

**FRAMEWORK FOR DEVELOPMENT AND DELIVERY
OF
ENVIRONMENTALLY SENSITIVE PRACTICES
FOR
FRONT LINE FOREST WORKERS**

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Western Newfoundland Model Forest

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TABLE OF CONTENTS

Table of Contents	ii
List of Appendices	iii
Disclaimer	iv
PURPOSE	1
Project History and Relevance to Model Forest	1
Title	2
Project Goal	2
Project Objectives for March 1996 - March 1997	2
ENVIRONMENTALLY SENSITIVE RELATED TRAINING TO DATE	2
History	2
Training to Date	2
Training Categories & Classification	2
Front line Forest Workers	3
Training Initiatives to Date/Directly Environmentally Sensitive	3
Corner Brook Pulp & Paper Ltd. (full-tree logging)	3
Abitibi - Price Inc.	4
Formal Training/Seminar for Crown Land Operators	4
Informal Training	4
TRAINING TOPICS	5
Other Topics	5
Training Type & Delivery Process	5
FRAMEWORK FOR DELIVERY (Tasks # 1-5)	6
PROPOSED TRAINING	15
Delivery	15
Methodology	15
Final evaluations will be based on the results of the program	15
Topical Subject Areas (per classification)	16
Duration/Size	19
Time frame	19
Equipment	19
Other Instructional Resources	20
Estimated Budgetary Requirements	20
Other Partnerships	20
Standardized Codes of Practice	20
CONCLUSION	21
Table 1. Environmental Ethics/Training Components	12

LIST OF APPENDICES

Appendix I: Survey	22
Appendix II: Department of Fisheries & Oceans Fact Sheets	25
Appendix III: Training Initiatives to Date/Indirectly Environmentally Sensitive	26
Appendix IV: List of Contacts/Collaborators	28
Appendix V: Resource and Reference Material	30

DISCLAIMER

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PURPOSE

The partners of the Western Newfoundland Model Forest (WNMF), in particular Corner Brook Pulp & Paper Ltd., Abitibi-Price Inc., the Newfoundland Forest Service (NFS), and the Centre for Forest & Environmental Studies (CFES), will be offering a “train the trainer” session in order to instill environmentally sensitive practices within front line forest workers and have compiled this report as part of a human resource assessment and framework strategy for the development and delivery process.

This report is designed as a framework document only and should not be considered a comprehensive document of all of the training that has occurred either formally or informally. The identification of various training initiatives and the certification process has been ongoing primarily as the result of a need to satisfy occupational health and safety concerns, to adjust to the adoption of new technology and new methods, to meet new regulations, guidelines and policies set by company, government and industry, to maintain and or enhance productivity and quality and to ensure there is an adequately trained labour force for all aspects of the industry. Another factor prevalent is the requirement for the employee to be versed in many areas of forest work thus becoming more employable.

Project History and Relevance to Model Forest

The Western Newfoundland Model Forest is supporting the development of a train the trainer program to be delivered to the forest worker that addresses specific forest management topics including; ongoing discussions/processes regarding national and international CSA and ISO certification, understanding the environment and sound environmental practices in the forest.

The training will be designed to incorporate basic environmental protection goals, good harvesting and work techniques that enhance wildlife habitat, recreation and aesthetic values. As a result of this proposed training, forest workers should be able to talk about their work to the public as being a major contribution to sustainable forestry.

Section 7.3 of the Western Newfoundland Model Forest proposal states: “new and innovative approaches of management of the Province’s forests, the results of the management strategies and research initiatives will be communicated to practising resource managers, the general public, and researchers through a number of communication mechanisms. The Model Forest Proposal Committee proposes to contract these ‘mechanisms’ out to professional public relation and education companies and/or individuals in order to ensure a high quality approach. The following communication techniques will be employed.

Two sets of short courses will be developed. The first set will be for technical and directed towards resource managers and researchers in order to transfer new approaches and decision-making systems for use outside the Model Forest and to identify new research requirements. **The second set of short courses will be designed for the public and forest workers to address such issues as domestic cutting, understanding the environment, and sound environmental practices in the forest.**



Title

“Environmentally Sensitive Practices for the Front Line Forest”

Project Goal

To adopt a Western Newfoundland Model Forest Standardized Code of Practice/Environmental Ethics Program through a series of short courses aimed at forest workers.

Project Objectives for March 1996 - March 1997

- a) To document present training efforts of the collaborators.
- b) To develop and deliver a “train the trainer” session utilizing the services and resources of all contributing collaborators.
- c) To instill within the forest worker a greater understanding of sustainable forestry.

ENVIRONMENTALLY SENSITIVE RELATED TRAINING TO DATE

History

Various training initiatives and the certification process has been ongoing, primarily as the result of a need to: satisfy occupational health and safety concerns, adjust to the adoption and adaption of new technology and new methods, meet new environmental regulations, guidelines and policies set by company, by the government and the industry, maintain and or enhance productivity and quality, ensure there is an adequately trained labour force for all aspects of the industry, expose the employee to many areas of forest work thus making the employee more employable.

Training to Date

The identification of past various training initiatives ensures that: we can avoid duplication of existing training programs as well as assess prior learning of front line forest workers, there is proper identification of environmentally sensitive training gaps and take the necessary steps to fill these gaps, the process identifies the individuals, organizations and departments that should be involved in the train the trainer program, documentation, standardization, accreditation and packaging occurs ensuring a provincially and nationally recognized train the trainer program.

Training Categories & Classification

Training to date would include that which was directed towards veterans of the workforce, new employees, and those that were parachuted into the industry as the result of job creation and development either short-term or long-term. Training may be classified as formal and informal, certified and non-certified, field oriented or classroom oriented and off-season rather than on the job.

Front Line Forest Workers

The front line forest workers are categorized as those closest to the trees. They may be classified as full-time, seasonal, part-time or other which would include contractual. The front line forest worker may be working as an employee of either Corner Brook Pulp and Paper Ltd., Abitibi-Price Inc., the Newfoundland Forest Service, a Forest Contractor, Newfoundland Power, Newfoundland Hydro, or other group that carries out work for the forest industry. These front line workers are employed in the logging industry, the sawmilling industry, the silviculture industry; which would include thinning, stand tending, stand establishment, nursery, planting, protection and other related areas. (See Appendix I for a comprehensive list of Roundwood Contractors, Eric Young, NFS, '96)

Training Initiatives to Date/Directly Environmentally Sensitive

Corner Brook Pulp & Paper Ltd (full-tree logging)

Corner Brook Pulp and Paper Ltd. has been genuinely concerned about their full-tree logging and environmental practices on sensitive sites, and as a result of a joint initiative under the direction of the Western Newfoundland Model Forest Program they initiated a project entitled "**Respecting Fish Habitat And Other Environmental Values While Conducting Logging Operations On Sensitive Sites In Western Newfoundland**", (J.R. Leach, Aug. 94). The project was undertaken to "study ways and means of conducting logging operations within the sensitive conditions in a manner which would: a.) preserve the productive capacity of streams, b.) respect water quality, and c.) minimize terrain disturbance, while remaining cost effective and respecting fiber requirements and future fiber supplies." One of the major recommendations (6.(f)) of the Jeff Leach report was that the company hire an individual (Kevin Parsons) to determine the most environmentally-wise ways to harvest the sensitive areas. Hard decisions were made based on conditions such as: season (winter/summer), accessibility, buffers (along brooks streams and ponds), specific logging equipment (grapple skidders and clambunk eight wheel tracked skidders, shortwood harvesters and feller bunchers), operating shifts (day/night), slopes, depth of topsoil, cutting schedules, methods of planning, follow-up and evaluation. The project has enlightened everyone involved in how this type of detailed analysis, increased environmental awareness for front line forest workers, and constant contact with the contractors has resulted in better harvesting practices and less detrimental effects to the environment. One of the recommendations being considered is to move into a shortwood system replacing a tree feller buncher with two shortwood harvesters and making some modifications to a clambunk skidder utilizing a forwarder rack. The increased mobility of the shortwood harvesters and the environmentally sensitive converted clambunk skidder could enable the company to go back

and harvest environmentally sensitive areas that were by-passed in the first round utilizing the full-tree system.

In addition to on-going training for loggers, an intense Pre-Commercial Thinning Training Program (1980's) was conducted at Loggers School road.

Abitibi - Price Inc.

Jim Evans of Abitibi-Price conducts on a regular basis an "Environmental Awareness Program" for the woodlands division. As per a conversation with Don Brain, they have extensively conducted environmental awareness training through videos, handouts, ID cards, utilizing methods from other companies i.e. STORA, randomly chose areas for an internal audit of the management plan and hired Price-Waterhouse to evaluate and rate as per such characteristics as biodiversity, items directly related to CSA/ISO 14,000 certifications. This was used as a baseline from which to point out areas to improve as per an action plan. They have also looked at grading techniques, taken springs out of roads using weeping tile, (french culvert technique), have a demonstration area through an agreement with fisheries and co-sponsored by CASEC showing various forms of environmental management for bridges, culverts, roads etc. They have zero tolerance for fuels and all systems are dyked with locked shut-offs. Two-day seminars for back-hoe, tractor operators and others have been conducted. Work is being pursued in hydroseeding, sandbagging and utilizing silt traps called fisheries coffer dams. They have made a video with Dave Quinton of Land & Sea.

Note: Both companies conduct professional safety training and training in work methods utilizing their safety supervisors and training.

Formal Training/Seminar for Crown Land Operators

One-day seminar by NFS, Fisheries & Oceans, Wildlife, CFS, Water Resources in Clarendville, Lewisporte, and Deer Lake (Spring 95) for Crown Land operators on the effects of harvesting on complementing natural resource values. Approximately 30-40 candidates per site received a certificate of participation. (See Appendix II, DFO Fact Sheets)

Informal Training

Environmentally sensitive informal training has been conducted by; the Newfoundland Forest Service, both Company Operations and Contractors. They include examples such as:

- contractors acquiring the services of company and crown officials on a individualized company by company basis to come in and meet with the workers to explain company and environmental policy regulations, etc.
- training conducted for workers taking part in stand reclamation (SR) projects. This training was usually conducted at the development association office where the project was to be carried out

and involved the forestry department providing relevant information to the workers who would be taking part in cutting the blocks of the SR project . The employees were made aware of cutting regulations, environmental regulations and purpose of the SR in general.

TRAINING TOPICS

Training topics to be addressed about the environment and its impact on the Forest Industry would include, but are not limited to the following:

- sustainable forestry practices
- forest ecosystem classifications
- wood utilization
- forest values
- ecosystem management
- other
- aesthetics
- timber harvesting
- stand conversion
- public perception
- terrain
- spraying/pest management
- firewood/domestic cutting
- impact on wildlife habitat and other
- age health, species of trees
- recreation

Other Topics

It is assumed that other training needs such as those listed below will have been mastered previously in other related training sessions:

- occupational health and safety
- operation and maintenance of equipment
- identification of forest conditions
- basic fire fighting
- new technology upgrading
- safe felling/and or skidding
- fatigue & time management
- management practices
- first aid/WHMIS
- other

Training Type & Delivery Process

Training will be conducted for loggers, skidder/forwarder/mechanical harvester operators, tractor/excavator operators, silviculture workers, sawmill operators, truckers, technicians, forepersons, independent contractors, supervisors and others that carry out related forest work.

The proposed type of training would be on the job supplemented by relevant classroom training of short duration. Training content, duration and delivery would depend on the skill levels of participants.

FRAMEWORK FOR DELIVERY

There will be a number of tasks required to be fulfilled prior to the delivery of a train the trainer program as part of an ongoing process. The following tasks form a basis from which to start.

TASK #1. Identify Forest Worker Skills and Skills Requirements for Environmental Sensitivity

(Most of the information will be indirectly relevant)

Relevant Courses to Date

-as per previous related training to date

Relevant Skills Area

- Safety training
- Work ethics
- Protective clothing/equipment

Employment Patterns & Skills Area

- Jobber (non-unionized)
- Unionized
- Contract
 - Stand Reclamation
 - Thinning
 - Logging
 - Woodlot Management
 - Planting
 - Prescribed Burning
 - Other

Product vs Skills

- Sawlog operation
 - Logging
 - Sawing
 - Full-tree utilization
 - Other

-Logging

- Full-tree skidder
- Full-tree mechanical harvester
- Trail drop forwarder
- Cut & bunch (short & long)
- Commercial thinning
- Other

-Silviculture

- Planting
- Thinning
- Prescribed burning
- Raking
- Site improvements
- Other

Broad-based skills

- Species identification
- Knowledge of relevant regulations, policies & procedures
- Environmentally sensitive forest practices
- Other

Job classification (unionized/nonunionized)

- Logger
- Thinner
- Planter
- Equipment operator
- Foreperson
- Technician
- Contractor
- Other

Specialized Expertise within job classifications

- Specialized skills/training completed to date
- Certification
- Experience
- Interprovincial certification
- International certification
- Other

Relevant Courses to date (off-the-shelf) cross-sectional/specialized

- Basic courses
- Technical
- Specialized
- Other

Prior Learning Assessment

- Versatility
- Creative, energetic, self-starters, technical, continuous learning, maturity,
- Other

Communication Skills/Technical Skills/Business Management Skills

- Basic communication, technical & business management
- Technical communication, business management skills

Project MGT Skills/Instructional Skills (train the trainer)

- Entrepreneurship
- Supervisory
- Leadership
- Instructional
- Train the trainer
- Other

TASK #2. Identify Courses/Modules/Logistics Based on Findings of No. 1
As per the following examples:

(a)Mandatory core courses:	Mandatory entry level courses:	Electives:
-professional forestry worker	-safety including WHMIS	-logging
-environmental harvesting practices	-work ethics	-silviculture
-basic tree identification	-regulations, etc...	-roads
-other	-other	-supervisory
		-other

(b)Feasibility/Priority

- Who first? Front line Forest Workers
- What first? What has been done? What are the priorities?
- When? Down time? Operating Season?
- How? Train the trainer? Seminars? Workshops?
- Duration? One day?

(c) What is the nature of the existing and future needs of the forest industry?

How does this factor into plans already being undertaken as the result of ongoing certification, CSA, ISO and other complementing processes?

(d) What ways might these needs be met through a train the trainer program?

- Avoidance of duplication resulting in standardization?
- The right people doing the right training?
- Cost Savings?
- Other?

(e) Other Factors

- Uniformity?
- Grandfathering?
- Competition? (In-Province? Nationally? Internationally?)
- Certification?
- Legislation?

Bottom line.....workers are required to have a more complete understanding of the process, as well as be part of a team, know about the objectives and goals of the organization for which they work, be able to communicate effectively within and outside of the workplace and be flexible to the continuous learning processes, acquiring of new skill sets, adaptable to new technologies and trends thereby ensuring they are not static and are more employable through the efforts of the company as well as their own efforts.

TASK # 3. Categorize Environmental Ethics/Training Components

The Environmental Ethics/Training Components are categorized under major headings specifically related to a training component and can be directed specifically to front line forest workers. There will be overlap and complimentary categories. The following is to be considered as a general guide to the training process. (Note: A-H is summarized in table form on page 13)

(a) Human & Environmental Health & Safety (Human Env. H & S)

- Workplace health and safety issues in relation to, noise pollution, the working environment, contamination and enforcement activities performed by regulatory activities;
- Safe operation and maintenance of equipment
- Safe felling/and or skidding
- Fatigue and time management
- First aid/WHMIS
- Timber harvesting

(b) Water Quality and Protection (Water Q & P)

- Work activities related to the protection and control of water quality and water pollution
- Spraying/pest management
- Impact on wildlife and other

(c) Fuels, Lubricants & Waste Management (Waste Mgmt.)

- Work activities related to fuels, lubricants and waste management, the control of land pollution caused by waste, and other related land quality issues as the result of forest working techniques
- Management practices
- Sustainable forestry practices

(d) Conservation & Management of Fishery & Wildlife (Cons./Mgt. OF F & A)

- Activities related to the conservation and preservation of fishery and wildlife resources including buffer zones, wildlife guidelines, fish protection procedures for small streams and environmental logging standards
- Forest values
- Ecosystem management
- Identification of forest conditions
- Terrain

(e) Outdoor Recreation (Out. Rec.)

- Work activities related to recreational areas as a resource. Management of the work activities for additional multi-use

- Recreation
- Firewood/domestic cutting

(f) Forestry Conservation (Forest Cons.)

- Work activities/procedures related to the conservation, preservation and wise use of forests as a natural resource
- Age, health, species of trees
- Wood utilization

(g) Integrated Natural Resource Management (Int. Nat. Res. Mgt.)

- Work activities related to the integrated management of natural resources and eco- systems as a whole, involving the application of multi-disciplines in the assessment and evaluation of natural resource systems, and in the development of policies and measures to protect, conserve, preserve, and restore our natural resource systems after forest treatments
- Forest Ecosystem Classification
- Stand conversion

(h) Forestry Communication/Education/Research (Forest Comm. Educ. & Res.)

- Work related activity in regards to; the design, development and delivery of public communication/education on forest environmental/ethical issues, the on-going maintenance of public relations regarding issues and the researching, documenting and reporting of relevant forestry issues, news and educational activities
- Activities related to research which is undertaken to understand the impact of human activities on the forest as well as the evaluation, development and testing of new silvicultural, harvesting, management technologies for adaption and possible adoption to our forest conditions
- Aesthetics
- Public perception
- Basic fire fighting
- New technology upgrading

Table 1. The following table represents an “Itemized Environmental Ethics/Training Components” breakdown on who should receive training and what type is required.

Job Classification Front line (Field)	Human Env. H&S	Water Q & P	Waste Mgt.	Cons./Mg t of F & W	Out. Rec.	Forest Cons.	Int. Nat. Res. Mgt.	Forest Comm. Educ. & Res.
Logger	X	X	X	X	X	X	X	X
Silviculture	X	X	X	X	X	X	X	X
Sawmiller	X	X	X		X	X	X	X
Other								
Job Classification Mechanized								
Skidder/ Forwarder	X	X	X	X	X	X	X	X
Mech. Harvester	X	X	X	X	X	X	X	X
Excavator Operator	X	X	X	X	X	X	X	X
Tractor Operator	X	X	X	X	X	X	X	X
Trucker	X	X	X					X
Job Classification Operations								
Scaler	X	X	X	X		X	X	X
Foreperson	X	X	X	X		X	X	X
Technician	X	X	X	X	X	X	X	X
Contractor	X	X	X	X	X	X	X	X

TASK #4. "Train the Trainer Curriculum Development Workshop" (collaborators)

SAMPLE AGENDA

**Development, Scheduling, Delivery, Evaluations and Recommendations for a Series of
Course Modules for Front Line Forest Workers**

Facilitator

1. Introduction (Large Group)
 - Facilitator's welcome, opening remarks, purpose & objectives of the meeting
 - Review of agenda (circulated 1 month prior) additions and deletions
2. Round-the-table (Individual Introductions)
 - Self - Introductions, areas of expertise and involvement
 - Perceived priority issues and special interest topics
3. Profile of the Forest Industries
 - Overview by Abitibi Price Inc./Corner Brook Pulp & Paper/Newfoundland Forest Service Include ISO, CSA, Federal Process and Speakers from these groups (Relevant Guest Speakers)
 - specific classifications of front line workers
 - management plans outlining work schedules
4. Statements from Representing Individuals (Individual/open discussions)
 - Educational Institutions, including Dept of Education
 - Skills Shortage areas; Trainers/Safety Supervisors, etc.
 - Focus on strategy - What do we want to achieve?
 - Identify CSA, ISO, etc. training requirements
 - Prioritize needs, path and schedules of events/milestones
5. Proposed Method of Delivery/Qualifications/Certification (Small Group Presentations)
 - Delivery Mechanisms (distance, train the trainer, etc.)
 - Qualifications required
 - Identification of key working group
6. Fine Tuning of the Proposed Curriculum. (See TASK # 5, page 15)
7. Overview and Evaluation of Meeting.
 - Path and Schedule of events including training schedule.
 - Next meeting & Adjournment.

TASK #5. Working Group will Draft Curriculum for Field and Classroom

Identify, design develop and deliver the following components:

- a: Course(s) Name(s) & Number(s)
- b: Descriptive Title(s)
- c: Course Description(s)
- d: Prerequisites
- e: Co-Requisites
- f: Credit Value
- g: Time Allocations: Lectures, Laboratory, Seminars, Field Experience, Practicum, other
- h: Textbook(s)/Software
- i: Course Aims
- j: Course Objectives
- k: Major Topics
- l: Major Tasks/Sub-Tasks
- m: Evaluation
- n: Department of Education Approval
- o: Development History
- p: Revisions
- q: Instructor's Notes

Working Groups will address other related curriculum development components, the milestones for each as well as any other related concerns/issues as they arise.

- Target trainers
- Target audience
- Working Groups
- Specific Schedule; Days, Months, Years
- Distance Delivery
- Delivery Mechanism; Field/Classroom/Formal/Informal
- Credits/Prior Learning Assessment

PROPOSED TRAINING

Training would be directed towards veterans of the workforce, new employees, and those that have been parachuted into the industry as the result of job creation and development either short-term or long-term. Training may be classified as formal and informal, certified and non-certified, field oriented or classroom oriented and off-season rather than on the job:

- Part-time continuing education
- Selective short term training
- Distance learning
- Campus delivery
- Packaged self-instruction, site- based.

Delivery

A train the trainer program would:

- train the staff of collaborators
- utilize/pool resources of collaborators
- be recognized nationally and internationally

Methodology

Traditional course descriptions and educational objective type delivery is not recommended (based on lectures, evaluations by tests or exams, instructional inputs only). The more of a "hands-on", field oriented, learn by doing atmosphere and identification with real life situations will enhance learning and ensure a greater understanding of the tasks at hand. The sharing of past experiences of credible instructors/participants from a wide range of fields will also be an invaluable educational tool for the co-ordinator to use and for all involved in the training process. (Some classroom sessions are unavoidable for orientation purposes)

Emphasis will be based on team building exercises and problem solving; interpersonal relationships, group dynamics; and individual skills will provide a broad base/foundation for participants upon graduation from this program. (loggers, operators, planners, management, technicians, forepersons, government officials, environmental groups, external auditors, etc.)

Project based specific real world situations can be used to effectively ensure results will be measurable, attainable and effective for various situations. (Similar to Kevin Parsons work)

Final evaluations will be based on the results of the program

Does the student/participant understand company goals and objectives for environmentally sensitive areas?

Using a real life situation and team setting, have all the criteria been met in regards to a sensitive environmental ethics program applied to the specific task at hand?

If the criteria was not met, why? Did the team have the ability to know and understand the factors that influenced this? (caused the problems) Have they learned from the process and can they provide an objective evaluation of the process?

Were financial and feasible factors addressed and how does this balance out in the whole scheme of things? (management plan)

Can this exercise be effectively communicated to the public by all members of the team to be the best possible environmentally sensitive solution to the problem or exercise?

What individual feelings do you have towards the process? Can the team be flexible enough to identify and implement a more beneficial way to carry out the exercise?

This program will require close partnerships, the sharing of resources and expertise, the will to drop or put aside *learned (pre-conceived)* ways for conducting traditional work activities and the *flexibility* to be able to adapt to new concepts and methods.

Topical Subject Areas (per classification)

Different areas of expertise/classifications of workers will be required to work together and plan as a team type operation to ensure the environmentally ethical training is applied to real life situations.

The following are examples of training initiatives only and can be modified to fit the needs of all parties:

(1) Logger: Safe cutting/logging (Human & Environmental Health & Safety)
Tree Identification (Forestry Communication/Education/Research)

Requirements: Must be in good physical condition, have good eye & hand coordination, as well as good hearing and sight (may initially ask for volunteers)

Duration: To be determined, pending skill levels of trainees

Objective(s): (Tentative)

1. Practice & maintain a safe working environment
2. Understand environmental regulations and practices
3. Identify and demonstrate methods for reducing erosion and pollution
4. Identify hazards
5. Identify tree species, age classes & basic site classifications

Components of Training:

1. Classroom %
2. Field %
3. Laboratory %
4. Seminar %
5. Guest Lecturers %
6. Other %

Knowledge:

1. Theory
2. Occupational Health & Safety
3. Equipment Safety & Maintenance
4. Local/Personal Experience
5. Other

Note: This type of training could be designed for cutters involved in tree-length, cut & bunch, drop cutting for forwarders or any combination of harvesting activity where manual felling is a component.

(2) Skidder operator: Safe skidding practices (Human & Environmental Health & Safety) Skidder Cleaning (Fuels, Lubricants & Waste Management)

Requirements: Must be in good physical condition, have good eye & hand coordination, as well as good hearing and sight, must have gained knowledge of machinery and have acquired basic mechanical skills (may initially ask for volunteers)

Duration: To be determined, pending skill levels of trainees

Objective(s): (Tentative)

1. Practice & maintain a safe working environment
2. Understand environmental regulations and practices
3. Identify and demonstrate methods for reducing erosion and pollution
4. Identify hazards
5. Demonstrate safe skidding, yarding practices

Components of Training:

1. Classroom %
2. Field %
3. Laboratory %

4. Seminar %
5. Guest Lecturers %
6. Other %

Knowledge:

1. Theory
2. Occupational Health & Safety
3. Equipment Safety & Maintenance
4. Local/Personal Experience
5. Other

Note: This type of training could be designed for forwarder, grapple skidder or other operators where hauling/forwarding practices are utilized.

- (3) Bulldozer/Excavator Operator: Buffer zones (Conservation & Management of Fishery & Wildlife)
 Skidding parallel to streams (Water Quality and Protection)

Requirements: Must be in good physical condition, have good eye & hand coordination, as well as good hearing and sight (may initially ask for volunteers). Should have basic mechanical skills complemented with basic knowledge of Forest Management Operating Plan

Duration: To be determined, pending skill levels of trainees

Objective(s): (Tentative)

1. Practice & maintain a safe working environment
2. Understand environmental regulations and practices
3. Identify and demonstrate methods for reducing erosion and pollution
4. Identify hazards
5. Identify tree species, age classes & basic site classifications
6. Demonstrate environmentally-friendly operating practices.

Components of Training:

1. Classroom %
2. Field %
3. Laboratory %
4. Seminar %
5. Guest Lecturers %
6. Other %

Knowledge:

1. Theory
2. Occupational Health & Safety
3. Equipment Safety & Maintenance
4. Local/Personal Experience
5. Other

Note: This type of training can be designed for operators who may be using Mechanical Harvesters, Feller Bunchers, or other similar equipment as part of the front line equipment that may be involved in harvesting operations

Topical Subject Areas (group oriented/team based to achieve objectives of the group)

Group: Group Dynamics (Integrated Natural Resource Management)
Recreational User Identification (Outdoor Recreation/Forestry Conservation)
(Utilize same format as previous; any combination of training may be pursued to fit the needs of all interested parties.)

The coordination of all topical subject areas will require teamwork and management on the part of each coordinator of training.

Duration/Size

This can be a lifelong learning process that can be incorporated into regular weekly, monthly, bi-annual safety meetings or can be initiated as a new effort. The process must ensure full participation, is not a paper exercise and must be evaluated. Size will be dictated by the size of the operation. Problem areas will be identified and rectified.

Time Frame

Typical basic/technical training should occur in downtime or just prior to startup. Relevant environmentally sensitive techniques will be applied on-site as part of the real life situation. As well the application of same while carrying out other related duties will be evaluated periodically. This will ensure adoption of the environmental ethics training.

Equipment

Equipment will be provided by specific contractor, company or group. Train the trainer specialized kits (i.e. bog-rods, silt filtration mats, record keeping documentation, etc.) will be provided to those co-ordinating the exercise. (To be determined)

Other Instructional Resources

The educational institution responsible for the certification process will receive a fee per each graduate (unless some other type of arrangement may be formulated) to ensure: constant upgrading, acquisition of relevant up to date course materials, and the required actions are taken to keep the program as current and as professional as possible. Course materials should be developed by all collaborators and approved as the Provincially/Nationally/Internationally acceptable course/series of modules by the Department of Education thereby ensuring standardization and the avoidance of duplication.

Estimated Budgetary Requirements

The budgetary development and launching of this program will be influenced by many variables. Timing is critical as it should be developed and implemented on a pilot type process so that it can eventually dove-tail into the on-going required CSA/ISO, federal requirements & certification processes presently being carried out to satisfy basic requirements by international partners, buyers and agencies.

Although many costs will be of an in-kind contribution, financial resources will have to be forthcoming and factored accordingly for those with the most to benefit; to ensure the program is professional in all respects, that a co-ordinator can ensure milestones and deadlines are being met and that this same person conducts the necessary and required procedures to deal with all levels of bureaucracy including the Department of Education approval process to ensure the program is recognized on a Provincial, National and International basis. The collaborators must ensure that they are competitive with others who have initiated these steps earlier.

Other Partnerships

It will be advantageous as part of the process to adopt or explore course curriculum, materials, modules and/or processes already approved by other provinces or countries to avoid duplication and ensure that timing will not be a factor as external auditing of front line forest workers may result in lost or delayed markets and market opportunities.

Standardized Codes of Practice

Nova Scotia has designed through the efforts of the Occupational Health and Safety Division, Nova Scotia Department of Labour and the Nova Scotia Forest Products Association, a manual titled: "The Forest Professional: A Code of Practice for the Stewards of Tomorrow's Forests". This manual is one of the primary documents used for training workers in the forest industry in Nova Scotia and is the standardized code of practice describing practical methods and procedures for good forest techniques. (See Appendix 3) This document although mainly addresses occupational health and safety concerns could be modified pending approval to incorporate environmental ethics as well.

Additional information and material may be obtained in a document used by the Western Newfoundland Forest Service to administer the Private Woodlot Management Program for District 14; "Successful Forestry: A Guide To Private Forest Management". This document was sponsored by the Canadian Forestry Service and the Government of Canada and provides some information which can be easily understood and practice by the average woodlot owner. The private woodlot management program is an excellent example of good public education/relations and a strategy to deliver the message of sustainable forest management.

CONCLUSION

Newfoundland does not have a standardized code of practice manual or training program for the forest worker. Almost everyone is doing something in regards to training, but we needed a standardized approach to fit everyone's needs. There is a great potential to deliver a training program and virtually encompass all of the industries/individuals connected with forest work in any way. As an example of ISO standards, "the International Organization for Standardization (ISO) has established international standards on the following:

- Wheeled Tractors for Agriculture & Forestry
(ISO 5700)
- Machinery for Forestry - winches
(ISO 6816)
- Chain - brake performance
(ISO 6533)
- Front hand guard
(ISO 6533)"

(Forest Occupational Training Needs Assessment - Final Report, Project 93-5-01, Manitoba Model Forest)

In the past there have been some problems with the documentation process. We have conducted as much formal and informal training as all of the other provinces, but we have failed to take advantage of a comprehensive "train the trainer approach" and package it.

We now have the opportunity, the resources and the technical expertise to document and package a standardized series of short course that can be delivered to forest workers within, and outside of, this province. This training and or certification program would ensure safety as well as practical techniques and procedures for any type of forest work. This may eventually include guides, adventure tourism operators, outfitters, trail workers and possibly even domestic cutters.

APPENDIX I

SURVEY

SHORT COURSE SERIES FOR THE FOREST WORKER

MARCH 1996 SURVEY:

The Western Newfoundland Model Forest, (WNMF) the Newfoundland Forest Service, (NFS) and the Centre for Forest & Environmental Studies (CFES) are preparing to offer a "train the trainer" session in 1996 in order to instill environmentally sensitive practices of front line forest workers. As a first step we are documenting what related training has already occurred in Newfoundland and Labrador. We appreciate you taking a few minutes to assist with this stage of information gathering.

SECTION A: SPECIFIC INFORMATION

Interviewer _____ Number _____ Interview Date _____

Name of Organization: _____ Address: _____ Telephone: _____
Fax: _____

Contact Person: _____ Position: _____

SECTION B: MAIN ACTIVITY OF YOUR DEPARTMENT/INDUSTRY/COMPANY OR ORGANIZATION

PULP & PAPER _____	SAWMILLING _____
CONTRACTOR _____	TRAINING _____
SILVICULTURE _____	DEPARTMENT _____
LOGGING _____	WORKING GROUP _____
SPRAYING _____	OTHER _____

SECTION C: NUMBER OF FRONT LINE FOREST WORKERS:

FULL TIME _____	<u>identified as those closest to the trees</u>
SEASONAL _____	<u>loggers, skidder/forwarder/mechanical harvester</u>
PART TIME _____	<u>operator, silviculture workers, independent contractor</u>
OTHER _____	<u>foreperson</u>

1. Have any of your employees (Front line Forest Workers) been involved in training in any of the following areas:

Basic Skills Training, Specify? _____
Safety Training, Specify? _____
Training on Existing Regulations, Specify? _____
Environmental Practices, Specify? _____
Low-Impact Harvesting Methods, Specify? _____
View scape Management, Specify? _____
Boreal Forest Ecology, Specify? _____
Wildlife Considerations, Specify? _____
Public Perceptions of Forestry, Specify? _____
Other, Specify? _____

2. What specific occupations were targeted?

Loggers _____ Contractors _____
Silviculture Workers _____ Foreperson _____
Equipment Operators _____ Other _____

Training conducted by? _____
Where? _____
Why? _____ Regulations? _____ Safety? _____
New Policies? _____ Certificate? _____ Other? _____

How? _____ Field Session? _____ Classroom? _____ Specialized? _____
Other? _____ Comments: _____

3. What environmental issues do you feel will affect your business in the next 3 years?

_____ Forest Certification
_____ Environmental Assessments
_____ Other. Specify _____

4. Are there any other specific concerns or factors regarding training of your employees that you would like noted?

SECTION D: TRAINING INITIATIVES

1. What training or re-training will be required for new or existing employees over the next number of years?
(Front Line Forest Workers Only)

No. requiring training _____ Type of training _____ Time frame _____
No. requiring training _____ Type of training _____ Time frame _____
No. requiring training _____ Type of training _____ Time frame _____

2. What type of training does your organization prefer?

On-The-Job _____ Night/Weekend Courses _____
One day Courses _____ Block Training (Week or more) _____

3. Are you willing to participate and/or contribute to training by either of the following methods:

Full tuition/training costs _____
Partial tuition/training costs _____
Participation in Train the Trainer Program _____
Providing Training Equipment _____
Other _____

4. What does your organization require with regards to training to be more competitive in the 1990's?

5. What other related training initiatives are you aware of in Newfoundland and Labrador? Canada?

Who should we contact?

Thank-you!!

APPENDIX II

DEPARTMENT OF FISHERIES & OCEANS FACT SHEETS

1. Factsheet No. 1, Effects of Silt on Fish and Fish Habitat, D.F.O., 2p.
2. Factsheet No. 2, Blasting - Fish and Fish Habitat Protection, D.F.O. - Newfoundland Region, March 1994, 2p.
3. Factsheet No. 3, Ditching, D.F.O., 2p.
4. Factsheet No. 4, Temporary Fording Sites, D.F.O., 2p.
5. Factsheet No. 5, Forwarder Trails, D.F.O., 2p.
6. Factsheet No. 6, Filter Fabric, D.F.O. - Newfoundland Region, March 1994, 2p.
7. Factsheet No. 7, Rock Check Dam, D.F.O. - Newfoundland Region, March 1994, 2p.
8. Factsheet No. 8, Temporary Bridges, D.F.O., 2p.
9. Factsheet No. 9, Resource Road Construction, D.F.O., Newfoundland Region, March 1994, 2p.
10. Factsheet No. 10, Instream Work in the Dry Cofferdams, D.F.O., 2p.
11. Factsheet No. 11, Streambank Stabilization, D.F.O., 2p.
12. Factsheet No.12, Instream Work in the Dry Temporary Diversion, D.F.O. - Newfoundland Region, March 1994, 2p.
13. Factsheet No. 13, Instream Work in the Dry Elevated Pipes, D.F.O., 2p.
14. Factsheet No. 14, Culvert Stabilization, D.F.O., 2p.
15. Factsheet No. 15, Storm Drain Outlets, D.F.O., 2p.
16. Factsheet No. 16, Highway Construction low Point Protection, D.F.O., 2p.
17. Factsheet No. 17, Temporary Settling (Detention) Basins, D.F.O. - Newfoundland Region, March 1994, 2p.
18. Factsheet No. 18, Bridge Construction / Demolition, D.F.O., 2p.
19. Factsheet No. 19, Freshwater Salmonid Habitat Requirements, D.F.O., 2p.
20. Factsheet No. 20, Highway Construction / Upgrading - Infilling, Stabilization & No-grub Zones, D.F.O., 2p.
21. Factsheet No. 21, Freshwater Intake End-Of-Pipe Fish Screen, D.F.O., 2p.
22. Factsheet No. 22, Diamond Drilling - Mineral Exploration, D.F.O., 2p.
23. Factsheet No. 23, Stream Clean-up, D.F.O., 2p.
24. Factsheet No. 24, Timber Crib, D.F.O., 2p.
25. Factsheet No. 25, Water & Sewer Installation - Stream Crossings, D.F.O., 2p.

APPENDIX III

TRAINING INITIATIVES TO DATE/ INDIRECTLY ENVIRONMENTALLY SENSITIVE

Training Initiatives to Date/Indirectly Environmentally Sensitive: (taken from Chapter 4, Documentation of Environmentally Sensitive Training for Front Line Forest Workers by Louis MacDonald, CFES for the Newfoundland Forest Service, June 1996.)

FYSTCP:

The most relevant example of formalized training for Newfoundland would be the "Forestry Youth Silviculture and Certification Program (FYSTCP)". This program had three equal members under the heading of the "Newfoundland and Labrador Forestry Training Association (NLFTA)." The members were Abitibi-Price Inc., Corner Brook Pulp and Paper Ltd. and the Newfoundland Forest Service. The program involved 278 graduates aged 18 -25 years that were physically fit with a grade 9 education or higher. This program was a two-year, two phase course with an "institutional classroom" phase and an on-site job training phase. Skills included pre-commercial thinning, spacing, saw operation, saw maintenance, cutting techniques, safety techniques, crop tree selection, site-clearing techniques, tree-planting methods for bereroot and container stock as well as tree acre, storage, and distribution. Candidates were required to thin up to 40 hectares, harvest one hectare and plant 5 hectares. (See attached list of graduates Appendix II) Additional information is included in the "Compendium of Existing Training and Certification Programs for Silviculture and Forest Workers in Canada, National Forest Strategy, by Canadian Forestry Service for The Canadian Council of Forest Ministers, 1994."

Provincial Scalers Course:

There are approximately 92 licensed scalers working with the Newfoundland Forest Service, 206 that are non-departmental commercial and 8 temporary as of 1995. This program is presently conducted on an as needed basis, but has been incorporated with full certification into the Forest Resources Technology Program at College of the North Atlantic, Corner Brook Campus. (statistics compliments of Chief Scaler/NFS) NOTE: Scalers have the most control of woodlands operations.

Basic Fire Fighters Course:

A Basic Fire Fighters Course has been conducted in District 14 (by local staff) for approximately 30 casual employees (names available on request) stressing the fire behaviour and safety component as well as environmental concerns. This training was conducted in the spring of 1995 as the result of preparation for the on-going "Prescribed Burn Program" and the need for properly trained staff for mop-up operations.

Pesticide Applicators Course:

Pesticide Applicators Courses conducted for Abitibi-Price Inc. and Corner Brook Pulp and Paper Ltd., the Newfoundland Forest Service, Forestry Contractors and others. (Statistics requested April 96)

Arboriculture Theory, Technique & Practice:

Arboriculture Theory, Technique and Practice was conducted for Newfoundland Power (Fall 1994) and sponsored by the Nautical Institute of Port Hawkesbury, Nova Scotia and CFES. A tree felling Certification component of this course was completed by two CFES participating instructors in an on the job "train the trainer" component. There were 10 participants from Newfoundland Power. The Nautical Institute was involved because Nova Scotia has designed through the efforts of the Occupational Health and Safety Division, Nova Scotia Department of Labour and the Nova Scotia Forest Products Association, a manual titled: "The Forest Professional: A Code of Practice for the Stewards of Tomorrow's Forests". This manual is one of the primary documents used for training workers in the forest industry in Nova Scotia and the standardized code of practice describing practical methods and procedures for good forest techniques.

Forestry Worker Training for Native Band Members:

The Native Band Councils in both Glenwood and Conne River received Forestry Worker Training Programs delivered by Centrac in Glenwood and Veitch & Associates in Conne River. (Statistics/specific course outlines requested April 96)

TAGS Training for Eastern College:

Eastern College is presently conducting Silviculture training as part of a TAGS initiative. Training is being conducted by Clarence Belbin. (Statistics/specific course outlines requested April 96)

APPENDIX IV

LIST OF CONTACTS/COLLABORATORS

Mr. Terry Greene, Director, Employee Development, Newfoundland Power
Wayne Howell, Technical Training Officer, Newfoundland Hydro
Bruce Yates, Safety Supervisor, Corner Brook Pulp & Paper
Roland Howell, Personnel and Safety Supervisor, Abitibi-Price Inc.
Ivan Downton, Director, Silviculture and Research Division, Dept. of Natural Resources
Jim Walsh, Business Representative, Local 579, U. B. of C. & J. of A.
Hedley Parsons, Forestry Instructor, Forest Ranger Program, Westviking College
Wayne Budgell, Canadian Papermakers Union
Roland Winters, NF. Lumber Producers Association
Phil Brake, Mining Industry, IOC
Charlie Young, Western Regional Director, Workers Compensation
Lorne Renouf, Forest Contractor/Instructor, Forest Resources Technology, Westviking College
Vernon Curran, Training officer, Human Resources Division, Department of Natural Resources
Otto Ryan, Occupational Health & Safety Officer, Occupational Health & Safety
Alfred Anstey, Occupational Health & Safety Officer, Occupational Health & Safety
Marilyn Payne, Training Officer, Occupational Health & Safety
David Russell, District Resource Officer, District 14, Forestry Division
Richard Brake, Private Woodlot Management, District 14, Forestry Division
Dave Butler, Forest Management Technician, District 14, Forestry Division
Michael Bennett, Support Services Technician, District 14, forestry Division
Greg Mitchell, Forest Contractor/Environmentalist, Gem Wood Products, NLEN
Bill Buggie, Forestry Instructor, Forest Resources Technology, Westviking College
Dave Sharpe, Forestry Instructor, Forest Resources Technology, Westviking College
Cyril Organ, Program Development Officer, Westviking College
Basil English, Silviculture & Research Division, Forestry Headquarters, Department of Natural Resources
W. Paul Duffett, P. Eng., Enfor Consulting Services, Environmental, Engineering and Forestry Consultants
George K. Veitch, Vietch & Company, Forestry Consultant
Ed Blackmore, Regional Director of Forestry, Central
Leonard Moores, Land Management & Use Planner, Forestry Headquarters, Department of Natural Resources
Martin vonMirbach, Sustainable Development Chair, CFES
Gleinn Payne, GIS Specialist/Technology Transfer, CFES
Glen Knee, Forestry Instructor, Forest Resources Technology, Westviking College
Mike Mac Donald, Instructor, Nautical Institute, Port Hawkesbury, Nova Scotia
Blake Gabriel, Instructor/Forest Contractor, Gabriels Logging & Sawmilling
Michael Gabriel, Instructor/Forest Contractor, Gabriel & Gaulton
Bruce Boland, Librarian, Forestry Headquarters, Department of Natural Resources
Paul Hynes, Forest Products, Forestry Headquarters, Department of Forestry
Kevin Sutton, Ecosystem Manager, District 16, Massey Drive, Corner Brook
Brent Humphries, Domestic Cutting Working Group Monitor, Western Newfoundland Model Forest
Jim Evans, Don Brain, Abitibi-Price Inc.
Holly Savage/Sheldon Brown, Instructors (Train the Trainer) Westviking College

Other Contacts were made but due to time limitations/restrictions, follow-up could not be initiated. This will be an ongoing process and periodically updated as new information becomes available.

LIST OF COLLABORATORS/PARTNERS

Abitibi-Price Inc.
Corner Brook Pulp & Paper
Canadian Papermakers Union
Carpenters & Joiners, Loggers Union
Department of Natural Resources
NF & Lab Forestry Training Association
Centre for Forest & Environmental Studies
Newfoundland Hydro
Newfoundland Power
Occupational Health & Safety
WNMF Education Working Group
Workers Compensation
Westviking College
Private Contractors

APPENDIX V

RESOURCE and REFERENCE MATERIAL

- Alberta Pacific Forest Industries; The Green Logger (Video). Ransom Video Production, Edmonton, Alberta.
- Anderson & Associates, Forest Occupational Training Needs Assessment - Final Report. May, 1994. Project 93-5-01.
- Canadian Council for Human Resources In The Environment Industry (CCHREI): Certification; What Is It? Newsletter, Changing Times. Fall 95.
- Canadian Council of Forest Ministers: A Compendium Of Existing Training and Certification Programs For Silviculture And Forestry Workers In Canada. National Forest Strategy, 6.5 Committee. 1994. ISBN 0-662-61123-3.
- Canadian Council of Forest Ministers: National Forest Strategy 6.5 Committee; National Forest Strategy "Sustainable Forests: A Canadian Commitment". Canadian Forestry Service, 1994. ISBN 0-662-61306-6.
- Canadian Council of Forest Ministers: The Green Binder - Educational And Training Aids For Silviculture And Forest Workers In Canada. National Forest Strategy, 6.5 Committee. 1994. ISBN 0-662-22413-2.
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- Maine TREE Foundation; "Skill, Knowledge, and pride in the Maine Woods" (Brochure) Certified Logging Professional. P. O. Box 1024, Augusta Maine 04330-1024.
- Meyer, Robert L.(Division Manager); Maine's Certified Logging Professional Program, Born of Necessity, Sustained By Success.(paper/presentation) Maine Employers' Mutual Insurance Company. P. O. Box 11409, 261 Commercial Street, Portland Maine 04104. 1996 Annual Meeting.
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- Newfoundland Forest Service, Department of Natural Resources; Our Forest, A Shared Resource, Timber Harvesting Guide, published by Newfoundland Forest Service.

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Quebec Region: Successful Forestry - A Guide To Private Management, Canadian Forestry Service, 1988. ISBN 0-660-12893-4.

Rugo, Lorenzo: The Silviculture Labor Force in Newfoundland and Labrador - A Socio- Economic Profile. Cooperation Agreement For Forestry Development, Forestry Canada. 1992. ISBN 0-662-19551-5.

Rugo, Lorenzo, Silviculture Worker Certification in Canada. Forestry Canada, Vol.2 No2/3 Spring/summer: Canadian Silviculture. 1994.

St. Peter, Mike, (Program Manager); Certified Logging Professional - Guide for the Maine Logger. (Training Manual) 1995. Main Street , P.O. Box 557, Jackman Maine 04945. Tel. (209) 668 - 2851.