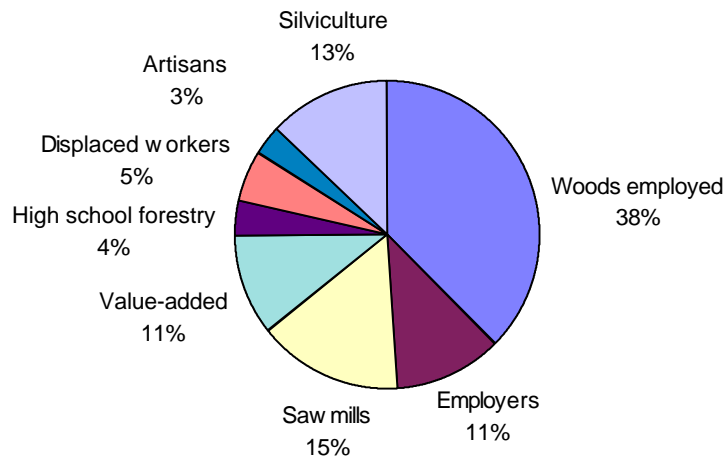
The Gorman questionnaire was administered throughout the various company locations and results correspond with those of the mill employees in the Monashee study.

DISCUSSION OF FINDINGS FROM DATA

Highlights of the summary of interviews are listed according to section category. The detailed summary is in Appendix 1.

SECTION A: GENERAL INFORMATION AND WORKER PROFILE

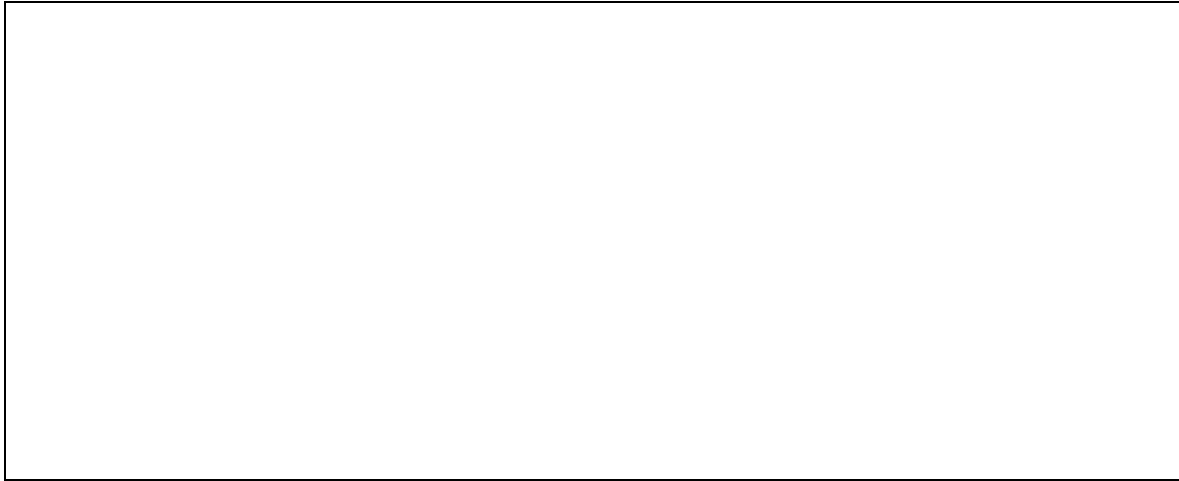
Employment Categories Surveyed



Number of Interviews According to Area of Forest Sector:

Sawmill:	24
Harvesting:	54
Silviculture:	17
Value-added:	29
Other:	6

Gender:	Male:	123
	Female:	7



Age Categories:

Age 16 to 25:	20%
Age 26 to 35:	23%
Age 36 to 45:	43%
Age 46 to 55:	18%
Over 55:	4%

Normal Work Year:

12 months:	49%
10 to 12 months:	7%
8 to 10 months:	24%
6 to 8 months:	7%
less than 6 months:	13%

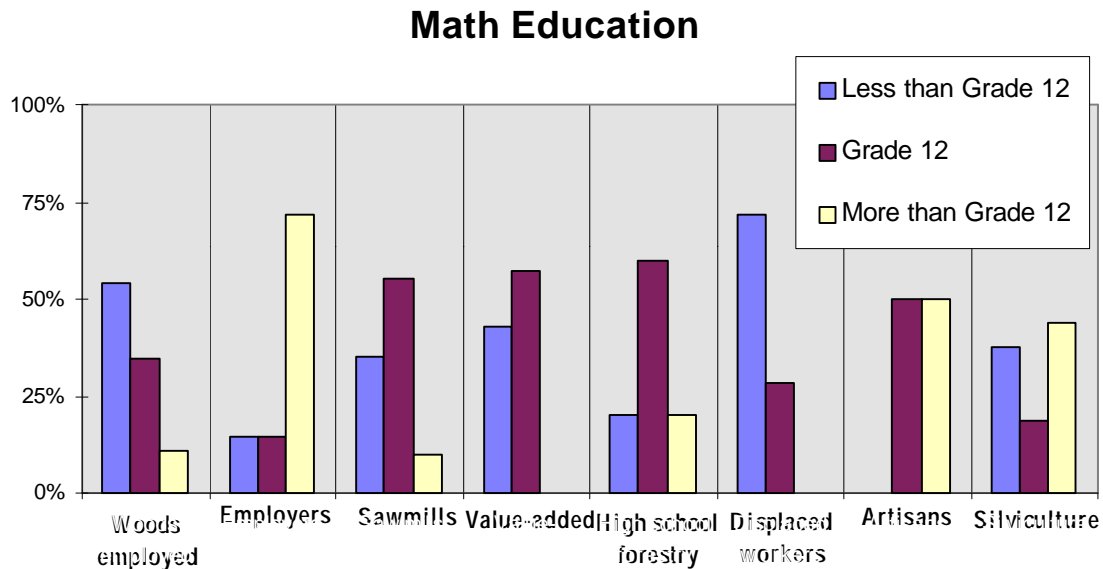
Area of Residence:

Monashee:	69%
(North) Okanagan:	31%

SECTION B: EDUCATION

Goal for those interested in further education:

High school	10%
Trade school	17%
Technical school	14%
College/University	20%



Current Education Level:

Post Secondary	20%
Grade 12	39%
Less than Grade 12	41%

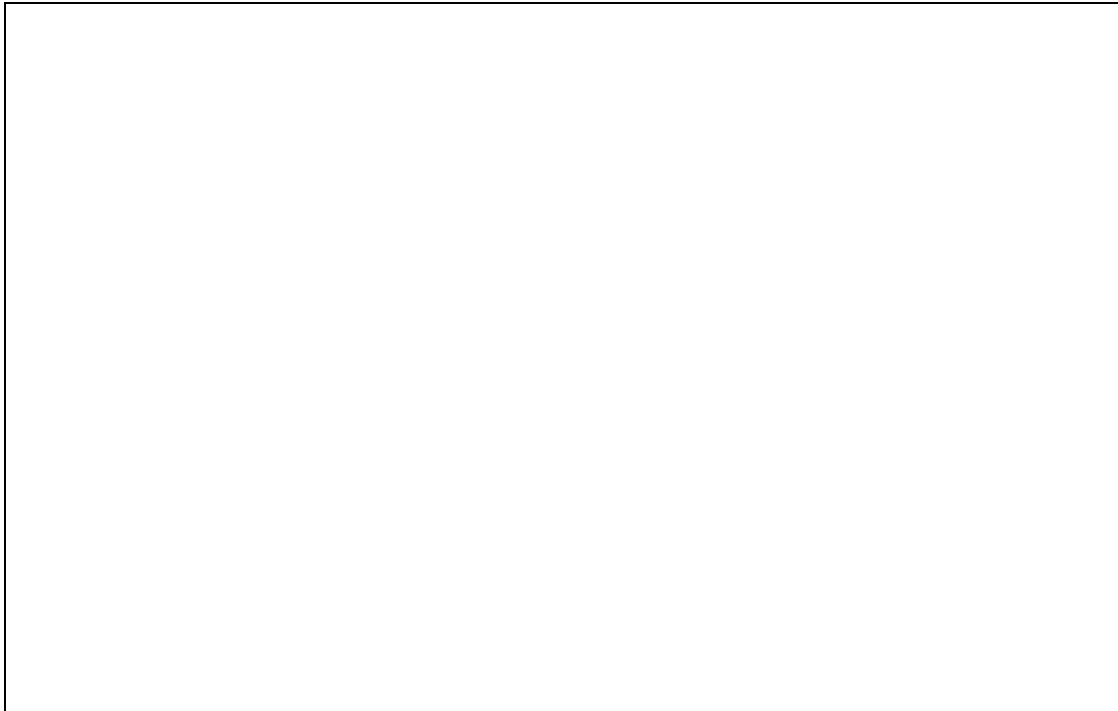
According to the recent Canadian Report of the *International Adult Literacy Survey*, almost one half of Canadian adults fall into the following categories:

- About 22% of adult Canadians 16 years and over fall into the lowest level of literacy. They have serious difficulty dealing with printed materials and most likely identify themselves as people who have difficulties reading.
- Another 24% fall into the second lowest level. Such people can deal only with material that is simple and clearly laid out, and material in which the tasks involved are not too complex. They read, but not well.

The results of the above survey clearly show that many workers require upgrading in basic education before they are able to learn new skills. Even with improved basic skills, 'literacy' today has an expanded meaning. The term also reflects a person's ability to understand and use new information.

A number of respondents to the Monashee questionnaire commented that they are limited in job options outside the forest industry because many other occupations have higher educational requirements. It is not suggested that all 41% of respondents with less than grade 12 need upgrading, but the community needs to ensure training participants have the basic educational skills required to achieve success in their next level of training.

SECTION C: COMPUTER SKILLS



Interviewees with computer related training: 38%

Interviewees with home computer: 50%

Table C1 lists the computer training needed for current or future employment positions as well as interest in acquiring training in computer applications.

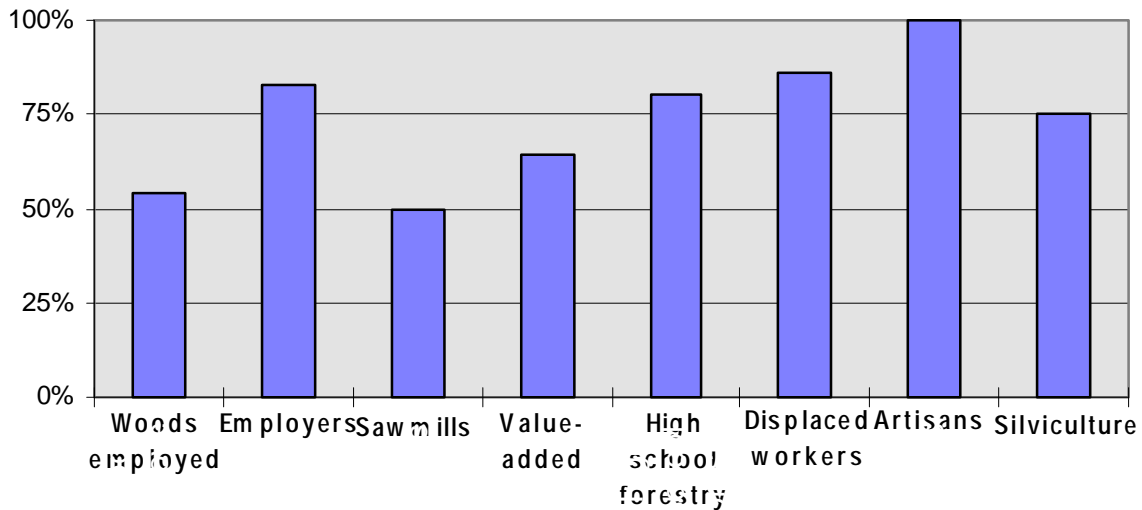
**Table C1:
Computer Skills: Training Needs and Interest in Training**

	<i>Need Training</i>	<i>Interest in Training</i>
Word processing (WordPerfect)	15%	22%
Database (MS Access)	12%	19%
Spreadsheet (Lotus 1-2-3)	9%	19%
Accounting (Simply Accounting)	9%	26%
Computer Assisted Drafting	10%	28%
Internet	16%	41%
Introduction to Computers	17%	31%
Understanding Software / Hardware	18%	31%
Technical Understanding	15%	27%
Repair and Maintenance	11%	18%

Respondents were given a variety of computer programs to choose from (listing in Appendix). The most requested computer programs are listed above. Requests for all computer related training is high for both required training or personal interest. The numbers on the survey show young workers in skilled trades or with higher educational levels have more computer training and skills than the older worker.

SECTION D: SMALL BUSINESS DEVELOPMENT

Interested in Developing a Small Business



Interviewees interested in developing a small business (includes those currently operating a small business): 68%

Intended location to establish a small business:

Within the Monashee area: 70%

Preferred type of forest sector small business from questionnaire list:

Value-added	25%
Silviculture	20%
Harvesting	18%
Watershed Reclamation	9%
Training	9%

It should be noted that many respondents are not optimistic that new jobs will be created within the forest sector. Current forest silviculture workers express interest in developing a small business outside the forest sector. This may reflect the uncertainty expressed by silviculture workers with the current practice of Forest Renewal BC replacing their jobs with "displaced forest workers" and ultimately changing the method of awarding or contracting out silviculture work. The perceived end result is displacement of current silviculture workers and financial instability for current silviculture contractors. Most of the workers interviewed had only a few weeks of confirmed work for the current field season with further work dependent on contracts still to be signed by Forest Renewal BC.

Individuals presently operating small businesses in the forest sector cite many problems with consistent funding and contracts. Respondents comment, “Project approvals and funding are late in being processed and the workload needs to be completed in short order, given the small biological window available.” Interviewees report that it is difficult to find trained personnel available to complete the work in the allotted time. There should be consistent standards between Forest Districts and Regions or between the Ministry of Forests and the Ministry of Environment, Land and Parks in contract administration.

Many of the businesses in the forest sector are tenure driven. Control of the budget and implementation of the work is related to the control of the wood fibre. Banks and investment agencies need a guarantee that the supply of wood and work related to the wood supply will be there. One value-added employer identified a lack of fibre supply and stated that if fibre supply was assured there would be many more value-added opportunities.

A reported lack of bidding opportunities is a limitation to starting new forest sector businesses. This may reflect the control tenure holders currently have on contractors. The environment for new harvesting and silviculture businesses is limited to low bids on Ministry of Forests work. The major tenure holders have no new entrant policy and tend to have a select invitation bidding system that favors established businesses.

There is interest in training for functional tasks such as business plan development and basic profitability. Many workers surveyed feel they could undertake contract work but are unfamiliar with payroll, WCB, and legal responsibilities. Contractors unfamiliar with government contracts would benefit from advance notice regarding next year's bids.

Potential contractors request training in successful costing and bid calculation techniques. There is a need for support of new businesses during the early stressful years. There is strong interest in transitional businesses in employment areas that have been downsized due to mechanization in areas such as harvesting.

Other small businesses suggested by respondents:

The identification of other small business interests by respondents demonstrates potential for **future jobs**. The largest potential exists in four categories: tourism, agriculture, trades and woodworking (craft and fine woodworking).

Respondents interested in starting a small business were instructed to select specific choices from a prepared list or select “other.” Twenty-five percent (25%) of the respondents (sample size 130) would like to start businesses outside listed forest sector businesses. Successful new business enterprises would create future job opportunities.

The business ideas identified by a number of respondents are as follows:

Tourism:	Bed and breakfast Ecotourism
Agriculture:	Market garden Greenhouse Food products, home based
Trade:	Carpentry/construction Heavy Duty Mechanic/Automotive Roofing and general maintenance Landscaping, excavator work, retaining walls
Manufacturing:	Custom concrete and moldings Metal work and railings
Woodworking:	Shop training Wood sculpture and carving Artisan village and workshop centre

Additional small business ideas:

Pottery
Model Trucks
Trucking
Nutritional Supplements
Nightclub/Casino
Auto Racetrack

Main barriers to setting up a business:

Funds/Capital	63%
Marketing Skills	39%
Business Management Skills	29%
Business Plan Development Skills	26%

Marketing exposure outside the Monashee area is needed by tourism business operators and artisans.

SECTION E: HUMAN RESOURCES (Skills/Training/Courses)

The levels of training and skills in *Human Resources* were assessed along with training needs and interests.

Table E1 lists the top five current training and skill levels of those interviewed.

Table E2 lists the top five most requested training needs or interests.

Table E1
Human Resources: Current Training and Skill Levels

	<i>Have Training</i>	<i>Have Skills</i>
Leadership Skills	18%	43%
Communication Skills	17%	39%
Negotiation Skills	17%	33%
Team Building	15%	36%
Troubleshooting	14%	38%

Table E2
Human Resources: Training Needs and Interest in Training

	<i>Need Training</i>	<i>Interest in Training</i>
Stress Management	26%	16%
Time Management	21%	19%
Negotiation Skills	21%	16%
Conflict Resolution	19%	16%
Career Development	16%	26%

SECTION F: PRODUCTION SKILLS and SAFETY

The indicated levels of training and skills in the *Production Skills and Safety* section were assessed along with interests and training needs.

Table F1 lists the top seven current training and skill levels reported by the interviewees.

Table F2 lists the six most requested training needs or interests.

Table F1
Production Skills and Safety: Current Training and Skill Levels

	<i>Have Training</i>	<i>Have Skills</i>
WHMIS	36%	14%
Chain saw	26%	55%
First Aid Level 1	28%	10%
Emergency spill training	16%	15%
Transportation of dangerous goods	16%	9%
Small mills	13%	32%
Preventative maintenance	12%	40%

Table F2
Production Skills and Safety: Training Needs and Interest in Training

	<i>Need Training</i>	<i>Interest in Training</i>
Transportation of dangerous goods	21%	21%
WCB regulations	19%	20%
Air endorsement	18%	24%
Emergency spill training	18%	22%
WHMIS	18%	17%
First Aid Level 1	8%	17%

High risk occupations in the forest sector require a similarly high level of industrial certification. The WHMIS training course has been taken by 36% of the workforce with another 18% reporting that they require this training. This number would suggest the need for an ongoing training program to meet the demand in the workplace. Workers express interest in programs such as First Aid Level 1, emergency spill training and transportation of dangerous goods.

SECTION G: APPRENTICESHIP and TECHNICAL TRAINING

Table G1 indicates the need for training and interest in training in the *Apprenticeship and Technical Training* section.

Table G1
Need Training or Interested in Taking Training

	<i>Need Training</i>	<i>Interest in Training</i>
Wildlife Technician	9%	*25%
Forestry Technician	9%	19%
Fisheries Technician	5%	18%
Heavy Duty Mechanic	7%	15%
Millwright	8%	10%
Electrician	7%	12%

There is considerable interest in Wildlife Technician training expressed by sawmill and value-added workers. (*44% of the sawmill and value-added group express interest in this category.)

Twenty-three per cent of all respondents express a need for training in wildlife, fisheries and forestry technician training. The current technical training outside of the Okanagan requires travel and living expenses. Conservatively, if even one-fourth of the interviewees applied, a first year natural resources course would have 72 applicants. Whitevalley Community Resource Centre may wish to encourage Okanagan University College to offer a forestry and wildlife technical module.

Meeting apprenticeship training needs within the local community may help prevent future displacement of workers and promote increased worker skill levels in this area.

SECTION H: MOBILE EQUIPMENT EXPERIENCE (MILL YARD)

(Sample size 48 from sawmill and value-added workers only)

Table H1 lists the top three current training and skill levels reported by the interviewees.

Table H2 lists the three most requested training needs or interests.

Table H1
Current Training and Skill Levels

	<i>Trained On</i>	<i>Skilled On</i>
Loaders	23%	21%
Forklifts	33%	21%
Dump Truck	15%	15%

Table H2
Need Training or Interest in Training

	<i>Need Training</i>	<i>Interest in Training</i>
Dump Trucks	6%	6%
Rubber-tired Backhoes	6%	10%
Forklift	4%	6%

When combined with the section F2 finding of an 18% training need for air endorsement, the need for driver training is reinforced. One employer commented that truck drivers with formal courses were better qualified than those with on-the-job training. A high skill and training level exists within the community.

SECTION I: MECHANICAL SECTION (MILL and VALUE-ADDED ONLY)

(Sample size 48)

This section is subdivided into several categories. The top training and skills for each subsection as well as the top training needs are summarized here. The complete summary for the study is in Appendix 1.

Table I1
Current Training and Skills Levels

	<i>Have Training</i>	<i>Have Skills</i>
Systems and Drives: Chain and Belt Drives	8%	21%
Machine Types (Stationary): Trimmers	10%	21%
Machine Types (Mobile): Forklifts	17%	17%
Other Specialty Areas: Welding	8%	25%
Analyzing Equipment: Alignment	13%	19%
	4%	2%

Table I2
Training Needs or Interest in Training

	<i>Need Training</i>	<i>Interest in Training</i>
Systems and Drives: Fire Protection Systems	10%	4%
Machine Types (Stationary): Dry Kilns	10%	10%
Machine Types (Mobile): Forklifts	6%	6%
Other Specialty Areas: Fabrication and Welding	13%	17%
Analyzing Equipment: Alignment	17%	21%
	6%	8%
	8%	6%
	6%	4%
Computers: CAD and Computerized Maintenance	2%	10%
	4%	2%

One respondent commented: "Laser alignment training is needed. We have the equipment in our operation but very few workers know how to use it. We also need Vibration Analysis training."

Respondents have high skill and training levels in welding and fabrication but have significant interest in further training. High training needs for MIG sets (welding) are also evident.

SECTION J: ELECTRICAL SECTION (MILL and VALUE-ADDED INTERVIEWS)

(Sample size 48)

Table J1 lists the top three current training and skill levels reported by the interviewees.

Table J2 lists the three most requested training needs or interests.

**Table J1
Current Training and Skills Levels**

	<i>Have Training</i>	<i>Have Skills</i>
Motors: Repair and Replace	14%	19%
Power Distribution (600 Volts or less)	6%	8%
AC/DC Drives	6%	14%

**Table J2
Need Training and Interest in Training**

	<i>Need Training</i>	<i>Interest in Training</i>
Laser Scanners	4%	10%
Moisture Detectors	4%	10%
Power Distribution (High Voltage)	4%	6%
(600 Volts or less)	4%	6%

The increased technical requirements of the workplace are reflected in the training needs for laser scanners and moisture detectors.

SECTION K: WOODLANDS: MOBILE EQUIPMENT EXPERIENCE

The indicated level of training and skills in the *Woodlands: Mobile Equipment* section were assessed along with interest and training needs.

Table K1 lists the top five current training and skill levels reported by the interviewees.

Table K2 lists the top eight most requested training needs or interest.

Table K1
Woodlands: Mobile Equipment: Current Training and Skill Levels

	<i>Have Training</i>	<i>Have Skills</i>
Line Skidders	16%	41%
Rubber Tired Loaders	14%	36%
Road Building: Dozers	12%	30%
Cat Skidders	12%	31%
Grapple Skidders	7%	25%

There has been an industry shift to grapple skidders from line skidders and several employers experience difficulty in finding operators. One employer comments, “I’m not going to put an inexperienced operator onto a half million dollar machine.”

Another employer reports that the experience of running heavy machinery is not being passed down to the younger operators. The same production now comes from fewer grapple skidders, eliminating many entry level positions. “Used to be you worked on the ground doing the labour jobs until your knees gave out, then you were put into the trucks. Now the kids all want to drive the trucks.”

Table K2
Woodland: Mobile Equipment: Training Needs and Interest in Training

	<i>Need Training</i>	<i>Interest in Training</i>
Excavators: Road Building	16%	22%
Silviculture	16%	12%
Processors	14%	16%
Stroke Delimiters	11%	14%
Log Trucks	13%	16%
Gravel Trucks	13%	16%
Butt-N-Top Loaders	12%	16%
Troubleshooting: Measuring Device on Processors	13%	10%

The shift from road building with dozers to using excavators can be seen in the above tables. Interest in excavators for silviculture work is also high.

There has been a profound change in the organization of logging operations over the last decade. Several respondents comment that these operations are more concentrated and accelerated. There are fewer large contractors logging greater volumes in a shortened operating season. The number of employees in these operations is declining and the work season is shorter. Mechanization has eliminated most of the hand falling and bucking jobs except in windfall areas or steep slopes. Experienced operators comment that the line skidder will be phased out within five years except for salvage or private land logging. Many stands which are currently being harvested would not be economical to log using hand fallers and line skidders as the trees are too small.

The better remnant stands are on ground that will be logged by yarders requiring training in cable harvesting skills. The chief cost or downtime associated with cable logging is the time it takes to change settings. Appropriate location of settings, intermediate supports and backspars are critical factors in minimizing moving time. Yarder contractors complain that layout is often inappropriate for their machinery because there is not a strong understanding of cable logging among local layout crews.

SECTION L: WOODLANDS

The indicated level of training and skills in the *Woodland* section were assessed along with interest and training needs. Table L1 lists the top six current training and skill levels reported by the interviewees. Table L2 lists the top ten most requested training needs or interests. Table L3 lists working knowledge of the Forest Practices Code.

Table L1
Woodlands: Current Training and Skill Levels

	<i>Have Training</i>	<i>Have Skills</i>
Fire Safety and Suppression	29%	28%
Fire Fighting	29%	27%
Forest Practice Code: General	19%	25%
Mapping and Compassing	17%	13%
Helicopter Safety	16%	17%
Riparian Assessment and Prescriptions	15%	7%

Many respondents comment that in any facet of forestry today, workers must have entry level training and experience to get a job. Skilled workers, especially those with specific technical training in areas such as fisheries, wildlife or forestry are in demand. Several interviewees see a need for formal training and certification for woodland forest workers.

One respondent cautions, “Be careful about the amount of training done. Training must have a specific need and lead to jobs at the end.”

Many woodland workers are multi-skilled in tree thinning, brushing, pruning, and planting. Most of these workers interviewed are interested in further education but in areas other than silviculture or forestry.

Table L2
Woodlands: Current Training Needs and Interest

	<i>Need Training</i>	<i>Interest in Training</i>
Forest Road Construction:		
Practices and Procedures	25%	32%
Forest Road Deactivation	20%	23%
Road Assessment and Prescription	22%	25%
Riparian Assessment and Prescription	22%	24%
Bridge and Culvert Maintenance	21%	29%
Bridge Certification	13%	22%
Silviculture Treatment Recommendations	19%	25%
Soil Conservation	19%	21%
Fundamentals of MSP	20%	26%
Site Prep/Soil Disturbance	16%	25%

The Forest Practices Code now regulates the building of roads and bridges as well as the maintenance and deactivation of roads. Regulations also cover riparian assessments, site preparation and soil disturbance. These new directions will require an increase in training courses.



Table L3
Working Knowledge of the Forest Practices Code

<i>Fair</i>	<i>Good</i>	<i>Need Training</i>	<i>Could Deliver Training</i>
24%	32%	35%	3%

Training in silviculture work (thinning, pruning, tree planting), mechanical site preparation, fire fighting and basic surveying and mapping could be delivered by local forestry workers.

SECTION M: SUPERVISOR and EMPLOYER

(Sample size 44)

Table M1 lists current training, skills, and future training needs of supervisors and employers.

Table M1
Supervisors and Employers: Current Training, Skills, and Future Training Needs

	<i>Have Training</i>	<i>Have Skills</i>	<i>Need Training</i>
Quality Control	25%	59%	7%
Environmental Awareness	25%	57%	18%
Accident Prevention	25%	57%	14%
Effective Supervision	25%	50%	14%
Management Techniques	23%	48%	32%
Motivational Strategies	14%	48%	25%
Time Management	23%	32%	23%
Basic Industrial Relations	16%	50%	20%

Changes in the workplace that require new skills or training:

Several respondents comment:

- Changes in the workplace have precipitated new training requirements related to technological advancements and changing government regulations.
- Computer skills are necessary in many jobs and in most small businesses.
- Changes in regulations in forest management are due to implementation of the Forest Practices Code. Forest Practices Code awareness is necessary for all woodland forest workers.
- Loggers and contractors must use different equipment to increase production and meet new regulations.
- Skilled workers must upgrade on a regular basis to keep current with their changing job descriptions.

Future training needs for jobs:

Several employees, employers and supervisors were asked what changes in the workplace will require new skills or training. A sampling of their comments is listed below.

Changes in the workplace require new training related to technological advancements and changing government regulations in the forest industry.

Computer skills are necessary now in many jobs and in most small businesses.

The Forest Practices Code has changed regulations in forest management and all woodland workers must have at least a basic understanding of the Code.

Loggers and contractors must now use different equipment than in the past to increase production and meet new regulations. Technical and professional woodland workers must be certified to perform many tasks beyond diplomas and degrees. Skilled workers must be constantly upgrading through continuing education to keep current.

The changing workplace also means managerial, time management, and organizational skills are changing and new techniques require training. Training is also required in safety, and life skills courses are needed for stress reduction, communication, and conflict resolution.

Employees in small businesses need more and varied skills to share responsibility for quality. They need to understand the importance of their work and how it affects the end product.

Several employees, employers and supervisors were asked what the future needs for jobs would be. A sampling of their comments are listed below.

There is a need for specific training in all areas of the forest industry.

Workers now must have multiple skills for a variety of jobs within their workplace.

Workers need to take courses specific to jobs. Set goals, see if there is a need there, then take training.

Workers need to develop greater teamwork and communication skills. The motivation to learn new skills is low.

More students should have a higher education level than grade 12 with an emphasis on math.

Certification will be required for future jobs in all areas of the industry. This will lead to trained forest workers in levels ranging from basic to professional.

Fisheries and wildlife technicians are needed for future jobs as well as those trained in integrated resource management.

Workers in log home building require certification.

Contractors and equipment operators need training in road construction and deactivation, mechanical site preparation, and bridge and culvert maintenance.

Training is needed in riparian assessment and prescriptions to effectively perform current jobs..

Further Comments:

- Specific training is needed in the sawmill, value-added and woodlands forest sectors.
- Certification for forest workers is another area of training possibilities for future jobs. This would produce trained forest workers with a range of skill levels from basic to professional.
- Fisheries and wildlife technicians are needed for future jobs as well as those trained in integrated resource management. Training is required in riparian assessment and prescriptions.
- Contractors and equipment operators need training in road construction practices and deactivation, mechanical site preparation, and bridge and culvert maintenance.
- A log building/craftsman trade training program would benefit individuals in future value-added job opportunities.

There are many highly skilled and well trained people in the Monashee forest sector. However, these individuals must stay current on existing jobs as changes in technology may reduce the number of forest sector jobs in the future.

SECTION N: EMPLOYER

Table N1
Summary of Employers' Personnel by Job Category

Employers were asked to provide the number of employees and job category in each area of operation. Table N1 reflects this information.

<i>Job Category</i>	<i># of Employees</i>	<i># Interviewed</i>
Woodlands	51	
Management/Admin.	61	
Forest Worker	32	
Logging/Trucking	107	
Manufacturing	326	
Mill Staff	30	
Total this study	607	130

Number of Monashee contractors and consultants utilized by the companies interviewed:

69 (19%)

Number of contractors and consultants from outside the Monashee area utilized by the companies interviewed:

137 (81%)

The basic level of educational requirements by the employers (13 respondents):

<i>Job Skills</i>	<i>Basic Literacy</i>	<i>Grade 12</i>	<i>Diploma</i>
54%	8%	30%	8%

Release time provided for training for employees:

Yes: 88% *No:* 12%

Future Jobs and Opportunities:

Several questions in this section address future training issues. The perception of the employees must be viewed as fairly accurate when the highest scores for “need training” match the employers’ comments with regards to future job opportunities.

Future forest sector jobs include current job opportunities and new job opportunities based on predicted forest industry trends and global economics.

Current employment opportunities in the Monashee area will require specific training. For example, workers skilled in stream survey and assessment work, stream restoration work and supervision of stream restoration work involving excavator skills are in demand.

Sawmill and value-added industries require specific work skills. Employers report that one trained technician may eventually replace three laborers. Skills are required in the following areas: knife grinder, moulder operators, vacuum system specialists, robotics expertise, independent millwright, good mobile equipment operators, marketing and product design, and hydraulics and control systems for sawmills.

Training for harvesting, harvest layout and alternate harvest systems layout is required. Skills for layout on steep terrain using cable harvest systems are needs identified by contractors and employers. Helicopter logging technology and harvest layout for visual quality protection are also required.

New job opportunities at value-added mills could include utilizing wood waste products such as hog fuel scraps. Through innovative design, a local value-added mill recycles wood waste and converts it into hanging flower baskets and bird houses. Other ideas for using wood waste materials include composting and using this compost for forest fertilizer. New strategies to deal with wood waste will improve local air quality by reducing the need for burners.

Other new job opportunities could be created within the tourism industry. Construction of recreation trails, park accessories and development of ecotourism require specific skills. Experience in marketing and program development are essential prerequisites for success in this industry.

SECTION O: TRAINING COURSES IN GENERAL

The following comments were collected on the questionnaires:

Key strengths for future training programs based on respondents' experience:

Training programs should provide background for future work, be of short duration and of high intensity. Courses should be well organized, informative, timely, accessible, hands-on and geared towards production work and realities of the job. They should provide on-the-job training and include helpful tips. Experienced trainers should be employed and participants should be grouped according to similar skill levels.

Weaknesses of previous courses:

“Boring,” “lack of depth,” “poor instructor,” “too many participants,” “training you do not use.”

Communication skills and techniques:

The trainer must be a good speaker, able to keep the group focused and stick to the agenda. Trainers must have practical knowledge, involve the audience with group activities, encourage dialogue and interaction, and use illustrations in course material, workbooks, etc. Multimedia is a preferred method for training. “Better to watch a good instructor on film, than to have a poor instructor in the classroom.”

Trainers, train the trainers and training skills:

Employers that could deliver training: 17 of 20 respondents or 85%.

Areas in which training could be provided by employers: apprenticeship log building, management, logging, trucking, machine operations and yarding.

Local trainers are available for forklifts, loaders, diesel engines, trucks, welding, cranes, bobcats and vibration machines. Training could also be delivered locally in motors, power distribution, AC/DC drives and optical scanners.

Local contractors are willing to provide training in logging equipment, cat, skidder, excavator, scraper, truck and rubber-tired loader operation, grapple skidder, hauling and logging procedures.

There is significant interest in a ‘Train the Trainer’ program.

SECTION P: OBSERVATIONS AND INITIATIVES

This section details observations from the data that suggest initiatives. The Recommendations Section prioritizes initiatives which address the most significant training needs identified by the sample survey. The initiatives have been divided into four categories:

1. Initiatives for Traditional Training Facilities
2. Employer Initiatives
3. Community-based Initiatives
4. Initiatives Based on the Leadership of the Community

The “community” in this section of the report refers to representation by the Lumby Village Council, the Forest Renewal Steering Committee, the Lumby Chamber of Commerce, the Cherryville Community Club and the Whitevalley Community Resource Centre.

The existing traditional facilities for training are Okanagan University College, the Open Learning Network and BC Forestry Continuing Studies Network. These facilities distribute catalogues outlining courses and locations.

Initiatives for Traditional Training Facilities:

Initiative #1 Strengthen Community Access to Traditional Training Facilities

Courses and training programs currently available through Okanagan University College, BC Forestry Continuing Studies Network and the Open Learning Network would provide many of the training programs requested by respondents. The community needs a resource centre situated in a central location to provide information on upcoming courses and to provide access to brochures and catalogues. Ten percent of interviewees would like to complete their high school diploma.

Many courses currently listed in the catalogue of the BC Forestry Continuing Studies Network are popular training needs requested by the respondents in the Woodlands Section of the questionnaire. These programs include Riparian Assessment and Prescriptions, Silviculture Prescriptions, Alternate Harvest Systems, Road Construction Practices and Procedures (offered by BCIT through BCFCNS), Site Preparation and Soil Disturbance, Principals of Mechanical Site Preparation and Forest Practices Code Training.

The demand for these courses is high with 16% to 25% of respondents needing training for jobs and a further 21% to 32% interested in training. This translates to 160-250 potential participants. If 10% enrolled in training there would be 16-25 students per course.

Indicated preferences for training locations are: within the Monashee (53%), within the Okanagan (43%) and outside the Okanagan (4%). Time away from work, travel and living expenses are cited as the main barriers to training. Eighty-six percent of respondents report they would be willing to pay for a portion of their training costs. Preferred time for training courses for woodland workers would be during breakup. (See Recommendation #1)

Initiative #2 Train the Trainer

Many respondents feel they could contribute as instructors for certain training courses with 59% showing an interest in acquiring the necessary skills to become a trainer. Utilizing local skilled trainers would be the most cost effective method of providing programs.

Initiative #3 Develop Locally Accredited Training for Resource Technicians

Many respondents express confidence in the potential for future job opportunities for resource technicians; particularly forestry, fisheries or wildlife technologists. Twenty-three percent of respondents indicate an interest in resource technician training. (See Recommendation #2)

Initiative #4 Small Business Development Training

Sixty-eight percent of respondents are interested in starting a small business and 70% of these would prefer to start a business in the Monashee area. Common barriers to starting a business are inadequate skills in developing a business plan, lack of business management and marketing skills, and difficulty in acquiring capital. There appears to be an opportunity for local communities to take a role in sponsoring business courses or assisting with the establishment of business counselling services. (See Recommendation #1)

Initiative #5 Air Endorsement and Truck Driver Training

Eighteen percent of respondents want Air Endorsement/Truck Driver training. Training facilities are available for air endorsement in Vernon. The community could encourage local delivery of some certification courses. Opportunities for training modules involving off-highway log hauling should be explored. (See Recommendation #1)

Employer Initiatives:

Many of the training needs identified in the questionnaire are offered to employees of larger local companies. These would be of benefit to the employees of smaller companies but delivery is not always cost effective. Community support for the following initiatives could benefit the smaller organizations and their workforce.

Initiative #6 Entry Level Forest Worker Training Program

Courses are available for woodland, mill and silviculture workers and many of the respondents express interest in these courses.

Fire fighting	Emergency spill training
Helicopter safety	Snowmobile safety
First Aid Level 1	Survival First Aid
WCB Regulations	
Workplace Hazard Material Safety (WHMIS)	

The community may wish to encourage or sponsor the delivery of these types of courses to assist workers and businesses within the Monashee area. (Recommendations #1 and 3)

Initiative #7 Certification for Log Builders

Log home construction/craftsman certification is desired by 62% of respondents. The Log Building Industry B.C. Association reports that the certification of Master Craftsman is supported by 88% of respondents to their recent survey. (See Recommendation #1)

Initiative #8 Machine Operator Training

Machine operator training is required on excavators, feller bunchers, stroker delimiters, cable yarders as well as for the computer software components of new equipment. Potential local trainers for such courses could be identified through “train the trainer” courses. Employers emphasize that technological advancements and high purchase costs of forestry equipment limit machine operation to trained and experienced operators.

There is a trend toward the use of excavators for road building, logging and silviculture. This trend will mean less training required for bulldozer operators. There will be some entry level positions become available for swampers that assist the excavator operator and do some power saw work. The best way to train operators is through a swamper apprenticeship arrangement with supplementary training in road building, site preparation or other specific applications. (See Recommendation #3)

Initiative #9 Value-added Manufacturing Workers Training

Value-added workers request training in specific activities, on specialized machines, and in certain technologies. Most notable are fabrication, welding, laser scanners, moisture detectors, pneumatic systems and analyzing equipment.

Given potential time and production losses as well as the high cost of sending workers to the training facility in Abbotsford, a *skilled replacement worker* program could be

considered for local value-added facilities. The skills needed by local value-added firms requires specialized training of the local workforce. (See Recommendation #1)

Community-based Initiatives:

The following initiatives could be locally based but may require extensive interaction with outside agencies or training facilities. In some instances specific programs may not currently be available through local employers or traditional training centres.

Initiative #10 Enhance Wood Artisans' Skills

Wood artisans in the community are generally self-employed or derive part of their income from independent woodworking activities. Certain of their skills may be of interest or even be marketable to other interested parties. Advanced or apprenticeship-style training programs for artisans should be evaluated to determine the merits of providing such training locally.

Of equal importance is training related to small business management and the marketing and promotion of artisan crafts. In addition, there exists a need for training on woodworking equipment and related techniques. (Recommendation #4 and Recommendation #1)

Initiative #11 Develop Ongoing Entry Level Forest Worker Training Programs

The training needs of forest workers could be addressed through a forest worker training program sponsored by the community. Training in tree spacing, pruning and chain saw certification, etc., could be combined with an introductory forestry course to provide the background for forest resource management skills. Training could be incorporated into forest renewal projects for on-site training. Trainers are available in the Monashee area and could be identified through "train the trainer" programs. Human resource, safety, small business, basic education and technical skills could also be addressed.

An entry level module could provide safety skills and technical training for pruning, spacing, planting and brushing. The target group should be displaced forest workers, youth and local residents seeking a career in the forest sector. Graduates could move to module 2 or seek work with silviculture contractors.

The second module should include the skills required to conduct block layout, pre-spacing surveys, riparian classification and ribboning and could include the basics of forestry such as ecosystem identification and Forest Practices Code training. The target group may include some graduates from module 1 and new applicants with a stronger forestry background. Graduates from module 2 could advance to module 3, seek employment with licensees or contractors or further their education by obtaining a technical degree.

Module 3 should be the harvesting section module and provide for on-site machine training. The target group for harvesting related training would be graduates from module 2 and other qualified new applicants from the existing workforce. Successful module 3 graduates could seek employment with contractors.

The field location for training would have to be identified. Approximately 150-200 ha/year of area requiring pruning, spacing, planting or brushing would provide module 1 and 2 with sufficient area for training. The area needs to be identified with the assistance of a major licensee.

Module 3 would require blocks needing summer harvest as well as an area scheduled for road building, deactivation and mechanical site preparation. These areas should be identified with assistance from the Ministry of Forests district manager. The logging and delivery of wood to the log sort yard would require subsidy because of low production during the training component of the harvesting operation.

These modules should be linked to the Career Preparation Forest Program at the local high school to provide training experiences in the field for the forestry class. (See Recommendations #1 and 3)

Initiative #12 Basic Skills Upgrading

The success of all training depends on the educational foundation of the student. Many workers may require basic skills upgrading before they can attempt any specific training. While 41% of the respondents have less than a grade 12 education, only 10% acknowledged an interest in upgrading their basic education to the grade 12 level. (Recommendation #1)

Initiative #13 Computer Training

Local employers indicate that current and future job skills depend on increased knowledge of computers, the Internet and specialized software. Community Learning Centres incorporating school computer labs may be one way of providing cost effective, local computer training. The need for computer training was acknowledged by 13% of respondents.

Computer based learning was viewed as a highly effective tool for individuals wishing to improve their education levels. A drop-in computer learning centre combined with facilities for training would meet the needs of persons choosing to upgrade their education and skills. (Recommendation #1)

Initiatives Based on the Leadership of the Community:

Initiative #14 Implementation of Recommendations

Specific staff may be needed to implement several recommendations advanced in this report. A liaison role between the communities, local employers and training organizations could evolve into a full time position. (Recommendation #1)

Initiative #15 Support for New Entrants into the Forestry Contracting Industry

Discussions between local industry, various Ministries, and aspiring contractors should be encouraged to assist new entrants with promoting their enterprises. Current opportunities do exist but reduced budgets and regulated long term contract conditions limit access by new entrants. Strategies to support new enterprises within the community must take existing local enterprises into consideration, of course. Efforts should be made, however, to assist the creation of new and viable businesses. (Recommendation #5)

Initiative #16 Utilization of Wood Waste Materials

The community could liaise with local mills to explore options for dealing with wood waste materials. Disposal of wood waste is identified as a major concern by forest companies in the Monashee area. Considerable expense and effort will be required to produce an economical solution for the disposal of waste products. Numerous attempts have been made to develop marketable alternatives but a realistic workable solution is still being sought. (Recommendation #6)

Initiative #17 Liaison with Provincial Ministries and Agencies

The community should liaise with government agencies to develop workshops designed to outline the process of budgeting, funding, advertising and awarding of contracts. Concern is expressed by respondents that the bid process and timing of contracts changes from year to year and it is difficult to stay informed. A “Ministry/Contractor Forum” would improve the exchange of information. (Recommendation #5)

RECOMMENDATIONS

The following recommendations are based on the most significant training needs extracted from the initiatives described in Section P (Observations and Initiatives).

Recommendation #1

The community should assist in the development of a Community Career Centre to identify and supply training programs, encourage participation and provide counselling and assessment services.. (See Initiatives 1, 2, 4, 5, 7, 9, 12, 13 and 14)

Recommendation #2

The community should propose the development of an accredited, one year Natural Resource Technician course, in conjunction with Okanagan University College. (See Initiative #3)

Recommendation #3

The community should propose the development of Forest Worker Training Modules to provide training in skills ranging from basic forestry to machine operation. The objectives of the modules would be to ensure the local workforce has access to the most up-to-date training available in order to acquire or maintain skill levels needed to meet current industry demands.

These modules could be linked to the Career Preparation Forestry Program at the local high school to provide training experiences in the field for the forestry class. (See Initiatives #6, 8 and 11)

Recommendation #4

The community should endorse training programs for artisans and craftsmen with emphasis on training, skill development and use of equipment. (See Initiative #10)

Recommendation #5

The community should seek to advance and promote opportunities for new enterprises in forest resource management activities to assist in the creation of new and viable local businesses. (Initiatives #15 and 17)

Recommendation #6

The community should take an active role in developing a cost effective method of dealing with waste wood material. Every effort should be made to extract as much value as

possible from so-called waste products and the goal should be to develop or enhance local businesses wherever possible. (Initiative #16)

CONCLUSIONS

The training needs of the local forest sector were assessed to determine both short and long term needs of workers and businesses. The findings indicate that programs to train or retrain forest workers will be vital for creating a stable environment for the Monashee forest sector. A number of educational and training needs were specifically identified.

The overriding conclusion is that access to continuous and ongoing training is essential to local workers. They must acquire and maintain the necessary skill sets and competitive edge required by local industry to compete in our global economy.

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