

**DEMONSTRATION FORESTS
CHANGING PUBLIC OPINION**

MICHAEL ROSS

1993 GOTTSTEIN FELLOWSHIP REPORT

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JOSEPH WILLIAM GOTTSTEIN MEMORIAL TRUST FUND

The Joseph William Gottstein Memorial Trust Fund was established in 1971 as a national educational Trust for the benefit of Australia's forest products industries. The purpose of the fund is *"to create opportunities for selected persons to acquire knowledge which will promote the interests of Australian industries which use forest products for the production of sawn timber, plywood, composite wood, pulp and paper and similar derived products."*

Bill Gottstein was an outstanding forest products research scientist working with the Division of Forest Products of the Commonwealth Scientific Industrial Research Organization (CSIRO) when tragically he was killed in 1971 photographing a tree-felling operation in New Guinea. He was held in such high esteem by the industry that he had assisted for many years that substantial financial support to establish an Educational Trust Fund to perpetuate his name was promptly forthcoming.

The Trust's major forms of activity are,

1. Fellowships - each year applications are invited from eligible candidates to submit a study programme in an area considered to be of benefit to the Australian forestry and forest industries. Study tours undertaken by Fellows have usually been to overseas countries but several have been within Australia. Fellows are obliged to submit reports on completion of their programme. These are then distributed to industry if appropriate.
2. Seminars - the information gained by Fellows is often best disseminated by seminars as well as through the written reports.
3. Wood Science Courses - at approximately two yearly intervals the Trust organises a week-long intensive course in wood science for executives and consultants in the Australian forest industries.
4. Study Tours - industry group study tours are arranged periodically and have been well supported.

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DEMONSTRATION FORESTS

Changing Public Opinion



Seymour
A
Success
Story

DEMONSTRATION FORESTS

Changing Public Opinion

Seymour

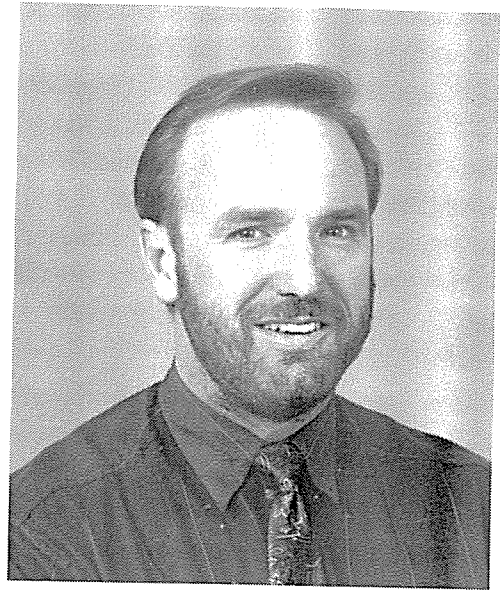
A Success Story

by Michael Ross
Forestry Tasmania

1994

Michael Ross held the position of Public Relations Forester with Forestry Tasmania from 1991 until 1993. Currently, he is the Marketing Forester in their Native Forests Program Unit. A graduate from the Australian National University in 1985, Michael is also the current Chairman of the Tasmanian Division of the Institute of Foresters. From 1985 he held various professional positions with the New South Wales Forestry Commission. In 1990 he moved to Tasmania.

Michael has long held the view that much of the misunderstanding and many of the misconceptions about forest management within the community could be overcome through improved avenues of public education and information. Demonstration forests are one of these avenues and his Gottstein Trust study tour enabled him to observe the management and operations of the very successful Seymour Demonstration Forest in Vancouver, Canada.



Recommendations for the Establishment of Demonstration Forests in Australia

Ultimately, the stakeholders - the people - will decide the fate of the forest resource. Through the governments elected in a democratic process, the majority feeling throughout the community will dictate the future. The management of the forest resource will be a part of this decision.

People on the whole are not necessarily naive or gullible, they are not ignorant nor unreasonable. However, they are greatly influenced through the power of mass media and as Rolley (1991) points out, many people in the community are lost in a web of apparently conflicting information and the tangle of values that are so often a part of the media reporting on forestry issues. This can often lead to opinions based on limited knowledge or understanding and formed from emotion rather than reason.

For far too long the forestry profession stood back and said nothing. When the profession began to counter the arguments of the environmental movement the response was often reactionary and had only limited success. Spriggins (1989) found that individuals and groups throughout Canada and the United States who took a pro-active approach to educating and informing the public were far more successful than those who were purely reactionary.

While not the definitive answer to changing public opinion about forestry and forest management, demonstration forests have the potential to significantly contribute to public understanding of the issues surrounding multiple use management of the forest resource.

"It was a common view of many foresters I spoke to that facilities such as well managed and well publicised demonstration forests should have been in place about 30 years ago. Had this occurred it was considered that the polarised debate about use of forests which is taking place in the United States might have been defused."

Spriggins, 1989

Demonstration forests use the most effective medium possible for promoting the understanding of forest management - the forest itself - they take the people to the forest, not the forest to the people, allowing people to see the facts for themselves.

What is required in Australia is a commitment to establishing a series of demonstration forests close to major urban population centres over the next few years, with the aim being that by the turn of the century there will be a demonstration forest in close proximity to each capital city.

Australia is now in a unique position to achieve this objective. Each of three Gottstein Fellows over the last five years, Don Spriggins, Evan Rolley and myself, have concentrated their overseas studies on increasing and improving public understanding of forest management through the medium of demonstration forests. Each study brought back to Australia a level of understanding and expertise that complimented the study before it; to the extent that now, unlike before, the capacity exists in this country to be able to provide the professional guidance to successfully establish demonstration forests.

The next step is a national, coordinated approach to the establishment of demonstration forests. While most states have established or begun to establish demonstration forests in some form or other, a national approach would add to the momentum and present a much more persuasive rationale to the Federal arena to provide funding for their development.

With this united approach, a much greater influence can also be brought to bear on State Governments and other bodies for funding and can be supported by the level of knowledge now available.

We now have the expertise - what we need as a profession, is the collective will to see the objective realised.

References:

Rolley, E.R. (1991) Access, Activity and Adventure - The Recipe for Successful Demonstration Forests.
Gottstein Fellowship Report

Spriggins, D. (1989) Obtaining More Favourable Attitudes To Use Of Forests For Timber Production -
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Fellowship Report

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Introduction

Public debate over forestry issues has made news headlines across Australia for over two decades. It has become clear during the debate that a way must be found to increase the public's knowledge of forestry issues - and soon. Many forums to inform and educate the public have been tried in the past, meeting with only limited success. People are still generally ill-informed and easily swayed by emotional rhetoric.

Demonstration forests have the potential to be able to influence public attitudes and raise community understanding on forestry issues. They offer a great opportunity for the public to examine first hand the real thing, where 'seeing is believing'. They take the people to the forest, not the forest to the people - letting people see the facts for themselves.

This report examines in detail the components, the building blocks, of arguably one of the world's most successful demonstration forests - Seymour Demonstration Forest, Vancouver, Canada. These principles are then applied and adapted to the Australian situation, outlining a solid framework for the establishment of demonstration forests in this country.

1. *What are demonstration forests?*

Demonstration forests are selected areas of forest that are actively managed for multiple use values, while at the same time offering the public a new and different learning experience. The public is encouraged to explore a forest being managed for a variety of resource uses and to view or take part in the process of integrated resource management. Management has the opportunity to show the public how it makes decisions on forest use and what the results of those decisions are. The demonstration forest becomes a meeting ground to display and discuss issues of land use, protection measures and resource management policies and regulations. These issues can be addressed from a local, national or international perspective, exploring the broader issues of integrated resource management, sustainable development and sustained yield.

Demonstration forests invite dynamic interpretation and education. Rather than merely showing 'what is' in a particular area, the interpretation opportunities include the management of that environment and 'how it will be' as a result.

The setting of a demonstration forest makes it possible to bring visitors into contact with operational forest management practices in an accessible, safe, entertaining and educational environment.

2. *How will demonstration forests assist in the understanding of Forestry?*

With so many, often conflicting, community values vying for our forests, resource allocation conflicts are inevitable. However, they could become less common if people had a better understanding of forest management principles leading to a greater acceptance of the integrated use and management of forest resources.

Public attitudes formed from a broad knowledge base rather than from partial or biased information would help diffuse or minimise potential conflicts.

Demonstration forests have the potential to achieve this awareness and understanding. The public can see for themselves the benefits of sound, integrated forest management, while forest managers can increase their awareness of the public's concerns and attitudes. This awareness is crucial if the profession is to overcome public misconceptions and allay fears of forest management. Demonstration forests have the potential to present information in a neutral environment that does not appear to be biased towards an industry or government body's point view. This neutrality gives demonstration forests a certain level of credibility in the public eye. The lack of any obvious allegiance promotes a more open minded approach by the public to the information conveyed.

3. SEYMOUR ~ AN OVERVIEW

Seymour Demonstration Forest is within 30 minutes drive from the centre of Vancouver, a city of over 1.5 million people. The forest rests below the Seymour River dam wall in a u-shaped glaciated valley approximately 5 kilometres wide. The valley is part of the Greater Vancouver Regional District's (GVRD) 60,000 hectare network of watersheds or catchment areas.

The demonstration forest is part of 5,600 hectares of west coast coniferous forest located between the Lynn Headwaters Regional Park and the Mount Seymour Provincial Park. The forest consists of mainly coniferous species of western hemlock, western red cedar, yellow cedar, Douglas fir and Sitka spruce. Past logging and other human and natural activities have created a mosaic of age classes, with stands ranging in age from new plantations to old growth.

A variety of wildlife inhabits the valley and over 100 species of vertebrates use the area for breeding or seasonal migration.

As is the practice with all watersheds, the area containing the demonstration forest was originally closed to public access. When it was decided in 1985 that the lower portion of the valley would not be needed for water supply purposes until well into the next century, two foresters working for the GVRD proposed that it be used as a demonstration forest. With nearby and adjoining National Parks and Reserves already displaying a strong conservation theme it was a deliberate decision to be distinctly different and provide an alternative experience, not reproduce the same experiences. In 1987 Seymour Demonstration Forest was opened to the public.

3a. The Design of Seymour

The demonstration forest spreads over about 60 hectares of Seymour Valley. Public vehicles are not allowed past the main gate, but there are over 40 kilometres of roadway within the demonstration forest for cyclists and pedestrians to use. The main logistical features of Seymour are:

i. Trails

A series of looped, interpreted trails take people through a variety of forest types and demonstration areas. People are more inclined to use a looped trail because it brings them back to where they started, so they don't have to back-track. Also because people generally do not want to walk too far, the main trails are less than two kilometres.

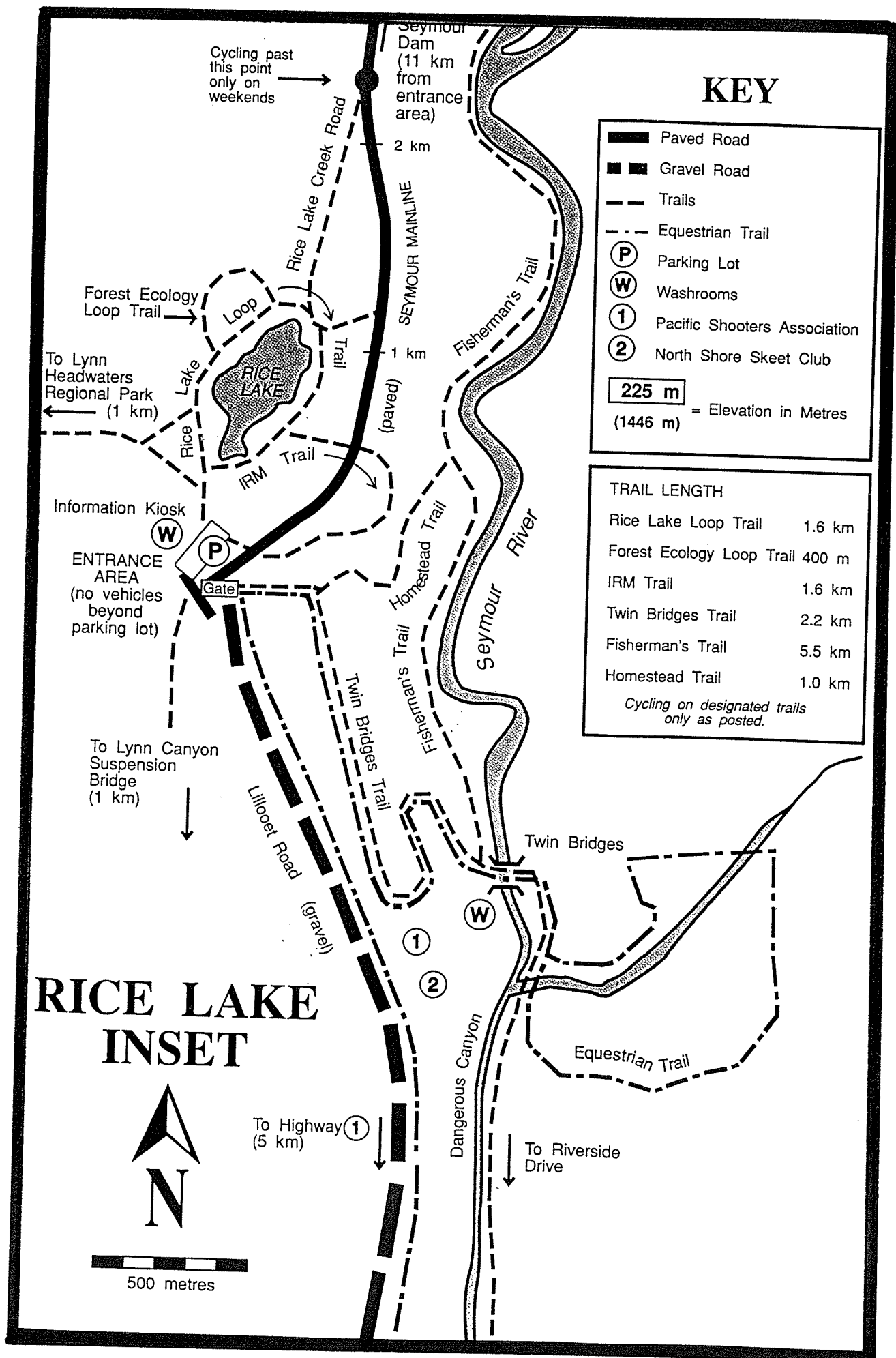
The diagram on the following page shows the system of trails through Seymour. The main trails are of very high quality; they have to be, to withstand the high volume of people traffic.

A trail width of about two metres is used for two good reasons. Firstly, it allows a small group of people to stand around a guide while they are speaking (rather than being strung out along a narrow trail). Secondly, it allows vehicle access for any required maintenance along the trail.

The main trails of Seymour are:

Rice Lake Loop Trail ~ 1.6 km

This was the first trail constructed and interpreted. It is the most popular trail and explains basic forest concepts (how trees grow in particular sites and why), principles of forest management, the management history of the forest and the proposed management for the area.



Ecology Loop Trail ~ 400 m

This is the most recent trail and branches off from the Rice Lake Trail. It explains, via a series of interpretive panels, how forest managers study the ecology of the forest to determine management treatments long before any management activities are undertaken.

The IRM Loop Trail ~ 1.6 km

This Integrated Forest Resource Management Loop Trail (IRM), focuses on forest resource management. There are six interpretive panels and a self-guiding brochure that provide information on the forest resource and its management.

The Twin Bridges Trail (2.2 km), Homestead Trail (1.0 km) and Fisherman's Trail (5.5 km) are less developed and have no interpretation, largely because of a lack of funding.

The 11 kms of main road from the gate to the dam is also a self-guided route that has designated stops providing visitors with an overview of forest management activities in the valley.

ii. Demonstration Areas

The demonstration forest is divided into a series of small compartments, or areas, of about one to three hectares that display a variety of forest management features. Not all of the compartments are active at once, and some are retained in their natural state to use as a comparison. The treatments are spread out over time to ensure a constantly changing forest and to display a diversity of age classes and management alternatives.

The demonstration areas have been kept small for a combination of reasons. People must walk, not drive, through a demonstration forest. If the trails are too long, many people won't go on them. However, visitors must be able to see a variety of treatments and forest types to appreciate the dynamic nature of the forest. They must see change and diversity. If the treatments cover large areas not only do the walks become far too long, but the changes over time are too slight to become obvious. Therefore, to achieve a short walk through constantly changing forest, the blocks must be kept small.

iii. Interpretation

Interpretation along the trails is kept simple and precise. The interpretation panels are easy to read, containing no more than 100 words (because if they do people are less likely to read them) and being free of jargon. Where possible they contain pictures, ideally with people in them.

Interpretation opportunities are available prior to any activity occurring in an area, while activity is taking place and after activity has ceased. Opportunities are taken to explain to the public what is going to occur in an area up to 12 months before it takes place, so people have an idea of what to expect and can monitor developments.

The quality of the interpretation is perhaps the most crucial component of the demonstration forest - its very success will hinge on the effectiveness of getting the message across. Considerable expertise is employed at Seymour to ensure that interpretation is of the highest standard.

iv. Harvesting

Harvesting in the demonstration forest is managed and carried out identically to operations anywhere else across the province. Apart from a matter of scale, these blocks are treated no differently, they are logged and regenerated with all the same environmental and site considerations that would normally be taken.

It would entirely defeat the purpose of a demonstration forest to have the area treated differently to normal forest operations.

At Seymour the timber from these blocks is part of the overall allocated cut for particular contractors. Harvesting on the areas can be difficult and costly due to the small scale of the operation, but in view



"The quality of the interpretation is perhaps the most crucial component of the demonstration forest."

of the overriding benefit to the industry this is accepted by the contractors and companies they work for.

The small scale operations mean that the public do not often get a chance of seeing logging actually occurring. However, the contractors agree to shut down their machinery and have the public look over the site and machines where practicable and where safety regulations allow.

This approach is very popular with children and adults alike.

v. Visitation

An estimated 212,000 people visited the Seymour Demonstration Forest in 1992 (an increase of 30% over the previous year). This figure is conservative, being based on car counts through the main gate, and does not include people who walked into the forest along trails leading from the adjoining parks.

The survey data does not distinguish between people who specifically went to visit the demonstration forest or those who went solely for recreation. However, regardless of their motivation for visiting, all the people who visit the area are exposed to production forestry and aspects of forest management to some degree. This is an important aspect in encouraging people's acceptance of working forests.

vi. Neutrality

One of the features of Seymour is the distinct lack of company logos and banners through the forest. Falling under the authority of the Greater Vancouver Regional District the forest companies provide considerable funding, but they accept that public recognition will be minimal. Funding partners do however receive recognition on a display board at the entrance to the forest.

3b. Management and Staffing Structure

The Seymour Demonstration Forest is managed by the Watershed Management Section of the Greater Vancouver Regional District. The GVRD structure is similar to that of a large Australian city council, with watershed management being a section of that council. A Board of Councilors determine the policies and management philosophies of the GVRD.

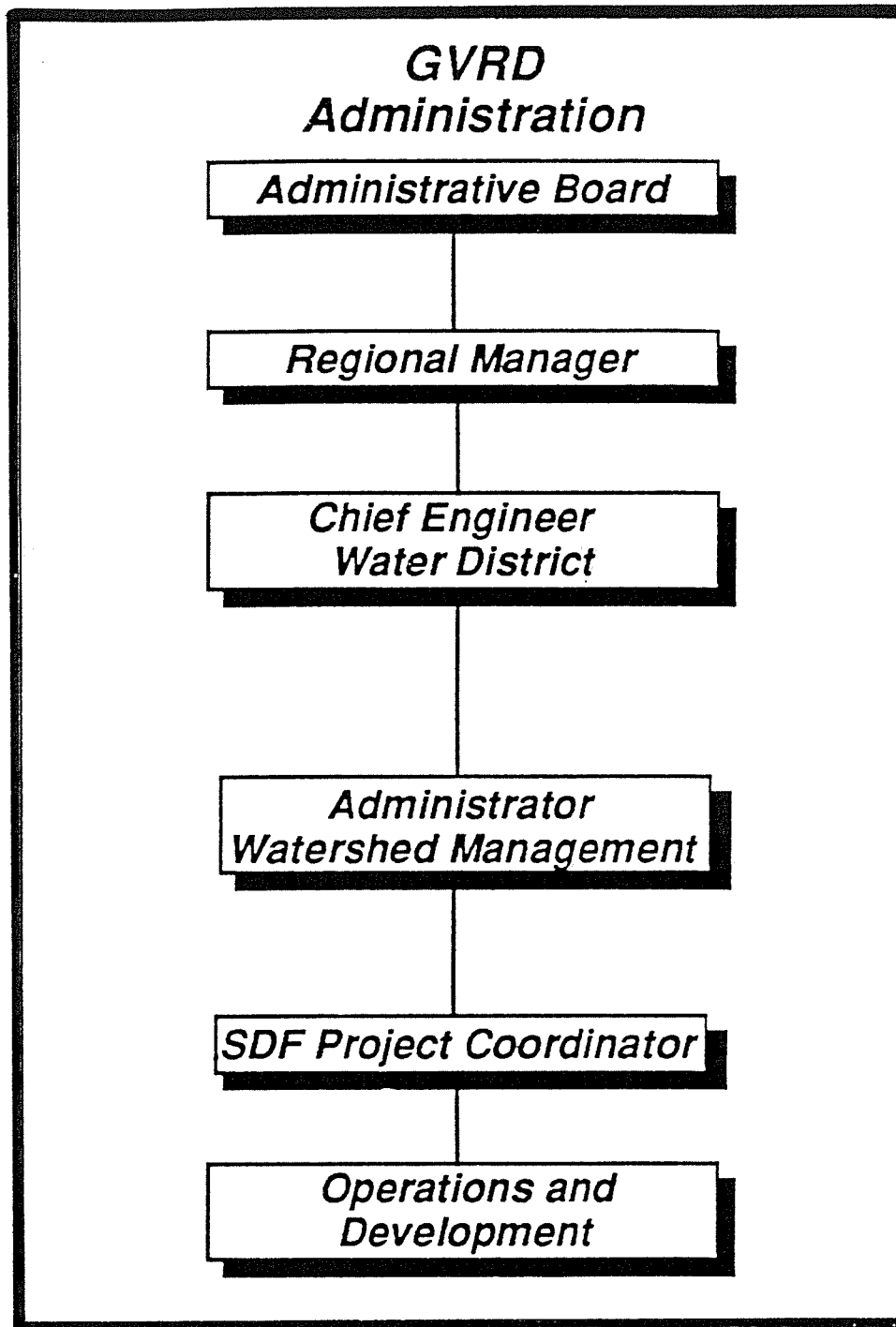
The chart on page 9 shows the administrative structure of the GVRD.

Any major developments within the demonstration forest, including harvesting, have to be approved by the Board. Any concepts for development must be approved at each level of management.

The GVRD undertakes its own logging operations in all the catchment areas and employs a team of foresters in the Watershed Management section to oversee this.

The demonstration forest is seen by the GVRD as a means of showing the public the principles of managing the forest in catchment areas. These principles, however, can also be applied to forest management across the province.

One of the key elements in the management of Seymour and the major contributor to its success, is the composition and interaction of its three committees: the Advisory Committee, the Education Committee and the Technical Committee. These committees often form subcommittees and make use of consultants when they lack the time or expertise to attend to certain issues. The interaction of these committees with the GVRD is shown in the chart on page 10. Their roles are described below, while their membership and terms of reference are listed in Appendix A.

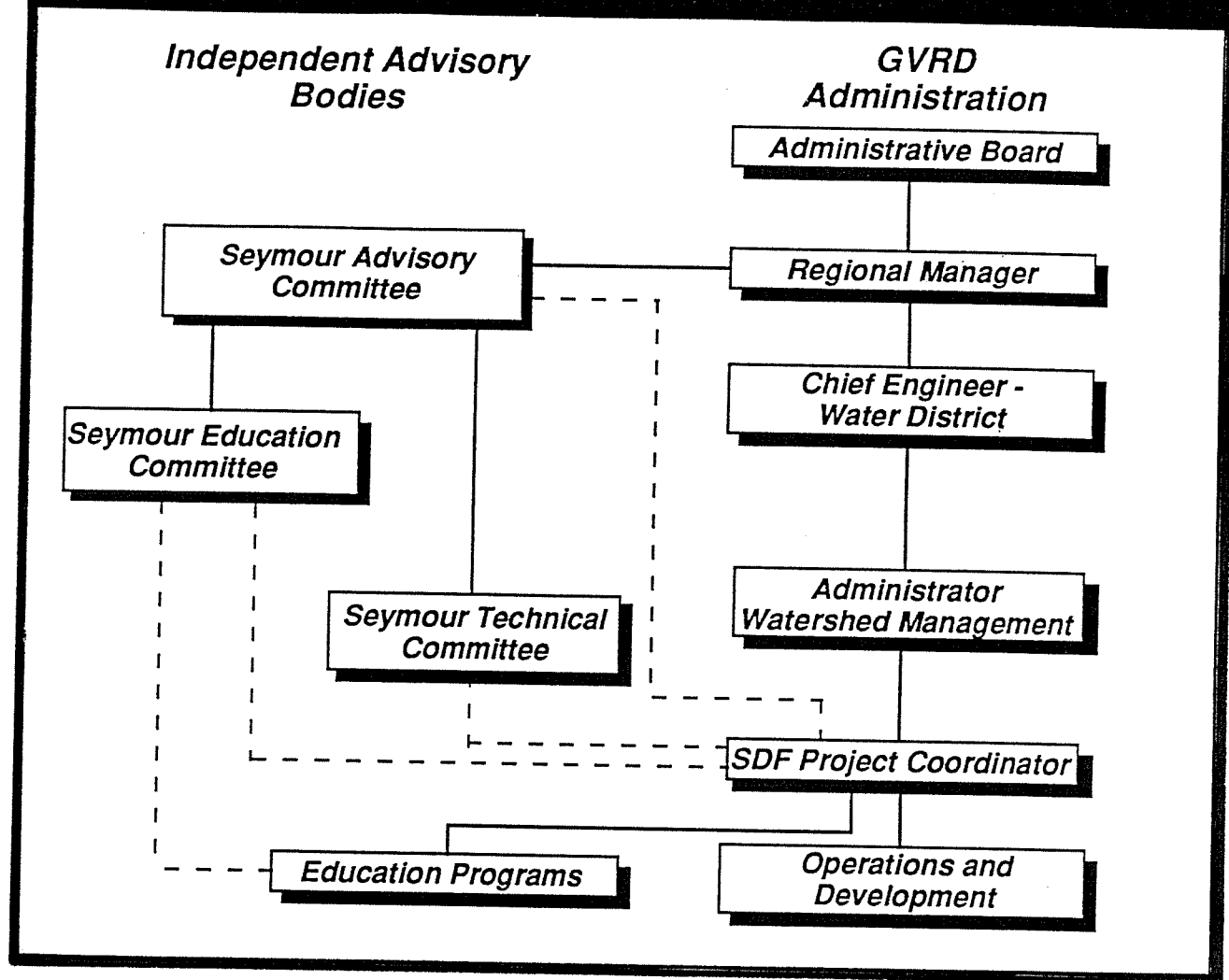


i. Advisory Committee

This is the main committee of Seymour Demonstration Forest. Composed of well-respected and high-profile members from a wide cross section of professions and the community, its role is to provide impartial advice on the management of the demonstration forest. It provides credibility as well as inter-agency links and allows for very active community involvement through input via representation directly to this committee.

Initial membership is chosen by GVRD management for a nominal term of five years. Further nominations for membership may then come from the Committee itself. Their function is to develop broad policies and management objectives, review funding requirements and operational concerns, and review and advise on educational initiatives and resource management strategies.

Organizational Chart of the Seymour Demonstration Forest



The Advisory Committee has no statutory authority. It makes recommendations to the Board of the GVRD (the administrative body responsible for the management of the demonstration forest), based on its terms of reference. Both the Education Committee and the Technical Committee make recommendations through the Advisory Committee, which has the final say on which of the recommendations are put to the GVRD Board.

The Advisory Committee was the first committee formed. It was on its recommendation that the Education and Technical Committee were established. The Advisory Committee meets four or five times a year.

ii. Education Committee

The Education Committee is responsible for developing education programs and the interpretation.

With a mixture of professional foresters, educationalists, conservationists and naturalists, this Committee develops and reviews the school tour program on an annual basis. It also reviews and develops all the interpretation in the demonstration forest. The committee meets at least six times a year.

iii. Technical Committee

The Technical Committee deals with the day to day running of the demonstration forest, as well as being responsible for developing the management plan for Seymour. It consists of members who are still employed in areas such as fish and wildlife management, water catchment management, forest management and recreation management.

This Committee makes recommendations to the Advisory Committee on all of the practical aspects of running Seymour, from logging operations to building trails, through to general maintenance and the location of toilets and garbage bins. They receive information from user groups, interested agencies and operational management of the Seymour Demonstration Forest.

iv. Staffing

The GVRD Watershed Management staff are responsible for day to day operations and administration within the demonstration forest. They act within the parameters set out by the committees and under the funding arrangements managed by the GVRD Board. Staff employed specifically to work in the demonstration forest are, in order of authority; a Project Coordinator, an Operations and Development Supervisor and a Works Supervisor. For six months of the year, one extra person is hired on a part-time basis to assist the Works Supervisor.

The Project Coordinator is responsible for the wide variety of activities associated with the demonstration forest. These activities include; coordinating education, public relations and operational aspects; coordinating and facilitating meetings of the Advisory Committee, Education Committee and Technical Committee; coordinating promotions, special events and volunteers; organising training programs for volunteers; as well as the day-to-day running and maintenance of the demonstration forest.

The Project Coordinator is required to have a solid background in resource management and possess excellent managerial, interpersonal and communication skills. A well-rounded background in forestry is very desirable; without it, trying to come to terms with the principles and goals of a demonstration forest is very difficult. The manager should have a good understanding of, and rapport with, the media and have the imagination and drive to take advantage of the multitude of media opportunities to promote the demonstration forest.

The Operations and Development Supervisor is responsible for carrying out most of the hands-on management of the demonstration forest, as directed by the Project Coordinator. This position again requires a person with a comprehensive forestry background, particularly in the technical aspects of forest operations. A good understanding of the principles of interpretation and recreation is also very useful in this position.

The Works Supervisor, who reports to the Operations and Development Supervisor, carries out the routine day-to-day maintenance. This person is also responsible for supervising work crews when they are available. This is more of a caretaker type position, but does involve a very diverse range of duties ranging from emptying bins to assisting with guided tours.

In the opinion of the Project Coordinator, and I would support this view, the present level of staffing allows only minimal development to be carried out. For Seymour to continue to advance beyond its present stage of development, increased staff numbers are essential. Seymour's success to date can be attributed to the enthusiasm and professional commitment of the staff.

v. Volunteers

The volunteer program was initially introduced to increase staffing levels without increasing costs, but it also had the added benefits of involving the community and establishing good relationships between professional forest managers and the public.

In the early years there were few volunteers but, as the reputation of Seymour grew, so did the numbers. Now there is a register of volunteers that can be called on to assist with tours and special events at any time.

The program draws on a broad range of people, and therefore skills, which greatly enhances the community appeal of the project. The volunteers consist of retired foresters, existing and retired forest company executives, members of such organisations as Women in Timber, Forest Industry Ladies, British Columbia Institute of Technology, University of British Columbia and the Seymour Salmonoid Society, as well as technical and professional members of government and private forestry organisations and institutions.

Apart from reducing costs, the main benefit of using volunteers is the personal contact. The public get to see the human face of forestry and the profession learns about the public's concerns and what they are thinking.

3.c. Financing/Funding

Running Seymour is not cheap: over A\$660,000 was spent on Seymour last year and this amount allowed only minimal development. Expenses for 1992 are summarised in the Table 1. Funding comes from a variety of source and these are outlined in Table 2. About 50 % comes directly from the GVRD, while the remainder comes from the Ministry of Forests, the Council of Forest Industries and Federal Government grants.

Table 1. Operating Expenses for Seymour in the 1992 Financial Year

OPERATIONS	
Labour	189,885
Vehicles	30,520
Operational Expenses	120,300
Materials & Supplies	29,360
Silviculture Project	21,000
Special Fisheries	15,260
Total Operations	406,325
EDUCATION	
Staff	12,600
Contract Staff	102,100
Expenses	9,900
Brochures & Displays	25,100
Birthday Party	4,200
Total Education	153,900
SECURITY	
Labour	66,315
Expenses	37,900
Total Security	104,215
TOTAL EXPENSES	664,440

Table 2. Seymour Demonstration Forest Revenue Sources for 1992

FUNDING PARTNERS		
Greater Vancouver Regional District	361,000	
Council of Forest Industries	78,450	
Ministry of Forests	105,000	
Industry Workers Association	1,190	
Total Funding Partners		545,640
<hr/>		
GRANTS		
Federal and Provincial Government	40,400	
Total Grants		40,400
<hr/>		
OTHER		
Forestry Industry Ladies	2,950	
Day Camp Fees	1,750	
Film Industry	73,700	
Total Other		78,400
<hr/>		
TOTAL REVENUE		664,440
<hr/>		

3d. Recreational Opportunities

Seymour Demonstration Forest provides a variety of recreational opportunities including fishing, cycling, jogging, walking, shooting, canoeing, and hiking. A fish hatchery below the dam is an added attraction for visitors, and the Seymour River itself is one of the top ten angling streams in the lower mainland. Rice Lake, just north of the main entrance gate to the demonstration forest, is one of the few freshwater lakes on the northern side of Vancouver and is also a popular fishing spot.

It is these recreational opportunities that attract the majority of visitors to Seymour. Recreation is the attraction, but often the result is education.

3e. Tours and Education Programs

Forest tours and education programs are a key component of Seymour Demonstration Forest. They are designed and conducted to help foster peoples' understanding and appreciation of forest management. The more personal contact the tours can offer, the more effective they become. While a more detailed description of the main programs can be found in Appendix B, those conducted at Seymour include:

i. Self-guided tours

Essentially Seymour has been established as a self-guiding demonstration forest. Directions at the main car park lead you to a choice of looped trails. Individual brochures that compliment the interpretation panels along these trails are also available at this point.

ii. Guided tours; Schools

The schools program which runs all through the summer is extremely popular. It is generally booked out from one year to the next. It caters for all age groups from early primary through to university.

An education team of professional foresters and teachers is employed on a consultancy basis to run the school tours. Volunteers are often called on to assist with these tours so that the student to guide ratio is always around 15:1.

The education team use the same trails as those used for self-guided tours but vary their presentation depending on the age group and the level of technical understanding required.

As a method of assessment the children are given post tour evaluation exams, to see if they have absorbed and understood the messages they have been given. The results of these exams can be used to modify both messages and techniques if they show that the desired messages are not being understood.

iii. Guided Tours; Public

Guided tours are also held for the general public. These are arranged on either a special needs or an ad hoc basis, such as promotional days or special events. Such occasions as Forestry Week, Arbor Week, World Environment Week, World Forestry Day and so on are ideal opportunities for special promotional tours.

Inviting particular groups such as orienteers, ornithologists, handicapped and underprivileged groups gives the tours a broader community appeal and generates a wider community understanding of demonstration forests.

Volunteers are used to assist or even take these tours and the response from the public has always been very positive.

iv. Brochures

Brochures compliment the interpretation panels along the trails. They are designed to achieve two things: to provide greater detail than the interpretation along the trail, and serve as take home reminders of what was seen. Hopefully, they will be re-read and the message reinforced.

While there are no surveys that specifically assess the effectiveness of the brochures, observations suggest that they are at least taken home, as very few are found discarded in bins or left lying around. The types of brochures used are shown in Appendix C.

3f. Safety

The management of Seymour recognise that safety has not been afforded the priority it should have been in recent years. Increasing visitation, a decreasing work force and several recent major, though non-fatal accidents, have prompted management to now address the development of a safety plan for the forest.

Seymour does not yet have a set of procedures to follow in emergencies, however, evacuation and emergency procedures to cover a variety of potential accident and disaster scenarios are being developed.

3g. Monitoring and Surveys

Surveys are a vital component of the demonstration forest. The long term viability of the forest depends on finding out what the public are thinking, what they are learning during their time in the forest and what they want to know more about.

Monitoring visitors to the forest is important in assessing the effectiveness of the interpretation and the guided tours. Questions often asked of visitors include, for example, “Is the interpretation easily understood ?” and “Are the guides pitching their talks at the appropriate level ?”.

With school tours at Seymour, both teachers and students are surveyed to determine if they have learnt anything from their visit. For example, “Are they taking home the desired messages ?”, that is, the messages that the demonstration forest is trying to get across.

The public, outside those visiting the forest, are surveyed to monitor their attitudes to forestry issues. What are their major concerns ? What is their level of understanding and acceptance of particular forestry issues ? What issues do they want to know more about in relation to forestry ?

A sample of surveys conducted at Seymour are shown in Appendix D. From the results of these surveys, interpretation and education formats and programs can be adjusted, modified or introduced. If the surveys are not undertaken there is the real risk that the demonstration forest will eventually become out of touch with the public and that the programs and interpretation will not be addressing the issues which are of most concern to them.



"The school's programme runs throughout the summer and is generally booked out from one year to the next."

4. THE BUILDING BLOCKS FOR A SUCCESSFUL DEMONSTRATION FOREST

Pre-planning of the demonstration forest is very important. How you design your forest to accommodate different themes and treatments requires considerable thought. While the set up of Seymour serves as an excellent model for establishing a demonstration forest in Australia, it is not simply a matter of superimposing the design, layout and themes of Seymour onto the Australian scene.

While the features of demonstration forests will vary with the potential for display on each specific site, my observations in Canada suggest that there are some basic building blocks that should be common to all. It is these building blocks that will ensure that the demonstration forest gets off to a sound start and is less likely to encounter unnecessary setbacks as it continues to develop.

4.a. Location

Proximity to a large population centre is essential to the success of any demonstration forest. Being less than 30 minutes drive from the centre of Vancouver is one of the major factors in Seymour's popularity. Were it further away, it is unlikely, despite all its features, to have the appeal that it presently does. Several demonstration forests throughout British Columbia have 'failed' solely for this one reason, despite having the same, and in some cases, more potential than Seymour as a demonstration forest site.

In larger cities such as Sydney or Melbourne this criteria is very hard to meet. Central locations in large regional centres then need to be considered where people can visit demonstration forests as part of an overall tourist experience in a particular area. Proximity to accommodation or camping facilities now becomes an important consideration. So too does the proximity of other recreational experiences in the general area of the demonstration forest. Does the demonstration forest offer a similar experience for the visitor, or is it distinctly different?

The drawing capacity of features such as lakes, rivers, beaches, scenic views, picnic grounds or campgrounds should not be undervalued. Being able to capitalise on the popularity of such features by having them as part of or near to the demonstration forest is a good way of getting the public into the forest.

4.b. Management Plan

As with any forest area, a management plan for a demonstration forest is essential for its long-term success and viability. The lack of an adequate management plan for Seymour is proving a major handicap in its development.

A management plan provides a clear focus for the direction of the demonstration forest to all levels, from the Advisory Committee down to the Works Supervisor. It outlines both short and long-term strategies and gives direction to all those associated with the project, whenever they become involved.

The plan should provide a long term vision of where the demonstration forest will be in 40, 50, even 100 years time, of how it intends to address current social attitudes to forestry and how this influences the proposed stages of development within the forest. The document needs to guide Committee members and others to the decisions necessary to achieve the demonstration forest's long-term objectives. The plan should outline resource characteristics and values of the demonstration forest, the resource management considerations and the principles and recommendations for the management of the area. The plan should be reviewed every five years with updates on social attitudes and public perceptions and the levels of available resources and funding.

The plan should also outline the interactive role of the committee(s), levels of demarcation and responsibility, the avenues of communication and the process for achieving management decisions.

4.c. Neutrality

The general public seem to be suspicious of forest companies and organisations as they defend their actions. There tends to be a “that’s what you would expect them to say” attitude to statements in the media.

Neutrality may be difficult to establish in Australia as it is more likely that Government bodies or forest companies will be responsible for establishing any form of demonstration forest. Given the public’s scepticism, will they believe what they see and hear ?

One way of establishing credibility is to have an independent body which serves as the governing authority. The funding may come from government and industry but the message would be from a source the public perceive - correctly - to be neutral.

This aspect emphasises the important role of the Advisory Committee in achieving an air of neutrality and credibility. It also stresses the need for a mechanism of public involvement in the planning process.

4.d. The Basic Set-up

The diagram on the following page shows the basic concept for linking themes or treatments along trails. In this example there are four areas of about 10 hectares. A series of looped trails lead out from a central point. Each of the trails would take the visitor through a different theme or treatment. This gives the visitor the option of walking all the trails in one day or a different trail each time they return. Within these areas you could display themes such as ‘why and how forests grow’, ‘harvesting and regeneration’, ‘fires’, or ‘catchment protection’. In combination with these themes treatments of ‘selective logging’, ‘plantations’, ‘clearfall’, to name just a few, could be displayed. The themes or treatments displayed will depend primarily on the messages to be conveyed and the capacity of the site.

Avoid trying to achieve everything in one demonstration forest or in one particular area, otherwise the whole forest will become confusing. It’s far better to plan for several key messages. Keep things simple and basic and don’t allow the forest to become cluttered.

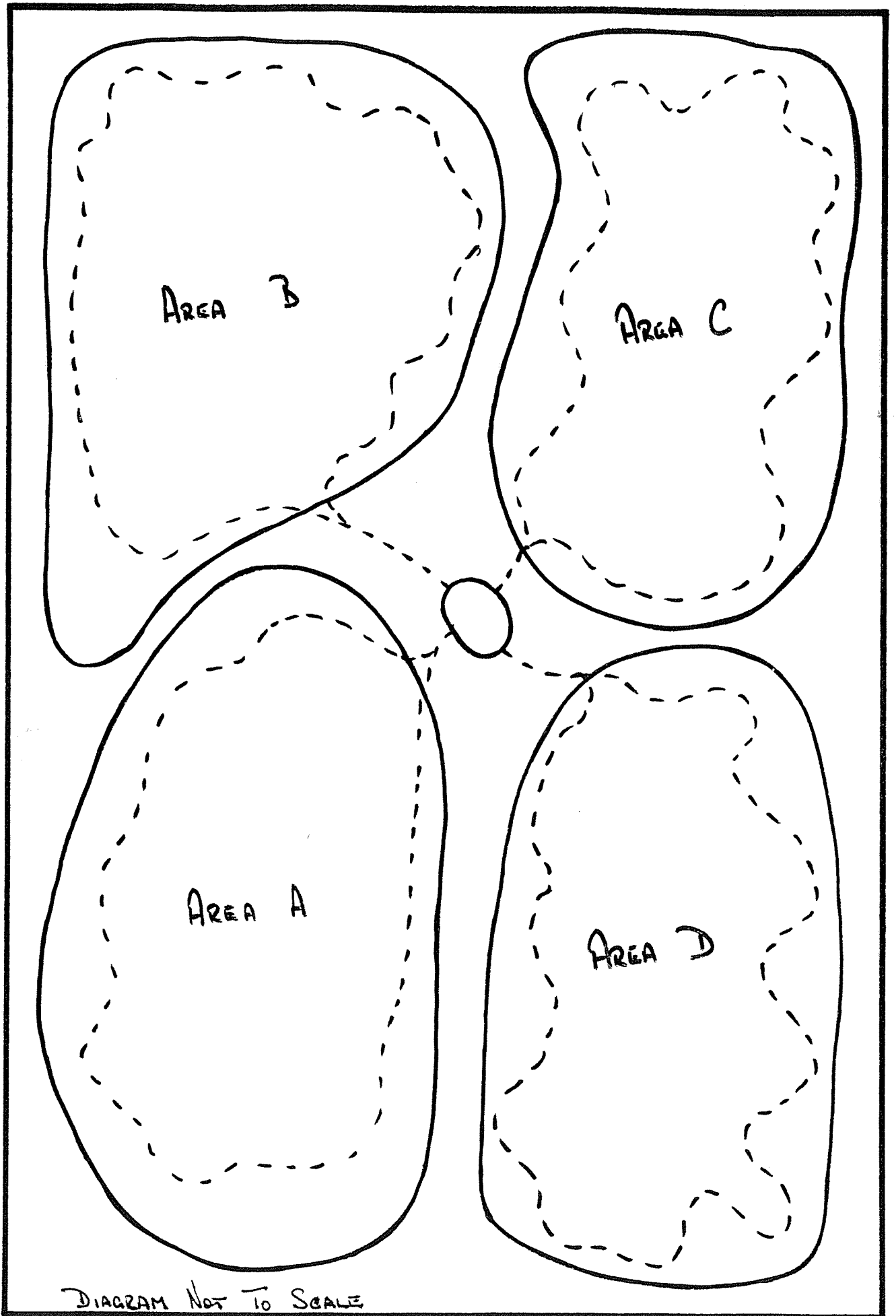
Not all the areas have to be developed or completed before you open the forest to the public. As long as you make people aware of the future plans for the forest you can allow access as soon as it is practicable to do so.

If an area is showing a production aspect of forestry do not treat the entire area at once (in this example all 10 hectares). For instance, in the first year only treat one or two hectares. It may be up to five years or more before this treatment is undertaken in this area again. In the intervening years other treatments, in other areas, may be started with a similar time frame in mind. Where possible, minor treatments such as controlled burns and pruning can also be incorporated in the years between major treatments, providing a further dimension to the areas.

By treating only one or two hectares at a time in each treatment area, a mosaic of age classes is eventually established. In this example, if the last two hectares of clearfall is completed 20 years after the first, there will be regrowth ranging down from 20 years old, already growing. Such diversity will provide dynamic interpretation opportunities.

i. Trails

The majority of the trails should be short - less than an hours walk, including time to stop and read the interpretation. Ensure good quality trails and adequate width to allow for people to stand around in groups and to assist maintenance.



ii. Interpretation

Interpretation should be brief, concise and free of jargon. The quality of the interpretation will be pivotal to the success of the demonstration forest.

iii. Demonstration Areas

Keep the treatments small in scale but treat the area exactly how a larger forest area would be treated. Even though it is on a small scale, this approach provides a dynamic dimension to the demonstration forest which can assist in people understanding how forests are not static - that they do change with time.

4.e. Committees

Depending on the individual circumstances, it may not be necessary or practicable to form a committee structure such as that of Seymour. Initially Seymour just had the Advisory Committee, with the others being formed at a later stage, principally on the recommendation of the Advisory Committee.

It is, however, vital to have some form of committee structure in place early enough to provide not only a focus and direction but also to engender the community support and involvement so vital to the success of a demonstration forest. A committee can also provide a perceived impartiality in the management of the demonstration forest by having a membership that encompasses a spectrum of professional bodies, government sectors and community interest groups.

At a local level, membership of an Advisory Committee or its equivalent should be initially chosen by the governing body of the demonstration forest and contain such people as former members of parliament, mayors or councillors; representatives of land management agencies, local councils, Tourism and Education bodies, and community service groups.

4.f. Staffing

Rhetorical though it sounds, committed and enthusiastic staff are the lynch pin to a demonstration forest's success. As funding and resources for Seymour have diminished over the years, it is the dedication of the staff that has ensured its continued momentum.

It is imperative that people associated with the demonstration forest are committed to the objectives. They need to fully appreciate what a demonstration forest is and what it is trying to achieve.

The roles and levels of skills required by staff are outlined in section 3b.iv. While the total staffing requirements for each demonstration forest will vary, my recommendation is that the minimum level of staffing would require:

- One full-time caretaker for general maintenance,
- One full-time professional forester to oversee forest management, liaise and coordinate committees, community groups and volunteers, coordinate media and marketing and assist with interpretation and guided tours,
- One full-time professional forester/educator to organise and conduct school tours, and
- One part-time professional interpreter.

This minimum level of staffing would need to rely on strong support from volunteers for assistance with tours, major maintenance projects and special event days.

4.g. Volunteers

A volunteer program should be established in the early stages to build up a reliable pool of people. Coordination of the volunteers should include arranging appropriate training to ensure they fully understand the objectives of a demonstration forest and that the messages being delivered are consistent.

In Australia, a base of volunteers could be drawn from such organisations as the Institute of Foresters, the Forest Protection Society and the Hoo Hoo Club, while current and retired employees of companies and government organisations can also be approached.

A volunteer program has the potential not only to reduce running costs but to develop strong camaraderie, community support and a degree of local pride in the demonstration forest.

4.h. Financing/Funding

Demonstration forests are a long-term commitment and investment in public education but the cost of establishment and maintenance can be high. Obviously, the cost will depend upon the scale and the level of sophistication desired.

It is important to put the costs into perspective. The initial outlay can be high, however, consider the following as a comparison. In Tasmania a one-page newspaper advertisement costs \$3,500 and lasts one day. A television advertisement costs, on average, \$1,200 per minute. For under \$60,000 a year a full-time professional could be employed to take school classes through a demonstration forest. While the figures are general, assume there are 30 available school weeks during the year to run tours, with an average class size of 20. Two classes a day on a two-hour tour means that 6,000 children pass through each year at an average cost of \$10 per child. Even if these expectations were halved, \$20 per child is very good value compared to other forms of public education.

Over and above the initial establishment costs, which will vary quite considerably, the estimated minimum annual funding required to manage a demonstration forest based on my experience in Seymour and Tasmania are outlined in Table 3.

Table 3: Minimum Annual Funding Requirements for a Demonstration Forest

Salaries		
Caretaker	30,000	
Forester	45,000	
Educationalist/Forester	45,000	
Interpreter (part-time)	10,000	\$130,000
Vehicles		
Hire of 3 vehicles plus running costs		\$40,000
Materials		
General building materials		\$10,000
Equipment		
Chainsaws, photocopiers, phone, fax, etc		\$10,000
Brochures		
Educational and promotional		\$5,000
Stationary		
Education and general office		\$5,000
TOTAL		\$200,000

The important point is that demonstration forests cannot be run effectively on a shoestring budget. To do so is to render them ineffective for the purpose that they are established. They are a significant commitment and have to be accorded the appropriate staffing and funding to remain viable.

It would be hoped that State and Federal governments can be convinced of the worthwhile nature of demonstration forests, and provide the bulk of the funding. Failing this, forest industry, forest companies and other private sources may have to be persuaded to provide finance.

4.i. Marketing

As with any new product, a marketing strategy is essential for success. Demonstration forests must be marketed to the public, both to attract people to it and to gauge their attitudes and perceptions, and they must be marketed to funding partners to attract finance to the project. The marketing of the demonstration forest concept is therefore another key component of their establishment.

With increasing competition for public education money it is important to convince potential funding partners that investing in a demonstration forest offers benefits over and above the money they would spend on other forms of public education. Approaches must be made to State and Federal governments, all sectors of the timber industry and the full range of recreational users of the forest.

A marketing strategy for the public should outline proposed promotional activities including media opportunities, advertising campaigns and special event days.

A marketing strategy for funding partners should outline what a demonstration forest is, what the short and long-term objectives are and the benefits of putting money into such a project compared to other avenues of public education.

Initially, Seymour's enormous potential for public education in forestry was used to attract funding partners. Forest agencies and private forest companies were invited to help fund an avenue for public education that, because it was attracting funding from a variety of sources, represented a reduced level of expenditure for potentially greater exposure and greater credibility. As Seymour's prominence and notoriety grew, with the media being used to its best advantage to run feature stories surrounding special events in the forest, so did the attraction for sponsorship. In essence the increasing success and popularity of Seymour was itself the most successful marketing strategy they had.

The success of marketing Seymour is reflected in the variety of its sponsors with funding coming from the Ministry of Forests and the Council of Forest Industries and Unions, while donations have been received from associations as diverse as the Salmonoid Society and the Vancouver Symphony Orchestra.

At a local level, approaches should be made to companies, sawmillers, contractors, processors, councils and government agencies to back the concept financially. Quite often these individuals and organisations are funding their own, often disjoint, public relations programs - the possibility of contributing to a cohesive program of public education in the form of a demonstration forest could prove quite attractive.

4.j. Getting people to it ~ the attraction

While proximity, as discussed earlier, is an important factor in attracting visitors to the demonstration forest, the greater the variety of recreational experiences an area can offer, the greater the potential to attract people.

Seymour offers such activities as walking, hiking, jogging, cycling, fishing and canoeing, all of which are very popular. Demonstration forest sites should ideally offer a wide variety of recreational opportunities, over and above simply walking and picnicking.

Education alone will not be the major crowd puller, although it will be for specifically targeted groups, such as schools, colleges and universities. The opportunities for recreation and leisure pursuits will tend to be the key attraction. As much as the forestry profession might like to believe otherwise, most people do not have a great interest in achieving a detailed understanding of forestry or forestry related matters. Ironically, it is these same people who are making ill-informed judgements and opinions based on what they hear and see in the media. These people will not come to the forest just to see and learn about forestry, but many will come for various forms of recreation. If at the same time they learn something about forestry, the demonstration forest will have achieved a great deal. To even be aware that you can walk, cycle, jog, horseride or fish in a working forest would be an education in itself for many people. Recreation is the attraction; education is the result.

One-off, or special events, are effective ways of attracting crowds and interest. Demonstrations of old-time logging methods using bullocks or horses on, for example, World Forestry Day or during Arbour Week or Forestry Week, are an effective way of arousing people's interest. So too are arranging special events for individual groups such as the handicapped, the disabled and the elderly. Worth considering also are holding more abstract activities in the forest such as sculpture, sketching, musical events, bush cooking classes and woodturning. The media coverage before and during these events is invaluable, and free advertising.

4.k. Media

Every opportunity to obtain media exposure should be taken. The opening of new trails and facilities, special event days, visits by community groups and special interest group volunteer days all offer excellent media opportunities. These opportunities provide good publicity for the demonstration forest and greatly assist in attracting more people. They are important for existing and potential funding partners and for the members of the community who are involved in the project.

Marketing to the public involves bringing the attractions of the forest to the public's attention. Through publicity in the general media, travel magazines and brochures, and through local clubs and organisations, the recreational, scenic and unique features of the demonstration forest can be outlined to a wide audience. Examples of the type of advertising used for Seymour are shown in Appendix E.

4.l. Community Involvement

Involvement by the community is central to the success of any demonstration forest. The public must have an avenue for active contribution into the planning and development processes. This involvement is pivotal to increasing their awareness and understanding of how a forest is managed.

Community involvement can be achieved through the Advisory Committee, as mentioned above, where user groups can be represented either by direct membership or via submissions to the Committee. Clubs such as Lions and Rotary, special interest groups such as bushwalkers and ornithologists, and organisations such as scouts and guides can also be approached to become involved in certain aspects of planning.

For example, ornithologists can be asked to do pre and post logging bird surveys, or bushwalkers asked to assist in siting new trails, school groups doing botanical surveys, or community service clubs can undertake on-site minor works such as shelters. This creates both a feeling of involvement with the forest and develops and appreciation of the considerations that must be taken into account in managing the forest resource.

Involving groups with conflicting values can also create its own difficulties. The process of public involvement needs to be handled sensitively with the guidelines clear from the outset. Handled correctly, the results can be very positive with different groups gaining an appreciation of the broad range of issues that need to be considered in forest management.

4.m. Monitoring

Establishing a system of surveys allows constant evaluation and helps gauge whether the forest is remaining relevant and reflecting current public concern about forestry issues. This is essential.

Surveys of visitors to Seymour certainly show that the demonstration forest is popular - how effective the messages and themes are in influencing public opinion is much harder to discern. What is clear, is that Seymour does have an effect on the attitudes of visitors and their understanding of forest management. The surveys of visitors, including school children, reflect attitude changes before and after going through the forest. Samples of surveys conducted at Seymour are shown in Appendix D.

Surveys will gauge the overall effectiveness of the interpretation and guided tours in the short-term, for example, What messages or impressions did visitors take home ? Are the messages clear ? Are they easily understood ? and so on. However, the long-term effectiveness of this form of education in changing public opinion and influencing future social attitudes to forestry is very difficult to evaluate. How can you critically gauge the influence of demonstration forests on the voting habits of school children, as adults in 10 to 15 years time ?

4.n. Tours

Guided tours have been shown to be one of the most effective means of communicating messages. Marketing of the demonstration forest should be geared towards running guided tours on a regular basis. However, if Seymour Demonstration Forest can be used as a guide, only about 20% of the visitors will choose to go on guided tours when they are available. This figure is relatively low compared to guided tours in National Parks. Whether this is because the people visiting Seymour are more interested in recreating, rather than being educated or whether there is a desire to 'see for themselves' rather than be influenced by the opinions of a guide, is unclear.

What it does mean is that the majority of visitors will choose to go on the self-guided tours. Therefore, the interpretation has to be well planned, well researched and of very high quality to ensure that the desired messages are being delivered.

5. Maintaining the Commitment

The commitment has to be ongoing if the demonstration forest is to be successful, it is definitely not a one-off cost in terms of time and resources. There has to be long-term commitment to staffing levels, resources, education programs, maintenance and above all, funding.

Demonstration forests can not be established and then just left alone. They are by their very nature dynamic and should constantly change with new technology and with shifts in public attitudes and perceptions. These aspects have to be regularly monitored and the demonstration forest must change in relation to them. If the 'guard is dropped' the demonstration forest will soon be out of touch with community needs and expectations and with forestry aims and objectives.

6. Conclusion - Why each State should have one

Demonstration forests are not the definitive answer to changing community attitudes to favour all aspects of forests management, particularly production forestry. No single forum of community education could ever hope to be. They are, however, potentially one of the most influential forms of public education on forestry presently available to us. Demonstration forests offer a "come and see for yourself" approach to increasing community understanding and awareness on the plethora of resource conflict issues facing multiple use land managers. The messages are presented in the most powerful and effective forum available - the forest itself.

Over the years, Industry and Government have to some extent paid lip service to community education on forestry related issues. The money has generally been insufficient to invest in effective and efficient programs and, where the money has been available, it has often been spent on programs which were poorly researched and ill-conceived. Changing community attitudes does not happen overnight and does not come cheap. If Australia is serious about educating the community on forestry related issues it cannot be done on a shoestring budget. Money, considerable amounts of it, has to be invested.

However, it must be invested wisely. After all I've seen, all I've read and all the people I've spoken to, I honestly believe that demonstration forests, as a medium for public education, are a worthwhile investment in both the short and long-term. It is essential that the demonstration forests are well thought out and follow sound principles, such as those outlined in this report. Many people think they know what should go into a demonstration forest but very few of these people have had the adequate exposure to both forest management and public education necessary to appreciate just what the demonstration forest should contain and what the messages should be.

The objective of establishing a demonstration forest close to the major urban population centres over the next few years should be uppermost in the minds of Government and Industry.

Misunderstanding and lack of acceptance of forest practices amongst the public tends to be much greater in larger population centres. By having a network of demonstration forests in close proximity to major urban centres (ie. less than one hours drive) the greater the potential impact on the views held by people in these areas. This network of outdoor working examples, that promotes the principles and practices of integrated resource management and sustainable development, would explain in a very practical fashion how all Australians can benefit.

Thanks to the Gottstein Memorial Trust, over the last five years Australia has developed the expertise and knowledge to be able to establish such a series of demonstration forests. This gain in expertise should now be given the opportunity to bear fruit, Australian Forestry has already waited far too long.

7. Acknowledgments

This study was made possible only by the generous financial support of the J.W.Gottstein Memorial Trust. I sincerely thank the trustees for awarding me a Gottstein Fellowship and hope that the findings of this study tour can go some way to advancing the cause of forestry in Australia.

I also owe my gratitude to Forestry Tasmania for their support, encouragement and understanding in allowing me to accept this Fellowship.

Finally, I am deeply indebted to a wealth on individuals across British Columbia who so willingly gave of their time and hospitality. While the names are too numerous to list, I cannot close without making special mention of the generous assistance of Dan Jepsen of the British Columbia Registered Professional Forester's Association and Tom McComb of the Greater Vancouver Regional District - without them this Fellowship would not have been the success I feel that it was.

Program of Overseas Visit

Program of Overseas Visit

Seymour Demonstration Forest, Vancouver, Canada and British Columbia

15th February to 8th April 1993

Week 1

Dan Jepsen
Manager, Forestry
Previous Project Coordinator Seymour Demonstration Forest
Association of British Columbia Professional Foresters
440 - 789 West Pender Street
Vancouver

Valerie Cameron
Project Coordinator
Seymour Demonstration Forest
Greater Vancouver Regional District
4330 Kingsway
Burnaby

Tom McComb
Operations and Development Supervisor
Seymour Demonstration Forest
Greater Vancouver Regional District
4330 Kingsway
Burnaby

Ed Hamaguchi
Chief Engineer
Seymour Demonstration Forest
Greater Vancouver Regional District
4330 Kingsway
Burnaby

Week 2

Seymour Demonstration Forest Technical Committee Meeting

Bob Cavill
President
British Columbia Forestry Association
9800A - 140th Street
Surrey

Don Lanscail
Chairman
Seymour Demonstration Forest Advisory Committee
2465 Rosebery Avenue
West Vancouver

Peter Caverhill
Chairman
Seymour Demonstration Forest Technical Committee
Ministry of Environment
10334 - 152A Street
Surrey

Don MacLaurin
Coordinator
Whistler Demonstration Forest
Whistler

Week 3

Janice Jarvis
Project Manager
Seymour Salmonoid Society
Seymour Demonstration Forest

Kevin Bell
Lynn Canyon Ecology Centre
1302 Sunnyside Drive
North Vancouver

Susan Craven
Multiple Use Planner
Fletcher Challenge Canada Ltd
6th Floor 815 West Hastings Street
Vancouver

Val Leasing
President
Canadian Women in Timber
617 Harrison Avenue
Coquitlam

Week 4

Seymour Demonstration Forest Education Committee Meeting

Linda Coss
Manager Education Services
Council Of Forest Industries
1200 - 555 Burrard Street
Vancouver

Rick Beckett
British Columbia Forestry Association
9800A - 140th Street
Surrey

Peter Sanders
Coordinator
University of British Columbia Research Forest
Maple Ridge

Week 5

David Cadman
Education Services
Greater Vancouver Regional District
4330 Kingsway
Burnaby

BC Forest Educators Meeting

Festival of Forestry Teacher Education Tour
Queen Charlotte Islands

Week 6

Derek Bonin
Chief Forester
Greater Vancouver Regional District
4330 Kingsway
Burnaby

Ken Juvik
Silviculturalist
Greater Vancouver Regional District
4330 Kingsway
Burnaby

Walter Veradsky
Public Relations Forester
Ministry of Forests
Chilliwach Forest District
9850 South McGrath Road
Rosedale

Provincial Regional Public Advisory Committee (RPAC) meeting

Week 7

Jack Munro
Chairman
Forest Alliance of B C
210 - 1100 Melville Street
Vancouver

Seymour Demonstration Forest Advisory Committee Meeting

Tony Shebbeare
Vice President
Council of Forest Industries
1200 -555 Burrard Street
Vancouver

Dr John Barker
Chairman
Canadian Institute of Foresters
1140 West Pender Street
Vancouver

Week 8

Gordon Joyce
Chief Forester
Former Project Coordinator Seymour Demonstration Forest
Victoria Water District
Victoria

Dr John Drew
Pacific Forestry Centre
506 West Burnside Road
Victoria

John Cuthbert
Ministry of Forests
1450 Government Street
Victoria

Appendix A

Committees

Terms of Reference

**SEYMOUR DEMONSTRATION FOREST
ADVISORY COMMITTEE**

TERMS OF REFERENCE

1. Background

The lower Seymour River valley was set aside decades ago as a future water catchment area and reservoir. In 1987 the administration board ruled that until such time as the lower Seymour valley is required for this purpose it has been made available for public usage and educational opportunities.

In 1987 the Seymour Demonstration Forest was opened to the public to demonstrate watershed management with a primary objective of maintaining water quality and supply.

Demonstration Forests offer a unique learning experience to the public. They provide first-hand opportunity to explore a forest managed for a variety of resource uses. A significant aspect of the Seymour Demonstration Forest (SDF) is the opportunity it affords for dynamic interpretation and education. While many education programs are based on "what is" in a particular area, the education opportunities within a demonstration forest include "what will be".

With over 200,000 visitors a year, the Seymour Demonstration Forest has proven itself as a first-class example of integrated resource management close to an urban setting. Over 12,000 people participate in guided programs annually and at least twice that amount take advantage of the numerous self-guiding opportunities. Demand for both guided and self-guided programs in the Seymour Demonstration Forest continues to increase and can be expected to do so in the years ahead. The challenge is to continue to provide high quality integrated resource management programs in this "real" setting.

2. Purpose

The purpose of the SDF Advisory Committee is to advise the Water Committee about SDF operational and educational programs.

3. Objectives

The primary objective of the SDF Advisory Committee is to provide input, guidance and recommendations to the Water Committee so that the Seymour Demonstration Forest is operated consistent with the guiding principles:

- i) To protect the potential use of the area for future water supply.
 - ii) To effectively demonstrate integrated resource management.
-

iii) To provide a wide variety of opportunities for education and demonstration to the public including, but not limited to, the following:

- . public tours and education programs
- . primary, intermediate and secondary school programs
- . technical and professional tours and programs
- . special events and displays
- . education publications
- . interpretive trails and panels
- . other

iv) To provide a 'wilderness' experience adjacent to a large population base.

4. Committee Membership

Membership on the SDF Advisory Committee and terms of appointment are at the discretion of the Water Committee.

Committee membership should include all funding partners and additional members to reflect balanced representation of the various interests to be considered in the integrated resource management of the Seymour Demonstration Forest. Agencies, industry, and the public are to be represented on the Committee. A list of SDF Advisory Committee members is attached and will be reviewed by the Water Committee annually for additions or deletions.

5. Committee Structure and Operations

a) Location

Meetings of the SDF Advisory Committee will be held at the Greater Vancouver Regional District at 4330 Kingsway, Burnaby, B.C. unless otherwise arranged.

b) Chairperson

The SDF Advisory Committee will be chaired by an independent person to be designated by the Greater Vancouver Regional District's Water Committee. The Chairperson's responsibility is to ensure that the meetings are run in an orderly and effective manner.

c) Meetings

Four regular meetings will be scheduled each year. Additional meetings may be called under special circumstances at the discretion of the Chairperson.

d) Agenda Process

The agenda for the SDF Advisory Committee will be provided by the Water and Construction department, with the Communications and Education department bringing forward those items that pertain to the Seymour Demonstration Forest Education program. In addition, SDF Advisory Committee members may also initiate agenda items. The meeting agenda will be finalised by the SDF Advisory Committee Chairperson in consideration of input from each of these sources.

e) Meeting Process

The meetings will be structured to encourage free and open discussion of agenda items concerning the SDF.

f) Presentations

Presentations made to the SDF Advisory Committee by subcommittees and/or members of the public must be accompanied by suitable written documentation which will be attached to the meeting notes.

g) Subcommittee of the SDF Advisory Committee

Where the SDF Advisory Committee considers that a subcommittee of the SDF Advisory Committee may be formed. The subcommittee must report to the SDF Advisory Committee.

h) Committee Recommendations

The Chairperson or a designate from the SDF Advisory Committee will present its recommendations to the Water Committee.

i) Reporting

The SDF Advisory Committee meeting notes will be regularly circulated to the Water Committee.

j) The Water and Construction department will ensure that appropriate staff are available to provide information to the Advisory Committee and to answer questions.

k) The Water and Construction department will make available in the GVRD library all public SDF project information. This information will be available during normal GVRD library hours.

l) Members of the public may attend Advisory Committee meetings as observers.

m) As the role of the Seymour Demonstration Forest Advisory Committee is advisory, no votes will be held to determine the Committee's position on issues. Where consensus exists, it will be noted and where it does not exist, the diversity of opinion will be communicated through reports to the Water Committee by the Committee chairperson.

n) The results of Seymour Demonstration Forest Advisory Committee meetings will be recorded in minutes which will contain a description of the issues addresses, action steps, responsibilities, time commitments and so forth.

o) Periodically, a report will be forwarded to the GVRD Water Committee describing the work completed by the Seymour Demonstration Forest Advisory Committee. Copies of the approved report will be circulated to Seymour Demonstration Forest Advisory Committee members and interested members of the public.

6.0 Mandate

The Seymour Demonstration Forest Advisory Committee will:

a) review and advise the Water Committee on the concept themes and plans relating to the Seymour Demonstration Forest;

b) review reports from its subcommittees and GVRD staff reports referred to it by the Water Committee to make recommendations on development and management of the Seymour Demonstration Forest;

c) serve as a resource in sharing their expertise in developing integrated resource forest management plans;

d) identify and advise on possible funding or resource agencies to assist with the planning and implementation of projects;

e) advise and assist in the building of communication networks between the Seymour Demonstration Forest and outside agencies;

f) provide input and recommendations on the Seymour Demonstration Forest integrated resource management education programs as they relate to the goals and objectives of the Seymour Demonstration Forest.

Seymour Advisory Committee

Mr. Don Lanskill Chairperson	2465 Rosebery Avenue West Vancouver, B.C. V7V 2Z8	922-8293
Mr. Bob Cavill	BCFA 9800A -140th Street Surrey, BC V3T 4M5	582-0100 582-0101 Fax
Mr. Mark Angelo	B.C.I.T. Forest Resource Technology Dept. 3700 Willingdon Avenue Burnaby, BC V5G 3H2	432-8270 432-1816 Fax
Mr. Angus Allison (Representing COFI)	Richmond Plywood 13911 Vulcan Way Richmond, BC V6V 1K7	278-9111 278-2617 Fax
Mr. Mark Johnson	Department of Fisheries & Oceans Salmonid Enhancement Program 610 Derwent Way New Westminster, BC V3M 5P8	666-0743 290-3156 Cel.
Dr. John Drew	Forestry Canada Pacific Forestry Centre 506 W. Burnside Road Victoria, BC V8Z 1M4	363-0600
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Mr. Gary Charland	Outdoor Recreation Council of B.C. 456 East 4th Street North Vancouver, BC V7L 1J5	737-3058 Work 983-2414 Home
Dr. Don Munro	UBC, Faculty of Forestry 2357 Main Mall Vancouver, BC V6T 1Z4	463-8148

Seymour Advisory Committee

Page 2

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Mr. Michael Banwell	Seymour Salmonid Society 775 Keefer Street Vancouver, BC V6A 1Y6	W687-2345 Lo: 5021 H253-4924
Mr. Jace Standish (Representing Association of Prof. Foresters of B.C.)	Forestry, Environmental and Land Use Consulting 2760 - 210th Street Langley, BC V3A 7R2	533-3755
Mr. Ben Marr	Regional Manager GVRD, 3rd Floor	Hand Deliver
Mr. Peter Coverhill Chairperson Technical Sub-Committee	B.C. Ministry of Environment Lands & Parks - Fish & Wildlife Branch 10334 - 152A Street Surrey, BC V3R 7P8	582-5200 660-8926 Fax
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Updated: January 22, 1993

mail/SAC.LST

SEYMOUR DEMONSTRATION FOREST EDUCATION COMMITTEE

TERMS OF REFERENCE

Purpose:

To provide input, guidance and recommendations on the Seymour Demonstration Forest Integrated Resource Management Education Programs as they relate to the goals and objectives of the Seymour Demonstration Forest.

Objectives:

1. Assist with the development and implementation of Integrated Resource Management education programs including but not limited to the following:
 - . general public tours and programs
 - . primary, intermediate and secondary school programs
 - . technical and professional tours and programs
 - . special events and displays
 - . education publications
 - . interpretive trails and panels
 - . other
2. Ensure that all programs are complimentary to existing resource management programs offered in B.C.
3. Monitor the education activities within the Seymour Demonstration Forest and recommend amendments to the programs through the Seymour Advisory Committee.
4. Develop proposed education budget yearly for submission to Seymour Advisory Committee.

Committee Members:

Committee membership will consist of representatives from agencies and groups currently involved in resource management education and representatives from each of the main resource uses in the Forest:

- Recreation (1 member)
- Fish and Wildlife (2 members - one from each discipline)
- Water (1 member)
- Forests (2 members)
- Land/Soil (1 member)
- Teachers (2 members - one intermediate, one secondary)
- Seymour Salmonid Society
- Natural History (1 member)

Membership and Structure of the Committee

Committee members will draw upon their backgrounds in education and resource management to provide input, guidance and recommendations on the Seymour Demonstration Forest Integrated Resource Management education programs.

1. The Committee will elect a chairman who will:
 - . be an active contributing member to the Committee
 - . chair Education Committee meetings
 - . represent the Education Committee at Seymour Advisory Committee meetings
 - . keep the Education Committee informed as to Seymour Advisory Committee and Technical Committee decisions
 - . inform GVRD liaison of additions or changes to meeting agendas

The chairman will be elected for a two year term.

2. Committee members duties and responsibilities:
 - . be an active contributing member to the Committee
 - . ensure resource/education area is represented
 - . inform GVRD liaison of additions or changes to meeting agendas

One committee member will be elected as a vice-chairman during the second term of the chairman.

3. GVRD will provide resource person to coordinate meetings, agendas and minutes and keep the Committee up to date.

4. The chairman will call meetings of the Education Committee at least six times per year. Meeting dates will generally be set at the conclusion of each meeting.

5. To ensure the highest possible level of continuity and consistency for Seymour Education Committee meetings, Committee members should make every effort to attend all Committee meetings throughout the year. Alternate representatives are encouraged to ensure all areas of education and resources are represented at each meeting.

6. Committee membership and objectives will be reviewed yearly (at the summer meeting) to determine if changes or additions are required.
-

SEYMOUR EDUCATION COMMITTEE
MEMBERSHIP LIST

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SEYMOUR DEMONSTRATION FOREST TECHNICAL COMMITTEE

TERMS OF REFERENCE

Purpose

- a. Ensure that integrated resource management, a process which identifies and considers all resource values along with social, economic and environmental needs, is undertaken to facilitate understanding of integrated resource management in the Seymour Demonstration Forest.

Objectives

- a. Develop and implement an Integrated Resource Management Plan for the Seymour Demonstration Forest.
- b. Solicit and consider the views of all resource users, agencies, institutions, internal committees, staff and the general public in the development of the Management Plan and to keep all parties informed of process and decisions.
- c. Monitor the activities within the Seymour Demonstration Forest and recommend amendments to the Management Plan through the Seymour Advisory Committee.
- d. Make recommendations and provide guidance on resource management concerns and issues to the Seymour Advisory Committee.

Planning Area

The Seymour Demonstration Forest is that portion of the Seymour Watershed south of Seymour Falls dam as shown on the attached map. The west boundary is marked by the height of land and borders Lynn Headwaters Regional Park. The east boundary is marked by the height of land and borders Mount Seymour Provincial park.

Committee Members

Committee membership will consist of representatives from resource fields outside the GVRD. GVRD staff will liaise with the committee. Each committee member will represent one of the main resource uses in the area:

Recreation
Fish & Wildlife
Forests
Water

The committee members will draw upon their backgrounds in resource management to provide input, guidance, and recommendations on the Seymour Demonstration Forest Integrated Resource Management planning process. The committee will review resource uses and concerns with a view to providing the "best" overall solution for review and approval by the Seymour Advisory Committee.

a. The committee will elect a chairman every 2 years who will be responsible for the following duties:

- . Be an active contributing member to the committee
- . Chair Technical Committee meetings
- . Represent the Technical Committee at Seymour Advisory Committee meetings and provide information to the same on recommended developments, operations and resource uses
- . Keep the Technical Committee informed as to the Seymour Advisory Committee's decisions
- . Inform GVRD staff representatives about additions or changes to meetings agendas

b. Committee members duties:

- . Be an active contributing member to the committee
 - . Inform GVRD staff representatives about additions or changes to meeting agendas
 - . Ensure resource area is represented
-

Appendix B

Education Programmes

A Description of
Education Programs
of the
Seymour Demonstration Forest

by Jill Deuling
Deuling Design and Communications
for GVRD Communications and Educations Department

June 1993

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SEYMOUR DEMONSTRATION FOREST EDUCATION PROGRAMS: DESCRIPTION OF THE PROGRAMS

This report is a description of the Seymour Demonstration Forest (SDF) education programs currently in use. It also summarizes the messages that are being given in the guided programs. It describes some of the styles of programs offered. Hopefully this information will be useful to someone who is being introduced to our programs. It may serve as a guide for anyone interested in participating in the SDF programs. It also identifies some of the themes and objectives of the education program. It can be used as a guideline for future projects. It explains our program to potential sponsors who may want to help build upon the present programs to increase the function of the SDF.

Education programs, an important focus in the SDF, are conducted to help foster people's appreciation and understanding of the management of watershed resources. The programs include school programs, community group tours, volunteer programs and self-guiding information systems (brochures and signs). The information presented relates to overall watershed management, forests and forestry, water protection and conservation, fisheries, wildlife, and people's values and uses of all of these resources.

Through these education programs it is intended that people will:

- 1) have an enjoyable learning experience so that they will care about and want to learn more about our watersheds, forests and other associated, natural resources;*
- 2) understand some watershed resource management concepts and recognize the need for planning and managing these resources for the future; and*
- 3) be encouraged to use our forests and water supply wisely.*

The SDF provides an extremely important opportunity for people to learn while experiencing the forest and seeing "first-hand" examples of integrated resource management. Nowhere else in the Vancouver region, so close to the expanding city, can people see such a combination of resource management examples, side by side, including forest treatment sites (clearcuts, silviculture projects, etc.), a fish hatchery, water supply systems, wildlife habitat, film industry activities and education/recreation facilities. The SDF is becoming increasingly important as a staging area for education programs about watershed and forest resources. It is now well established as a field-trip site for school classes studying forestry and the environment.

HOW THE SDF EDUCATION PROGRAMS WORK

The GVRD manages the overall watershed land base which includes the SDF. More specifically, the GVRD Watershed Management Department manages the forestry programs, public facilities and education programs in the SDF. Further the education programs are a joint effort between: GVRD Watershed Management Department; GVRD Education and Communications Department; BC Ministry of Forests, Council of Forest Industries, Forestry Canada, BC Ministry of Environment, Lands and Parks, Environment Canada, Federal Fisheries and Oceans, consultants and **volunteers**. Many volunteers are associated with organizations such as Women in Timber, Forest Industry Ladies, BCIT, UBC, SFU, the Seymour Salmonid Society, forest companies, provincial and federal government, and GVRD. Others are simply individuals who are also interested in forestry and environmental education. Professional educators and experienced volunteers play an important role presenting information to SDF visitors.

The Watershed Management Department builds and maintains facilities that enhance the educational and recreational experience for SDF visitors. The forestry sector has been extremely supportive of the GVRD's SDF programs. It is this combined effort amongst many players which contributes to the success of the SDF education programs.

A BRIEF DESCRIPTION OF A TYPICAL SCHOOL PROGRAM

School Program Introduction

School programs usually start in the SDF parking lot, at the shelter. Groups are given a 10 minute introduction to the program under the shelter. This introduction includes greetings, a description of the tour itinerary, and a general explanation of watershed management. The SDF guides use props to explain the watershed system. Elementary school children build a watershed using a felt-board. They learn by creating a picture that illustrates the water cycle, the different forest resources, and some of the management activities in the watershed. The groups discuss what resources are managed, and the value of these resources. The older groups such as the high-school or college groups are shown maps during the introduction. The discussions vary in academic level based on the academic level of each group.

IRM Trail Walk

During this section of the program, groups learn about forestry, how it pertains to watershed management, and how it relates to the visitor's lives. Participants are taught using games, props, and group discussions to provoke their interest and group participation. We not only teach school students but also teach school teachers important concepts during the forest walk.

The history of watershed planning is introduced during this forest walk. Groups learn about Rice Lake's past and present use. We look for evidence of the watershed's history through finding cut tree stumps and spring-board notches; fire marks; fence-line; wells; logging cables; and old road ways and skid trails. We look at the forest as "an ever changing system" and discuss human intervention of the natural clearing processes such as fire. We also discuss minimizing human impact on the watersheds such as closing the area from housing developments and certain industry and discouraging some visitor activities.

Groups see how forestry techniques can be used as management tools to improve the overall forest land base. They visit a few forestry treatment sites and learn about clearcut logging, forest spacing/thinning, selection logging, tree planting, site preparation and site planning. People learn that different forest types and tree species have different characteristics and often require special consideration for forestry treatment. For example, people learn how Douglas-fir requires total clearings to regenerate in the lower Seymour Valley, while hemlock can easily regenerate under the shade of other trees. People learn why Douglas-fir, cedar, and junipers are favoured over hemlock for slope stabilization/erosion control. This information helps people understand why some of the forestry activities are carried out in the watersheds.

SDF program leaders encourage group discussions on the many values of forests in general, (i.e., wood products and, wildlife shelter, air production, erosion control, and filtration etc.). We discuss the application of certain forestry practices throughout the Province. We discuss the role of the Forester and careers in forestry and resource management. We also want the visitors to understand how forestry and forests in general impact people's lives.

The tour groups learn about the watershed's wildlife and some simple concepts about wildlife habitat requirements. People learn about how forest health and wildlife diversity is improved as a result of managing the forest for a diversity of stand age classes. People see first-hand that some animal species are taking advantage of the clearcuts, while others need to live on or in trees and are restricted to forests. We explain the importance of maintaining a balance of clearings and forest on a large land base for the overall diversity of habitats and health of the larger ecosystem (the watershed).

The IRM trail walk is usually concluded with a discussion on balancing the resource uses, setting priorities for management activities - all as a part of "integrated resource management" in the watershed. It is important to us that the visitors understand how the management programs directly and indirectly effect their lives in order for us to promote wise use of the resources and responsible decisions about resource management.

Visit to Midvalley

The groups usually stop at Midvalley for lunch. The view from Midvalley is explained after lunch. Midvalley is a great location that brings to perspective the scale of the watershed. Groups get a better understanding of the valley's size and layout. At this location the tour leaders identify historical logging sites, old fire sites, the Seymour River and film sets. By people seeing the mosaic of different forest stands and having an professional interpreter explain the aerial view of the valley, people get a better understanding of the forestry program that was introduced during the forest walk.

Dam Site

Groups are led to the base of the dam and to the viewpoint overlooking Seymour Lake. At the lake view, groups learn more about watershed security, and water systems. The guides explain the dam the pipeline system and the chlorination house. We go into more detail about the value of water. We ask people how they can conserve water so that the lower valley doesn't get flooded in the near future. One of the activities that we often do here is the "Water Comparison". This is to demonstrate the amount of fresh water available in the world for people to use. We emphasize water's value. The group discusses water around the world and we ask people to tell others about their experiences with the water in other cities and countries. People share many interesting stories for example; how some had to boil their water before drinking it in Africa, or how others could only drink bottled water, or how some had experienced severe water shortages. The leaders talk about the cost of water in other cities. For example water costs in Germany works out to be about \$4.00 per bath-tub- full quantity of water, whereas our water only costs a household approximately \$ 140.00 per year. This sharing of stories from tour participants takes the onuses off of the leaders and puts the participant in the role of teacher. This adds to the interest in our program and reinforces messages about water's value and the importance of planning and taking care of our resources.

Seymour Hatchery Tour

This stop adds another dimension to the overall program on integrated resource management. Groups are taken for a tour of the hatchery and learn about salmonids, enhancement work and the role of the hatchery. They learn about the impacts of the dam to the fisheries resource by seeing how the dam destroyed the original migratory routes of the salmonids. We discuss human use of the various resources and the consequences of our impact on the environment especially related to fish habitat. We talk about the fish as being a major revenue generating resource for Canada. The Pacific Salmon produced 3.5 billion dollars annually. We often see hatchery activities occurring simultaneously with the tours. Groups sometimes see fish being clipped or spawned. The leaders explain the processes or ask the hatchery staff to talk to the groups.

School Program Conclusion

We conclude our programs and give teachers a post-trip activity-package which includes items such as colouring sheets; tree growing kits; brochures on the GVRD, SDF and Water Systems; and any current flyers about water conservation. The teachers also receive an evaluation form to fill out. It is for them to comment on our program. Generally most teachers enjoy the program and want to return. The education programs are now becoming well established in the school program especially with the intermediate level Social Studies program and the High School Science program.

SUNDAY TOURS

Sunday tours rely greatly on the help of volunteer foresters, forest technicians forestry students and resource managers. This program brings the community of the forestry planners and the public together. The tours are generally two hours in length. This program is extremely important to encourage community involvement in the SDF as well as recognition from industry and Ministry of Forests. Overall, it increases the SDF's profile and emphasises it's importance as a "demonstration forest".

ON-SITE COMMUNITY GROUP PROGRAM

This program is year-round. It is targeted at groups such as Guides, Scouts, Junior Forest Wardens, senior centres, and community service clubs. These programs cover the same messages and themes as the school programs.

SPECIAL EVENTS AND CONVENTIONS

Although we are not yet scheduled for a special event specifically for the SDF this year we are tying into special events organized by others. So far we have assisted with the Watershed Weekend and National Environment Week Events. We have made arrangements to facilitate the North Shore Walkabout scheduled for October 3rd. Scheduling a special event for the SDF will be dependant on extra funding.

SUMMER CHILDREN'S PROGRAM

Watershed Wonders is a four-day summer camp which goes into greater detail on the environment and our natural resources. Children spend 5 hours each day learning about that day's specific topic: water, forestry, fish, and wildlife. The children learn through games, discussions, hands-on activities, crafts stories and songs. A registration fee of \$25.00 is charged for each child for the four days. It is intended that each child will leave the program with a life-long appreciation of our forests and environment. Hopefully the children will also remember some of the simple principles of resource stewardship. We also strive at encouraging the children to further develop their skills in group involvement/team building; sciences studies; and environmental awareness. This program is conducted by one professional interpreter and requires the assistance of an adult volunteer.

TOURS FOR PROFESSIONAL ORGANIZATION, CONVENTIONS AND TOURIST

An increased emphasis is being put on these tours for this summer. Lately, we are seeing more interest in the SDF from the work force and organizations such as Vancity, B.C. Hydro, resource managers from other countries, government agencies, and tourism. People from around the world are wanting to visit Vancouver and see examples of a working forest. Some organizations such as Vancity and BC Hydro now have employment environmental awareness programs included in their employee development programs. The Jonik Hospitality group is organizing a German farmers group to visit in June. Venue West is inviting to the SDF an international group of accountants and CEOs who want to know more about our resource management practices particularly the forestry practices. We are going to encourage more visits to the SDF from groups such as these. We will advertise our program to convention centres and large organizations.

SELF-GUIDING INFORMATION SYSTEMS

While guided tours and programs can provide more details and information about more complicated concepts than self guiding systems; self-guiding systems will cater to more SDF visitors. Self directed visitors amount to 70% - 80% of the total visitors in the SDF. Self-guiding information systems are developed to provide information to these people. They allow people to learn at their own pace in an seemingly unstructured environment. Some of the self-guiding systems that are currently being used at the SDF are the following: brochures that correspond with trail markers; information brochures; trail signs and information kiosks.

CONCLUSION AND RECOMMENDATION

The education media and programs directly reflect the image of the SDF, the GVRD, forest agencies and all other participating agencies. The SDF is now a model for resource management and forestry. It is on the front-line for environmental education in Vancouver. It has international recognition as a working forest. For the public it is the place to make connections and association about our environment and resource management. Peoples who come to the SDF consciously and subconsciously learn about how their natural resources are being managed. Some people come to the SDF at first to recreate but also see the education signs and brochures. Others visit the forest to specifically learn about the management of our forests and watersheds. It is "first-rate" staging area to present information about our forests and watersheds. It is a perfect opportunity for agencies to sponsor information programs which are compatible with the present educational objectives. We conclude this report with a recommendation that more organizations and individuals become involved in the SDF education programs. A variety of education programs and media will cater to more audiences. The style of education programs can change and vary with the changing needs of the SDF visitors, however the standards of information interpretation must always remain high. Involvement from the many sponsors and the community will ensure that the SDF will remain a high profile education centre which continues to provide high quality education programs on forestry, watershed resource management, fisheries, wildlife and outdoor recreation.

APPENDIX 1

REFERENCE INFORMATION

ESPECIALLY FOR EDUCATION PROGRAMS

QUICK FACTS ABOUT THE SDF

The Seymour Demonstration Forest (SDF) is a future water catchment area for the Greater Vancouver Regional District (GVRD). However, it is not likely that this area will be required for water supply for many years. While not being used for domestic water supply, The GVRD has opened the SDF to the public for education and recreational use. It displays the management of various resources: the drinking water, forests, salmonids, wildlife, and recreational and educational opportunities.

- The SDF is owned and operated by the Greater Vancouver Regional District (GVRD).
- Opened to the public on August 27, 1987
- Size: 5600 hectares/12000 acres.
- The Seymour Advisory Committee, a public advisory group, assists with the preparation of recommendations for the development and management of the Demonstration Forest.
- Hours of operation: dawn to dusk seven days a week
- Seymour Falls Dam, 11km from entrance
- Public vehicular access not permitted beyond entrance area.
- Cycling to Seymour Dam permitted on weekends and holidays, not during the week (because of abundance of work vehicles on the road).
- Can cycle to the 2.5 km mark during the week.
- Cycling not permitted on Rice Lake Trail, Homestead Trail, or Fisherman's Trail
- The Interpretive Loop Trail is approximately 1.5 km.
- Rice Lake Trail - 1.6km
- Homestead Trail - 0.9 km
- Twin Bridges Trail - 1.1km
- Fisherman's Trail (from Twin Bridges) - approximately 6.0km.
- Riverside Drive to Twin Bridges -approximately 2.0 km.
- Phone number for Education Programs 987-1273
- Salmonid Enhancement Program fish hatchery run by the Seymour Salmonid Society) located at Seymour Falls Dam, 11km from entrance area.
- Fish species raised in the hatchery include coho, chum, pink, chinook, steelhead and cutthroat trout.
- Seymour River is rated as one of the top ten angling streams in the Lower Mainland - fishing permitted but restricted: see the fishing regulations guide.
- Rice Lake is stocked with rainbow trout from the Fraser Valley Trout Hatchery in Abbotsford.

- Special-use permits are required for canoeing/kayaking, (phone 987-5354) . People must be members of an association in order to use the river.
- Over 40 km of unpaved logging trails and roads traverse the SDF.
- Operations staff are available to assist in emergencies
- Dogs are not permitted anywhere in the Demonstration Forest.
- The Demonstration Forest can be closed during extreme fire hazard.
- Open fires are not permitted.

SEYMOUR RIVER VALLEY: HISTORY OF RESOURCE USE

- 1875 - first timber lease, 500 acres on east bank. (Moodyville Sawmill).
- 1877 - completion of 26 miles of trail through Seymour Valley. Trail provided access to valley for prospectors, trappers and settlers.
- 1887 - Royal City Planing Mill - 21 year timber lease including Rice Lake area.
- 1888 - gold discovered along Seymour Creek - mine excavated.
- 1890 - several settlers involved in logging activities.
- 1890 - one house located at north end of Rice Lake, other houses and ranches soon followed.
- 1900 - Hastings Shingle Manufacturing Company had flume system from Lynn Valley to Rice Lake where there was a shingle bolt camp (used spring boards and cross-cut saws). Up to 60 men worked at Rice Lake camps.
- Hastings Shingle Manufacturing Company also operated a flume carrying bolts from Dog Mountain.
- 1905 - the importance of Seymour Valley for domestic water supply was realized.
- 1906 - Provincial government placed a reserve on unalienated land but it wasn't adhered to.
- 1907 - work on Seymour water system was underway. A rock dam was built at mid-valley.
- October 14, 1908 - water system officially opened.
- 1909 - incipient "gold rush" in Valley, quickly died.
- 1912 - Rice Lake secured as a reservoir for City of North Vancouver.
- 1913/14 - survey of the watershed and its ecosystems.
- 1920 - Provincial Government passed an order in council prohibiting the dumping of logs and shingle bolts in Seymour River above the intake.
- 1924 - Greater Vancouver Water District incorporated - North Shore watersheds were partially closed to the public.
- 1926 - expansion of existing water supply system to Seymour falls. Burwell Lake and Loch Lomond were developed as additional storage basins in the late 1920s.
- Small logging operations carried out under strict Water Board rules, but by 1936 all logging operations had ceased.

- Several residents were permitted to remain in the lower Seymour Watershed along the Fisher man's Trail. There were six houses in the area. There was a store by Twin Bridges to supply hikers and residents. There was another store which served afternoon tea on a verandah overlooking the river. There were also six cabins along the River that were rented to tourists. Old fence posts and concrete foundations are still visible. Everyone was forced to leave in the 1950s
- 1939 - reforestation was carried out for the first time in the Watershed - 1500 trees were planted on areas near the Dam that weren't regenerating properly.
- 1940 - agreement that GVWD would handle all watershed protection along the River. 730 acres of privately held land around Rice Lake was excluded (430 owned by the City of North Vancouver and 300 privately owned).
- During World War II, the GVWD constructed a barrier at the mouth of the canyon to deter "aliens" who might damage the water supply system.
- 1945 - anglers permitted to fish along Fisherman's Trail but they had to walk in.
- 1961 - completion of the new dam (existing dam).
- 1961 - Balsam woolly aphid outbreak - salvage program began
- Salvage program brought up the need for a comprehensive forest management plan in the watersheds.
- 1967 - amendment to the 999-year lease to provide for timber management on a sustained-yield basis on fee simple and Crown Lands.
- 1979 - Salmonid hatchery in operation immediately south of the Dam.
- AUGUST 27, 1987- SEYMOUR DEMONSTRATION FOREST OPENED - the forests of the lower Seymour Valley are now a managed, shared resource for forestry, watershed, recreational and educational purposes.

NOTES ON GVRD WATERSHED MANAGEMENT

There are three watersheds in the system:

Capilano - 20,000 ha

Seymour - 18,000 ha (approximate)

Coquitlam - 20,000 ha

TOTAL: 58,000 ha (approximate)

The three watersheds supply water for all of the Lower Mainland including: Vancouver, Burnaby, Richmond, North Vancouver, West Vancouver, Port Moody, New Westminster, Coquitlam, Port Coquitlam, Pitt Meadows, Maple Ridge, Surrey, Delta and Langley. They supply water to 1.7 million people.

The Watershed Management Department is responsible for managing the lands held by the Water District in the Capilano, Seymour and Coquitlam Watersheds. The forests within the Watersheds are managed in order to develop, protect and improve the water resource on the lands. One-eighth of the land is owned by the Water District and the remainder is held under a 999-year lease from the Province of British Columbia. The Watershed lands are governed by an Amending Indenture dated March 7, 1967.

OPERATIONS INCLUDE:

Watershed Maintenance - An aggressive stream maintenance program is ongoing and includes the replacement of wooden drainage structures with concrete; rip-rapping; stump clearing; and bank stabilization projects to control erosion. Maintaining slope stability is another portion of the Watershed Maintenance Program. Treatments include planting Douglas-fir, and junipers, and seeding with grass.

Protection - Watershed management includes the protection of the forests from fire, insects and disease. There are three fully automatic, electronic fire-weather recording stations to provide instantaneous weather information to the GVRD head office computer.

Access Development and Maintenance - Approximately 5 km of access roads are constructed annually. Road maintenance is carried out on approximately 300 km of roads within the watershed lands.

Timber Harvesting - The annual-allowable-cut program is no longer applicable in the watersheds. A risk management program has replaced the sustained-yield program, which was previously calculated at 180,000 cubic metres per year. The risk management program, implemented in November 1991, involves harvesting trees that are of declining health or diseased, particularly in the overmature forests. Highlead yarding and skyline yarding are the two main harvesting systems used to create patch cutblocks, sized less than 10 hectares each. The result is spread-out patches of different aged stands over a large land base. This in turn increases the diversity of forest stands and thus an overall more disease and fire resistant forested land base. An increase in the diversity of forest types also benefits the diversity of wildlife, although this is not a priority management objective

Silviculture - All harvested areas are planted within one year of harvesting. If necessary, site preparation may include mechanical scarification. Prescribed burning is no longer permitted for forest site preparation because of air quality guidelines for the Vancouver Region. No herbicides or pesticides are used within watershed lands. Brushing and weeding, juvenile spacing, conifer release, pruning and commercial thinning are all part of the silviculture program.

STAFF - The Watershed Management Department employs 21 full-time staff including personnel in silviculture, engineering, protection, cruising, road construction , road maintenance and clerical positions. Temporary staff are hired as necessary to assist in seasonal duties (silviculture surveys, fire protection, etc.).

RESEARCH- There are a variety of research projects being carried out in the watersheds by organizations such as UBC, SFU, and BC Ministry of Environment , etc. For information on projects, please contact the Watershed Management Department at 432-6410.

EDUCATION - The watershed lands serve as a training area for a variety of educational institutions and other agencies including:

University of British Columbia - Forest Hydrology
- Forest Fire Sciences

- Research Forest

- British Columbia Institute of Technology - Forest Resources Dept.
- BC. Ministry of Forests
- BC. Ministry of Environment
- Forest Engineering Research Institute of Canada (Feric)
- Council of Forest Industries (COFI)
- Federal Department of Fisheries and Oceans

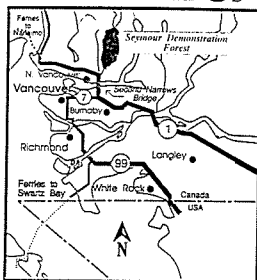
SEYMOUR DEMONSTRATION FOREST - The Seymour Demonstration Forest was opened in 1987 to increase public awareness of the principles of integrated resource management. It encompasses 5,600 hectares at the south end of the Seymour Watershed. Developments to date include interpretive trails, information kiosks, panels, pamphlets and guided tours for school and community groups and professional organizations.

FILM COMPANIES - A number of film companies use the Seymour Demonstration Forest for filming activities such as regular TV shows, commercials, feature films and documentaries.

Appendix C

Brochures

How to Find Us



THE SEYMOUR DEMONSTRATION FOREST IS IN THE DISTRICT OF NORTH VANCOUVER.

FROM BURNABY AND VANCOUVER, CROSS THE SECOND NARROWS BRIDGE AND TAKE THE THIRD EXIT (LILLOOET ROAD).

FROM WEST AND NORTH VANCOUVER, TAKE THE LILLOOET ROAD EXIT FROM THE UPPER LEVELS HIGHWAY (HIGHWAY 1).

HEAD NORTH ON LILLOOET ROAD, PASS CAPILANO COLLEGE, GO THROUGH THE CEMETERY, TRAVEL ALONG THE GRAVEL ROAD TO THE DEMONSTRATION FOREST ENTRANCE.

With Thanks...

THE GVRD GRATEFULLY ACKNOWLEDGES THE SEYMOUR DEMONSTRATION FOREST ADVISORY COMMITTEE AND SEYMOUR EDUCATION COMMITTEE FOR THEIR GUIDANCE IN THE DEVELOPMENT AND OPERATION OF THE DEMONSTRATION FOREST.

VARIOUS AGENCIES HAVE GENEROUSLY CONTRIBUTED TO THE SEYMOUR DEMONSTRATION FOREST.

THE PARTICIPANTS INCLUDE:

- FORESTRY CANADA
- COUNCIL OF FOREST INDUSTRIES
- MINISTRY OF FORESTS
- U.N.C. - CANADA
- FEDERATION OF MOUNTAIN CLUBS OF B.C.
- OUTDOOR RECREATION FOUNDATION

For More Information: 432-6286

Emergencies:

- GVRD (24 HRS.) 929-1201
- NORTH VANCOUVER RCMP 988-4111

Hours of Operation:

OPEN SEVEN DAYS A WEEK DURING DAYLIGHT HOURS UNLESS CLOSED DUE TO FIRE HAZARD. HOURS ARE POSTED AT THE ENTRANCE GATE.



DISCOVER A FOREST FOR EVERYONE!



the Seymour Demonstration Forest



Greater Vancouver
Regional District

Welcome to the Seymour Demonstration Forest

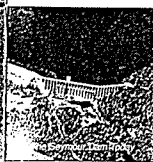
Experience the forest environment - learn more about the living forest, its soils, trees, vegetation, wildlife, fish and water.

The Seymour Demonstration Forest lies in the lower part of a glacier carved valley between Lynn Headwaters Regional Park and Mount Seymour Provincial Park in the District of North Vancouver.

This area is typical of a coastal forest made up mainly of coniferous trees - western hemlock, western red cedar, Douglas-fir, amabilis fir and Sitka spruce.



In 1987, the Greater Vancouver Regional District (GVRD) opened the lower Seymour Valley to the public for the first time since 1928. The area was originally set aside for future domestic water supply and is still available for this purpose.



The purpose of the 5 600 hectare area is to promote awareness of forests and multiple land use. Explore the Seymour Demonstration Forest and see examples of:

- water management
- timber harvesting
- reforestation

- spacing & thinning (& other forest management practices)
- fish & wildlife management
- recreation

The hills and valley are forested with both merchantable and non-merchantable timber.

Various species of salmon and trout use the gravels of the Seymour River to spawn and over 100 species of mammals and birds live within the valley.



Rice Lake is one of the few fresh-water lakes on Vancouver's North Shore.

The Seymour Demonstration Forest is being developed to demonstrate the best use of all the resources in the valley. Management of the area is long term; management of the forest today is the key to the forest of the future.



Come and explore the many trails and logging roads. See first hand how man and nature have worked together to create "A Forest for Everyone!"

KEEP the FOREST GREEN

You are in a watershed where plants are needed to control erosion and regulate streamflow. Please do not remove flowers, shrubs or trees. PLEASE REPORT PROBLEMS TO STAFF.



Fires

Please remember, this is an operating forest. During dry periods access to any part of the Demonstration Forest may be denied due to fire hazard. USE CAUTION WHEN SMOKING IN THE FOREST.



Dogs

DOGS ARE PROHIBITED as they are potential carriers of parasites which can infect forest animals and affect the domestic water supply. Also, dogs often disturb wildlife.



Horseback Riding

Horses are permitted ON DESIGNATED TRAILS ONLY (SEE MAP).



Camping

NO CAMPING IS PERMITTED IN THE DEMONSTRATION FOREST.



Animals

Stay away from wildlife. Approaching, feeding or attempting to pet any species of wildlife could endanger their lives and yours. REMEMBER, PLEASE REMOVE YOUR GARBAGE.

For Your Safety

The Seymour Demonstration Forest area is mountainous and subject to heavy rainfall and abrupt weather changes. Dress accordingly and hike or cycle with a friend.

Private Vehicles

Private vehicles are generally NOT PERMITTED BEYOND THE ENTRANCE AREA. At various times organized tours will be allowed vehicular access to Seymour Falls Dam.

What is a Demonstration Forest?

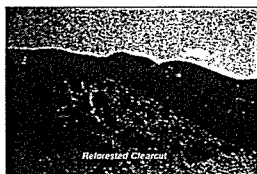
As the demands on our resources increase, a knowledge of the forest becomes more important to all of us.

The Seymour Demonstration Forest is an outdoor classroom - a living, breathing, dynamic exhibit of integrated forest resource management - an area that shows first hand how a forest resource is managed.



The GVRD invites you to explore the Seymour Demonstration Forest. Pause at the interpretive panels and viewpoints, follow the self-guiding routes with the appropriate pamphlets or participate in a guided program.

Much of the young healthy forest you see in the Demonstration Forest was harvested over 60 years ago. Evidence of past activities are everywhere.



The Seymour Demonstration Forest has many different resources that can be used in different ways.

Managing the Demonstration Forest to ensure all these resources are identified and considered in the planning process is called:

INTEGRATED FOREST RESOURCE MANAGEMENT

We often take trees as well as forests for granted. They play too important a role in who we are and how we live to be taken for granted!

Forests provide us with clean drinking water, fish and wildlife habitat, recreation areas, scenery, development sites and of course, a variety of wood products.

The forest is a complex, dynamic system. It is forever developing and changing. The Seymour Demonstration Forest illustrates sound management of all its natural resources. Developments and educational opportunities reflect the ever changing resource base and the balance needed in a dynamic system of forest land management.

WATER

All resources are managed under guidelines that protect water quality. View the Seymour Falls Dam and Seymour Lake from the Seymour Dam Loop Trail (see map).

WILDLIFE

The Seymour Demonstration Forest provides habitat for many species of wildlife; resource use in the forest can improve their habitat.

FISHERIES

The Seymour River is an important habitat for salmon and trout. Resource use in the valley is done in such a way as to protect fish habitat. Visit the Seymour River Hatchery and see what is being done to ensure the Seymour River always has a fish population.

RECREATION

The Demonstration Forest offers rich recreational opportunities because of the variety of resources in the valley. See how the resources are managed while observing and studying, cycling, hiking, canoeing or walking through the valley.

FORESTS

Forests create a diversity of wildlife habitat, protect water and fish resources and provide a variety of recreational opportunities.



You will see examples of:

- small clearcuts
- new plantations
- pruning
- juvenile spacing
- commercial thinning

and other activities. Forest harvesting and reforestation has resulted in stands ranging from young plantations to old growth forests.

Put yourself in the shoes of a Forest Land Manager for a while!



Whether you're cycling, picnicking, fishing or observing examples of forest management you'll discover Man's role in managing the variety of resources.

EDUCATION

Integrated forest resource management activities are explained and demonstrated throughout the Seymour Demonstration Forest. Interpretive trails and pamphlets, demonstration sites and guided programs are available for your enjoyment and understanding.

THE INTEGRATED FOREST RESOURCE MANAGEMENT LOOP TRAIL (IRM)

An easy 1.5 hour walk focusing on integrated forest resource management. Six interpretive panels and a self-guiding pamphlet provide information on the resources and the demonstration sites along the way.

THE FOREST ECOLOGY LOOP TRAIL

An easy 1 hour walk from the parking lot. A series of interpretive panels show how forest managers study the ecology of a forest to determine management treatments long before any management activities are undertaken.

THE SELF-GUIDING ROUTE TO SEYMOUR FALLS DAM

A self-guiding interpretive pamphlet guides visitors along the 11 km paved road from the entrance gate to Seymour Dam. Eight designated stops provide visitors with an overview of integrated forest resource management activities in the valley.

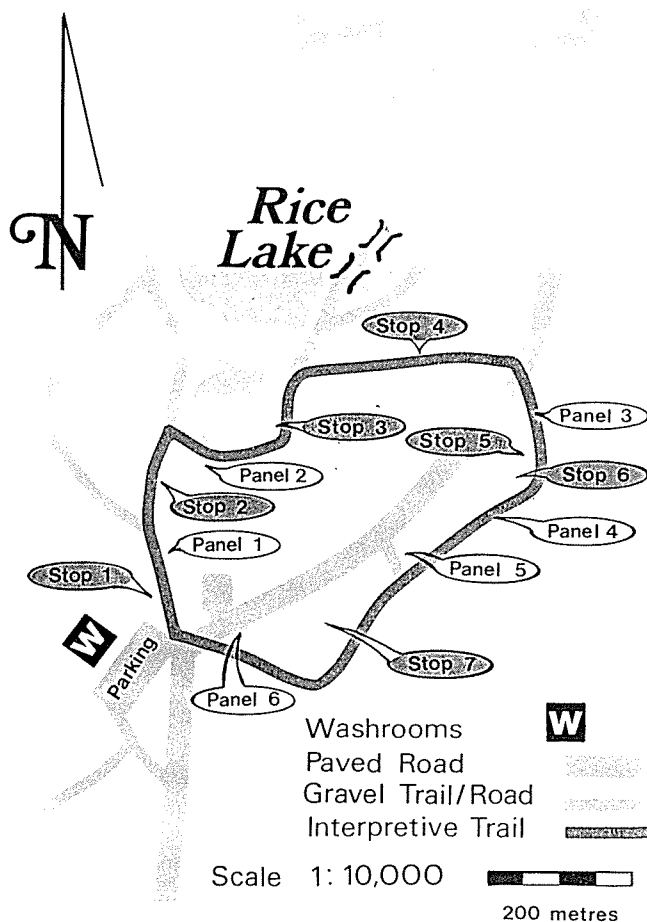
REMEMBER, IT'S A 22 KM ROUND TRIP!

This Trail Guide:

provides additional information to the interpretive panels you will encounter along the trail.

The numbered trail markers correspond to the numbers in this pamphlet. The trail contains 6 educational panels and 7 numbered stops. It is 1.5 kilometres in length and is easily walked in one and a half hours allowing for stops to view the features.

LOCATION MAP OF INTERPRETIVE STOPS AND PANELS



Please do your part to protect this area - remove all litter and leave vegetation undamaged.

STOP 1

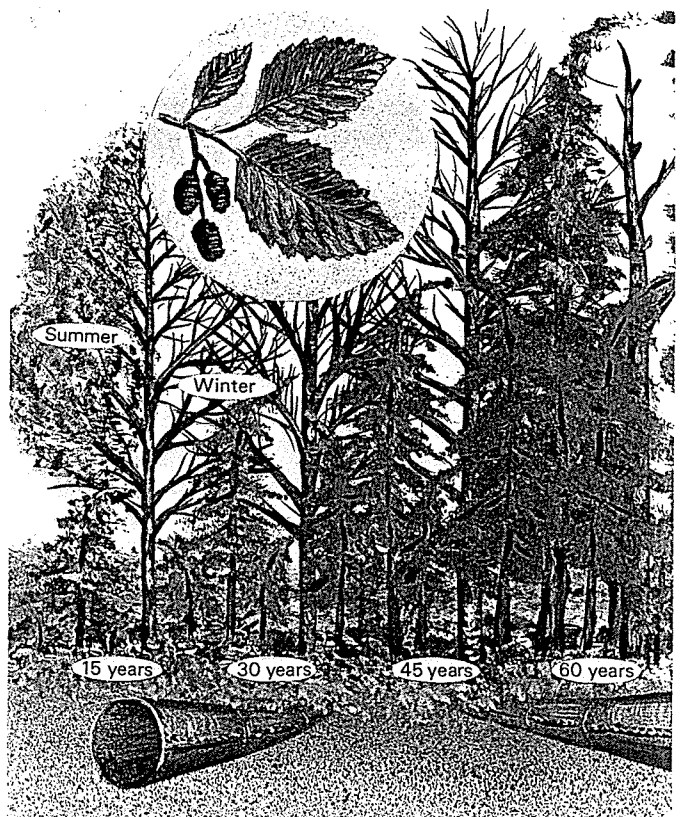
You are now viewing a deciduous forest made up mostly of red alder. (Deciduous trees are leaf trees.)

An alder forest such as this often indicates that there has been some sort of disturbance to the original forest. These disturbances can be man-made changes to the land or natural changes caused by fires, landslides or floods. In this case, the disturbance was caused by construction of the 2.3 metre (90 inch) diameter water pipeline which runs under the parking lot.

Notice the young conifers (trees with needle-like leaves) growing under the alder. These trees, called western hemlock, can tolerate shade and can therefore begin to grow under the alder trees. The hemlocks will eventually grow over the top of the alder stand, replacing the deciduous forest with a coniferous forest. All these changes are part of a process called **succession**.

Look for the sudden change to the coniferous forest further along the trail. Remember, any alder stands that you see may be a clue to some previous disturbance in the area.

Look for other clues of past human activity along the trail such as old logging cables and stumps with springboard notches in them.



STOP 2

Naturally-growing hemlock trees surround this stop. These trees are identified by their drooping tops and flat needles of differing lengths. Notice the needles are white on the underside.



The needles, with the help of sunlight, make food for the tree. Trees that don't get enough sunlight may die. (But remember, different types of trees need different amounts of sunlight.)

Notice that the hemlocks closest to the trail have lots of branches and needles. Look deeper into the stand of trees. You can see bare spindly hemlocks with few branches or needles. These trees, which are growing in very crowded conditions, are not receiving enough sunlight.

To help this stand of trees grow better a forest manager might space or thin the trees to reduce the number of trees growing in the area. Thinning lets the remaining trees grow faster and larger because they have more sunlight, space, nutrients and water. The benefits of spacing and thinning practices are similar to those achieved by thinning in a residential garden.



STOP 3

Notice the trees with bent trunks on the downhill side of the trail. The bent trunks indicate very slow downhill movement of the hillside, a process known as "soil creep."

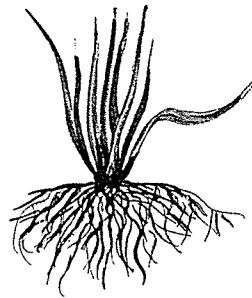


The trees are bending as the soil pushes on their trunks. Trees are also bending back to grow towards the sun.

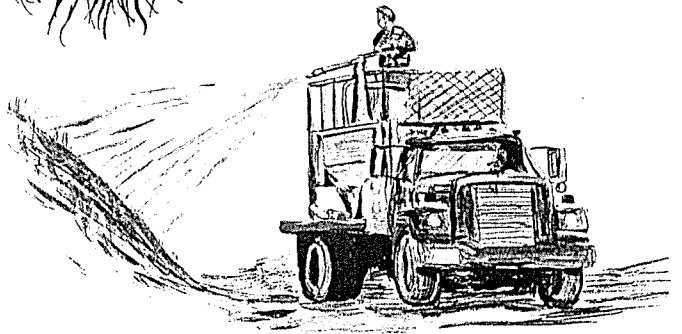
Specialized techniques to eliminate or minimize any possible unstable conditions can be seen all along the trail. Look for things such as retaining walls and drainage ditches. A fabric-like material, called geotextile, is laid underneath the surface of this trail. This material provides a base for trail building in wet or marshy areas.

Grass has been planted in different locations along the trail edges. Roots from grass create a net-like structure in the soil. This netting helps hold the soil in place.

Larger, steeper slopes are revegetated with grass, alder, juniper or other tree species.



Hydroseeding truck spraying a mixture of seed and fertilizer suspended in water. This process will revegetate slopes.



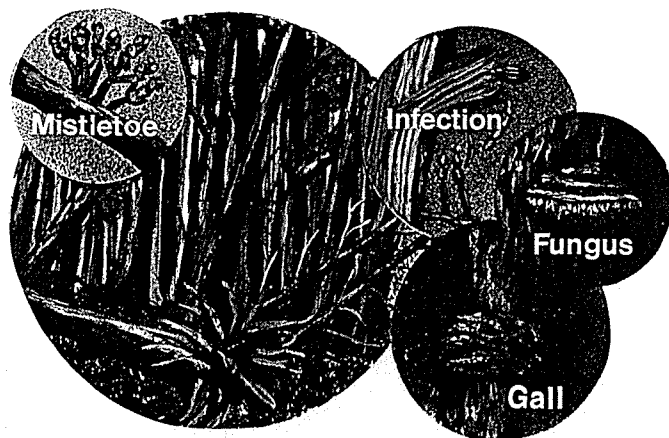
A healthy managed forest is made up of many tree species of different ages.

STOP 4

Look into this stand of naturally-growing trees. Notice the darkness and shade in the area.

There is very little vegetation growing on the forest floor. Deer and other animals must find brighter open areas where ground vegetation can grow. This stand of second growth trees regenerated after a fire went through the area in the early 1900's.

Some trees weaken and even die because of overcrowding. Weak trees are susceptible to disease, fungus and insect infestation that can easily spread to nearby, healthier trees.



In a managed forest, the weakened or dead trees are removed, (a process called spacing or thinning) to improve growing conditions and to protect the health of the remaining trees.

Patch clearcut logging is another method commonly used to improve areas like these. Small clearcuts, located between areas of standing trees, may help stop the spread of disease and insect infestations.

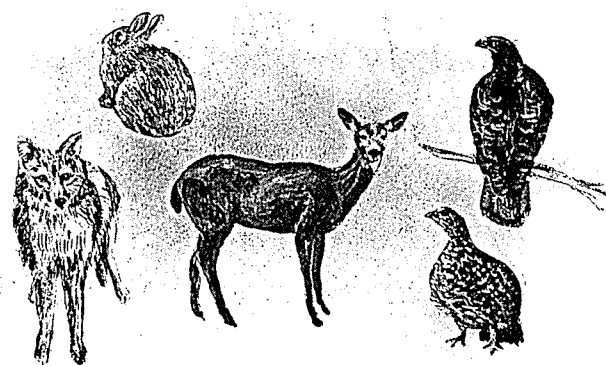


STOP 5

You are standing on the edge of an opening created by clearcut logging. The interpretive panels along this section of trail provide information specific to this site.

Because of the amount of sunlight reaching the ground in this area, there is a good supply of shrubs and other plants, which are an important food source for browsing deer and other wildlife.

Grasshoppers, redtailed hawks and other wildlife are often spotted in openings like this. Look for evidence of animals in the area (browse marks on seedlings, tracks in the soil.)



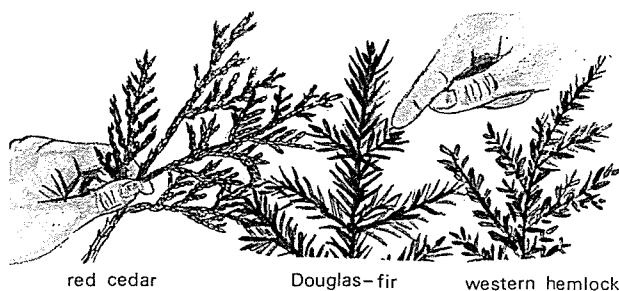
STOP 6

This area was planted with western red cedar and Douglas-fir. The western hemlock regenerated naturally.

Notice that the western red cedar is planted in the low-lying wetter areas, while the Douglas-fir is planted on higher ground, on well drained soils. Cedar can tolerate wet conditions for growing, but Douglas-fir cannot. Douglas-fir requires a good deal of direct sunlight for healthy growth, but cedar can survive in shaded conditions.

Both these species are common to a coastal forest and were planted here because of their commercial value.

See if you can identify the three tree species in the plantation.

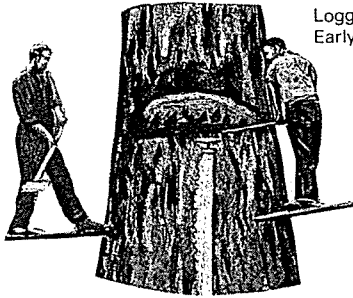


STOP 7

Can you identify the stumps that remain from logging in the early 1900's? Try and distinguish them from the stumps that remain from the 1986 commercial thinning. This is easy to do when you think about the different methods that were used for cutting trees.

The large, decaying stumps with notches remain from the early days of logging. Trees were felled using axes and cross-cut saws. Springboards were placed in the notches for the loggers to stand on. This enabled loggers to cut above the thickest portion of the tree.

Today, chainsaws allow fallers to cut the trees closer to the ground, therefore using more wood from the tree. The shorter stumps you see remain from the 1986 commercial thinning.



Logging
Early 1900's



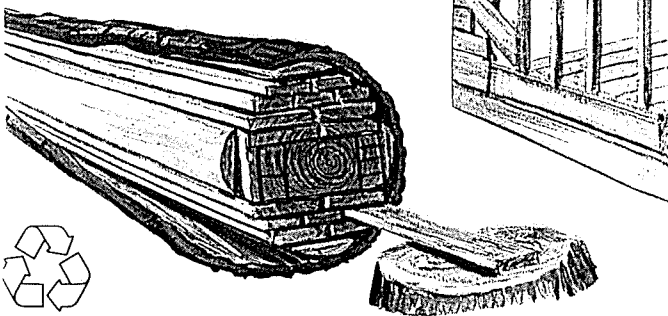
1986
Commercial
Thinning

The rest of the trees here will probably be harvested early in the twenty-first century.

The tree before you has an approximate volume of 3.8 cubic metres. This means that it would probably take about 11 of these trees to build a standard two bedroom bungalow home.

Have you noticed the different conditions on the forest floor between this area and the unmanaged forest?

This Integrated Forest Resource Management Interpretive trail demonstrates the balance existing among the forest, fish, wildlife, water and recreational resources present throughout the Seymour Demonstration Forest. It is a working example of how natural resources can produce benefits for all of us - "A Forest For Everyone!"



A GUIDE TO THE

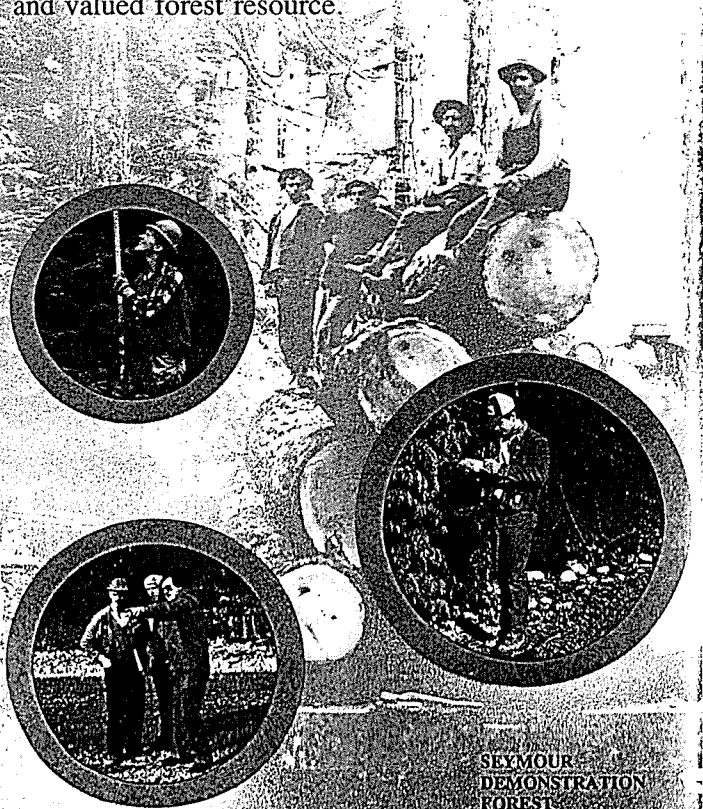
Integrated Forest Resource Management Interpretive Loop Trail



The Seymour Demonstration Forest, like all forests, is a dynamic system, continually changing. The valley you see here today has been shaped through time by both natural occurrences and man's activities. Natural fires, landslides and forest insects and diseases play a role in the developing forest.

Forest management, as illustrated on this interpretive trail results in the establishment of diverse, healthy, young forests which are resistant to fires, insect outbreaks and disease.

As you explore this Integrated Forest Resource Management Interpretive Trail you will have the opportunity to view the management of timber, water, recreation, fish and wildlife. This trail demonstrates the balanced and cooperative management of our diverse and valued forest resource.



SEYMOUR
DEMONSTRATION
FOREST



Forestry
Canada

Forêts
Canada



Greater Vancouver
Regional District

STOP 1 0.4 km

You are now standing between two important forest management activity areas, commercial thinning and planting.

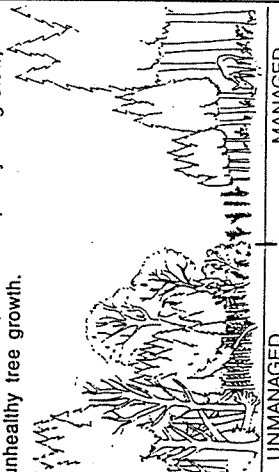
Commercial thinning, carried out here in 1986, removes selected competing trees and allows remaining trees to grow taller, wider and healthier. Sunlight now easily reaches the spacious forest floor allowing the growth of important food

UNMANAGED **MANAGED** plants for animals and birds.

Douglas-fir and western red cedar seedlings were planted in the second treatment area in 1986. Protective coverings

have been placed on the seedlings to eliminate the damage caused by browsing deer. Deer and other wildlife are often seen in this feeding ground created by clearcut logging.

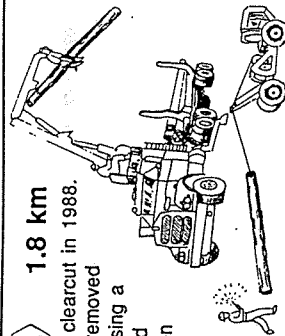
In a forest unmanaged by man, crowded conditions and nature's competition frequently bring slow, unhealthy tree growth.



STOP 2 1.8 km

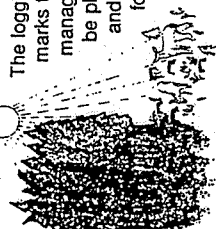
This area was clearcut in 1988.

The logs were removed from the site using a radio controlled skidder and then loaded onto a self-loading logging truck.



This clearcut opening admits large amounts of sunlight - promoting the growth of weeds, grasses and browse plants for deer and other animals.

The logging which has occurred here marks the beginning of the forest management cycle. The site will be planted in the spring of 1990 and the new trees will be cared for until the next harvest.



STOP 3 2.3 km

Below you is Rice Creek, an important tributary of the Seymour River. The creek provides habitat for coho salmon, cutthroat trout and Dolly Varden char.

Notice the trees and shrubs around the banks of the creek. These help to keep water temperatures down by providing shade over the creek. The shade also provides necessary hiding places for the fish.

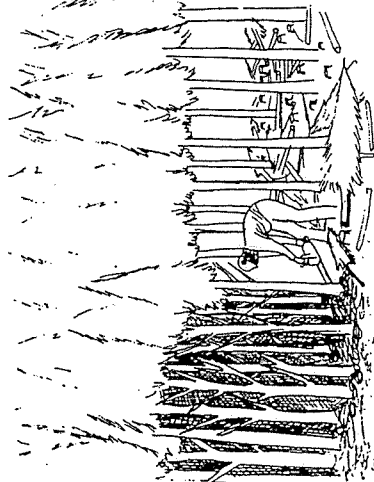


The natural debris in and around the creek provide food for the fish and create pools and structures where fish can hide and spawn.

STOP 4 4.2 km

You are looking at one of the oldest plantations in the Seymour Demonstration Forest. This 17.0 hectare site was originally harvested in 1962 and planted with Douglas-fir in 1963. The abundance of western hemlock trees are the result of natural regeneration.

In 1988, an important forest management activity was undertaken; juvenile spacing. Spacing involves the removal of some trees that are growing too dense. Often these trees are damaged or poorly growing and would likely die from nature's competition. The remaining trees have more water, sunlight, nutrients and space. This site was spaced from 2042 to 505 trees per hectare.



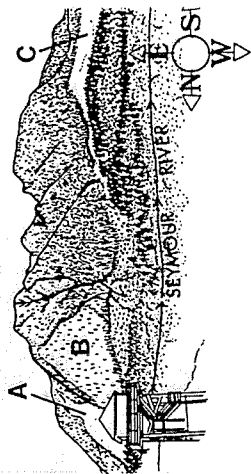
This open, airy site provides better access for wildlife and allows easier movement for future forest management activities.

Notice how the lower branches of all the trees have been removed. This helps to ensure that knot free wood is produced and also provides easier movement for people and wildlife.

STOP 5 5.2 Km

The mosaic of vegetation patterns before you is the result of a rich history of human activity in the Seymour Demonstration Forest. This forest has been cleared for roads, trails, dams, water pipelines and a fish hatchery.

A rock fill dam for domestic water supply was located just south of this area in 1907. Since that time logging, mining, wildfires and other activities have shaped the landscape you see today.



A - Wyssen Skyline logging - a simple gravity system for aerially transporting logs down a slope. Notice the absence of logging roads in this area. (Logged 1980-81, planted 1986.)

B - Scars from a wildfire in the 1920's. Notice the remaining snags (standing dead trees).

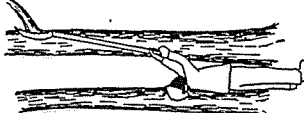
C - Recent forest management. This treatment unit was logged in 1974 and planted the same year. The 17.2 hectare stand was juvenile spaced from 1985 to 1987.

Look at the different textures and colors of the trees. The dark green upper slopes are mainly old growth trees while the light green areas consist mainly of second growth stands, both planted and naturally growing.

The Seymour River is located in the valley bottom in the slight opening between the deciduous trees.

STOP 6 7.0 Km


This site was harvested in 1961 and planted with Douglas-fir seedlings the same year. Notice the large amount of western hemlock trees that have grown naturally on the site.




In 1985 this 11.0 hectare site was juvenile spaced. The abundance of plant growth on the forest floor is a direct result of the openings created by juvenile spacing. These plants are an important source of food for the wildlife. The site was also pruned in 1985. Imagine how easy it is for people and wildlife to move through the area.


STOP 7 11.0 Km

The Seymour River Hatchery is a Salmonid Enhancement Program run by the Seymour Salmonid Society. The hatchery produces great numbers of salmon and steelhead trout to ensure a steady run of fish in the Seymour River.



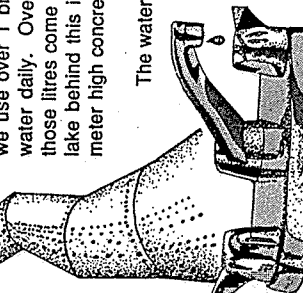
Fish are released back into the river at different stages during their life cycle. Stop in at the hatchery; if staff are available they will be happy to show you around. Please ensure that you obey all posted signs.





STOP 8 11.0 Km

Water, pure and simple is one of the Lower Mainland's most precious resources. On average we use over 1 billion litres of water daily. Over 150 million of those litres come from the storage lake behind this impressive 21 meter high concrete dam.

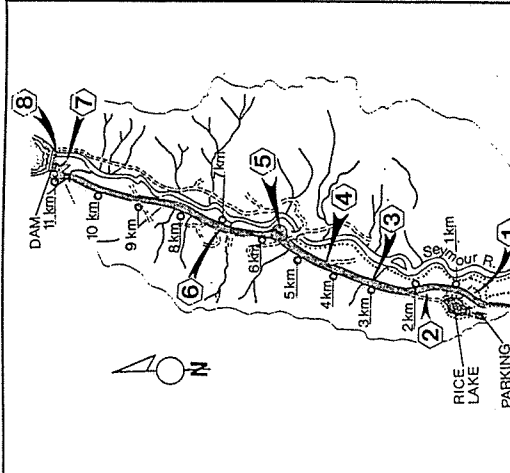


The water held in storage originates in another of our most precious resources, the forest.

The Greater Vancouver Regional District ensures quality drinking water through a carefully controlled Watershed Management Program. Aging and dying stands of trees are removed and a new healthy forest is established and managed.

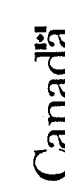

The North Shore mountain watersheds supply some of the highest quality drinking water in North America. Only a small amount of chlorine is added to ensure quality. The chlorine is added in the small building located in front of the dam.

Access above the dam is restricted to authorized personnel but, for a view of the impressive Seymour Lake, walk the short Dam Trail up to the view point.




For further information about the Seymour Demonstration Forest please call 432-6286

This project was made possible through a Green Gold Grant, sponsored by the Canada-British Columbia Forest Resource Development Agreement

sponsored by:



designed by: A.R. Milavsky and Associates
graphics by: Jill Dauling

An Environmentally Sound (Recycled) Paper

EMERGENCY CONTACT - GVRD CONTROL - 929-1201

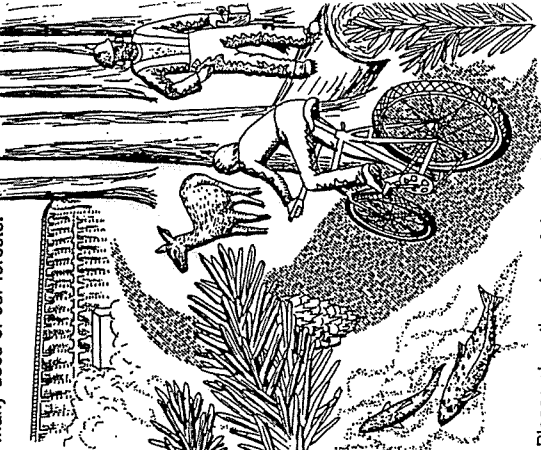
SEYMOUR DEMONSTRATION FOREST

A FOREST FOR EVERYONE

The Seymour Demonstration Forest is a living, breathing exhibit of integrated resource management. This forest is managed for future water supply, the production and harvesting of timber, the protection and enhancement of fish and wildlife habitat and recreation. It is truly "A Forest For Everyone."

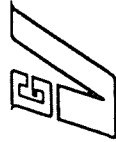
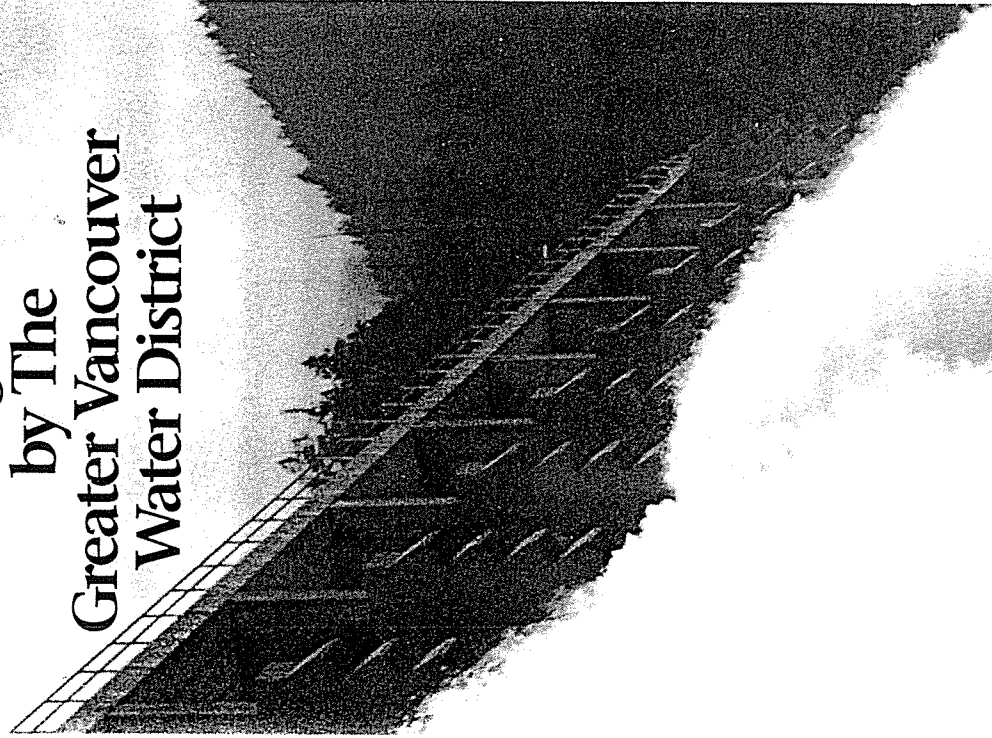
As you follow this eleven kilometer self-guided route you will find yourself in the middle of an outdoor classroom.

Follow the red numbered posts to see first hand the many uses of our forests.



Please obey the rules of the road.

Watershed Management by The Greater Vancouver Water District



**Greater Vancouver
Regional District**

Watershed Management

The present Watershed Management Program began in 1961 on lands owned by the GVWD in response to a major insect attack which was causing widespread damage in the watershed forests. By 1967 the balsam wooly aphid had killed 25% of the balsam trees in the Capilano and Seymour watersheds. A hemlock looper infestation attacked the Coquitlam watershed in 1970 affecting some 184 hectares of forest. The GVWD began a program of harvesting forest stands containing dead and dying trees on both private and Crown land in 1967.



Dead and dying stands of trees pose a serious fire hazard which in turn has a potential negative impact on water quality. Recognizing the need for a healthy, vigorous forest in the watershed lands, the GVWD and the Province of British Columbia mutually agreed to begin active timber management on the watershed lands in 1967. Under the agreement, known as the Amending Indenture, the GVWD must manage the forests of the watershed lands to develop, protect and improve water supply.

Appropriate harvesting methods and well engineered, constructed and maintained roads ensure that the Watershed Management Program:

- provides access for fire suppression and watershed maintenance,
- maintains a healthy, disease resistant mixed age forest,
- provides access for insect and disease monitoring, and;
- provides access for security and water quality monitoring.

The GVWD has been managing the watershed lands for over 60 years. The Watershed Management Program reflects responsible environmental management which is consistent with the GVWD's prime objective of providing high quality drinking water.

The Watershed Management Program enables the GVWD to convert the productive bottom forest lands into stable, healthy, well managed stands with a wide selection of age classes and species mix. The diversity of these stands results in increased resistance to disease and insect attacks, and increased resistance to fire.

Aqua Terra Classification System

In 1978, the GVWD adopted the Aqua Terra Classification System. This classification system has resulted in the division of the watershed lands into two broad categories:

1. Protection Forest - 62% (36,000 ha) of the land base
2. Production Forest - 38% (22,000 ha) of the land base

Regular maintenance is carried out in the Protection Forest but no harvesting is proposed.

The Production Forest is being harvested over a 90 to 100 year period. The trees planted in 1961, when harvesting and reforestation programs began, will be 90 to 100 years old when harvested. At the end of the 100 year cycle, the process will be repeated. This process is referred to as sustained yield.

Since 1961, 6% (3,706 ha) of the watershed lands have been harvested.

Planning

All watershed management activities are described in detail in a Five Year Development Plan that must be approved by the Ministry of Forests. The plan, which must also be approved by the provincial fish and wildlife agencies and Federal Department of Fisheries and Oceans, is made available for public review once a year. The plan addresses all phases of forest management including harvesting, reforestation, silviculture, research and water quality enhancement projects.

A Pre-Harvest Silviculture Prescription must also be prepared for all proposed harvesting areas. These prescriptions must also be approved by the Ministry of Forests and be made available for public viewing. The prescription includes:

- an ecological evaluation of the area,
- the proposed method of harvesting,
- the identification of water quality, fish and wildlife values, and,
- the proposed reforestation and silvicultural procedures.

The British Columbia government, through the Ministry of Forests, audits the performance in the watersheds annually. Audit results are available to the public for review.

In addition to the Provincial review process, all watershed management activities are summarized and reported on an annual basis to the Greater Vancouver Regional District Board of Directors.

Seymour Demonstration Forest

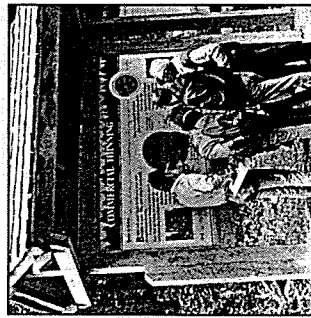


The techniques employed in the Watershed Management Program can in part be viewed in the Greater Vancouver Water District's Seymour Demonstration Forest.

The 5600 hectare Demonstration Forest was opened to the public in 1987 to promote awareness of forests and multiple land use through interpretive trails and programs, educational displays, tours and forestry demonstration plots.

Educational programs that demonstrate sound watershed, forestry, fisheries, wildlife and forest recreation management are provided. Working examples of the forest management techniques used within the watersheds have been

developed and are displayed in the Demonstration Forest. The Demonstration Forest is designed to increase public awareness and interest in the Watershed Management Program without opening up the closed access areas.



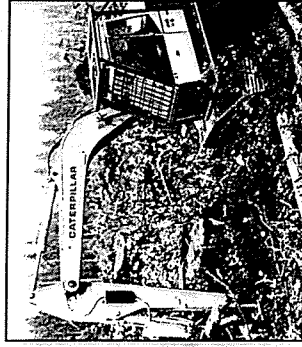
If you would like more information about the Greater Vancouver Water District's Watershed Management Program, please contact our office at:

Greater Vancouver Water District
Watershed Management Department
4330 Kingsway
Burnaby, B.C.
V5H 4G8

Tel: (604) 432-6410

Site Preparation

After logging, an area may be covered with debris or logging slash. This debris can present a fire hazard and make planting difficult. In such cases, the GVWD prepares the area for planting by mechanically breaking up the debris to create planting spots for seedlings.



Planting

All areas are 100% planted within two years of harvest. Species planted include western red cedar, yellow cedar and Douglas-fir. Planting is also complemented by natural regeneration.

The species to be planted in a particular area is identified in the Pre-Harvest Silviculture Prescription long before the proposed harvest takes place. Seedlings are ordered from commercial nurseries often three years prior to the time of planting.

Areas are planted with an average of 600 seedlings per hectare. Since 1961, 3600 hectares have been planted using 2.8 million seedlings. Of all the seedlings planted, survival rate is over 90%.



Silviculture



Brush and weeds can be a problem in many of the planted areas. During the first few

years of seedling growth, brush and weeds must be removed before they choke the seedlings. It is critical that seedlings are given the best possible chance for survival.

Pesticides and other chemicals are not

used as a silviculture technique on watershed lands.

Once the forest establishes, there may be too many trees growing per hectare of land, causing overcrowded conditions amongst the trees. There may be as many as 3000 trees per hectare by the time the stand is 15 years old.

The GVWD undertakes juvenile spacing (which involves removing some of the trees) to give the remaining trees more light and space to grow.

Juvenile spacing to 750 trees per hectare ensures the maintenance of a diverse species mix which is more resilient to insects and disease.

In second growth stands, where conditions are favorable, commercial thinning is undertaken. Shorter understory trees, mistletoe infected trees, deformed and diseased trees and any unhealthy trees are removed to create better growing conditions for the healthier trees.

Many of the silviculture techniques are similar to those developed and practised in Europe.

Appendix D

Evaluation Programmes

SEYMOUR DEMONSTRATION FOREST EDUCATION PROGRAM

VOLUNTEER TOUR LEADERS' PROGRAM EVALUATION

1. Name: _____
2. Date of your tour: _____
3. Starting time: _____
4. Duration of tour: _____
5. Weather: _____
6. Type of tour: Forest walk _____ Bike tour on mainline _____ Bus tour to east side _____
Long walk to river _____ Other (specify) _____
7. Number of people in your group: _____
8. Age groups represented (rank from most to least represented, with 1 being most and 6 being least):
Under 12 _____ 13-17 _____ 18-24 _____ 25-39 _____ 40-59 _____ 60+ _____
9. Most of the participants were: Families _____ Pairs or groups of friends _____ Individuals _____
Members of an agency or group (specify) _____
10. Was group size: Too large _____ Too small _____ About right _____
11. Information distributed: _____

12. Activities undertaken: _____

-- VOLUNTEER TOUR LEADERS' PROGRAM EVALUATION -- PAGE 2 OF 2 --

13. Did your group appear to enjoy the tour (was there any feedback)? _____

14. Was there anything you think should have been done differently? _____

15. Were there any problems or questions that should be noted for other tours? _____

16. Additional comments and/or suggestions (use other side of page if necessary):

**PLEASE RETURN THIS EVALUATION IN THE ENVELOPE PROVIDED
THANK YOU FOR TAKING THE TIME TO COMPLETE THIS EVALUATION**

SEYMOUR DEMONSTRATION FOREST EDUCATION PROGRAM

"WATERSHED WONDERS" DAY CAMP PROGRAM EVALUATION

1. CAMPER'S NAME: _____

2. SESSION ATTENDED (DATE/AGE GROUP):

July 13-16 (6-7 years) _____

Aug 3 - 6 (6-7 years) _____

July 20-23 (8-9 years) _____

Aug 10-13 (8-9 years) _____

July 27-30 (10-12 yrs) _____

Aug 17-20 (10-12 yrs) _____

3. NAME OF CAMP LEADER: _____

4. HAS YOUR SON/DAUGHTER ATTENDED WATERSHED WONDERS BEFORE? Yes ____ No ____

If yes, which year(s) _____

5. WERE DAILY HOURS OF CAMP: Too long ____ Too short ____ About right ____

Comments: _____

6. WAS TOTAL DURATION OF CAMP: Too long ____ Too short ____ About right ____

Comments: _____

7. WAS GROUP SIZE: Too large ____ Too small ____ About right ____

Comments: _____

-- WATERSHED WONDERS PROGRAM EVALUATION -- PAGE 2 OF 3 --

8. DO YOU FEEL THAT THE PROGRAM HELPED YOUR SON/DAUGHTER DEVELOP AN INCREASED AWARENESS OF INTEGRATED RESOURCE MANAGEMENT PRINCIPLES IN THE SEYMOUR DEMONSTRATION FOREST?

Yes _____

No _____

Comments: _____

9. WHAT DID YOUR SON/DAUGHTER ENJOY MOST ABOUT THE CAMP?

10. WHAT DID YOUR SON/DAUGHTER ENJOY LEAST?

11. WERE THE ACTIVITIES APPROPRIATE FOR YOUR SON'S/DAUGHTER'S AGE AND LEARNING LEVEL?

Yes _____

No _____

Comments: _____

12. WERE THE ARTS & CRAFTS SUITABLE FOR YOUR SON/DAUGHTER? Yes _____ No _____

Comments: _____

-- WATERSHED WONDERS PROGRAM EVALUATION -- PAGE 3 OF 3 --

13. WHAT WOULD YOU AND YOUR SON/DAUGHTER LIKE TO SEE ADDED, DELETED OR CHANGED IN THE PROGRAM?

14. OVERALL, HOW WOULD YOU RATE THE PROGRAM?

Poor _____ Fair _____ Good _____ Excellent _____

15. WOULD YOU ENROLL YOUR SON/DAUGHTER IN WATERSHED WONDERS AGAIN?

Yes _____ No _____

If no, why not? _____

16. ADDITIONAL COMMENTS AND/OR SUGGESTIONS (use other side of page if necessary):

PLEASE RETURN THE EVALUATION IN THE ENVELOPE PROVIDED

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS EVALUATION

SEYMOUR DEMONSTRATION FOREST EDUCATION PROGRAM

SUNDAY TOURS PROGRAM EVALUATION

1. Date of your program: July 4/93 Starting time: 2:30 Duration: 4:00
2. Name of your guide (program leader): Jim MacIntosh
3. Which municipality or district do you live in? North Vancouver
4. Age group: Under 12 ☐ 13-17 ☒ 18-24 ☐ 25-39 ☐ 40-59 ☐ 60+ ☐
5. Have you been to the Demonstration Forest before? Yes ☐ No ☒
6. How did you find out about the Seymour Demonstration Forest?
- Live nearby ☒ By chance, hiking over from adjacent park ☐ Road signs ☐
- Radio ☐ TV ☐ Newspaper ☐ GVRD publication ☐ Word of mouth ☐
- Other (please specify) _____
7. What attracted you to the Seymour Demonstration Forest?
- Guided tours ☐ Recreation opportunities (e.g. forest walk, cycling, birdwatching, fishing) ☐
- Family outing ☒ Other (please specify) _____
8. Have you been on a guided tour in the Demonstration Forest before? Yes ☐ No ☒
9. Do you feel the tour helped you to develop an increased awareness of forestry practices and integrated resource management principles in the Seymour Demonstration Forest?

Yes ☒ No ☐

Comment: I learned that they clear-cut
for a good reason.

-- SUNDAY TOURS PROGRAM EVALUATION -- PAGE 2 OF 2 --

10. What, if anything, would you like to hear more about on a guided tour?

Integrated resource management _____

Forestry practices _____

Role of industry and government in forest management _____

Fish and wildlife management _____

Forest Ecology _____

Water Management (i.e. Seymour Dam) ✓

Other (please specify): _____

11. What kinds of educational opportunities do you think should be offered at the Seymour Demonstration Forest? (check all that apply)

Active demonstrations (of management practices) _____

Displays _____

Self-guiding walks along marked trails with explanatory pamphlets _____

Guided walks/tours _____

Children's programs (e.g. day camp) _____

Community group programs (children & adult) _____

Family programs _____

School programs _____

Education centre ✓

Other (please specify): _____

12. Additional comments and/or suggestions for future tours (use other side of page if necessary):

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS EVALUATION.

SEYMOUR DEMONSTRATION FOREST EDUCATION PROGRAM

PROGRAM EVALUATION

1. Name of your school or community group: Tillicum Elementary
2. Name of teacher(s) or group leader(s): Sandi Robertson
3. Date of your program: Fri. April 30, 1993 4. Weather: Cloudy with sun
5. Name of your guide (program leader): Iva Clark
6. Duration of program: 2 hrs 7. Grade/age range of your group: K (5yr. olds)
8. Number of individuals in your group: ~~12~~¹⁴ children
9. Was duration of program: Too long ☐ Too short ☐ About right ☒
10. Was group size: Too large ☐ Too small ☐ About right ☒
11. Was the quality of introduction:
 Poor ☐ Fair ☐ Good ☒ Excellent ☐

12. Do you feel the program helped your group to develop an increased awareness of integrated resource management principles in the Seymour Demonstration Forest?

These principles were just touched on, which was appropriate for the age level & understanding of our students.

13. How would you rate the discussion of resources of the Seymour Demonstration Forest?
(please rate for each resource):

	Poor	Fair	Good	Excellent
Water	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Forestry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Fish	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wildlife	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Recreation	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Land/soil	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Education	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

14. What (if anything) would you have liked the program leader to discuss in more detail?

nothing

15. What (if anything) did you feel the program leader spent too much time on?

nothing

16. Do you feel your group could understand the program leader? (Please elaborate on answer.)

Yes, she spoke at an age appropriate level. She was excellent!

17. Did the program meet the expectations of:

(a) the students or community group members?

Yes ☒

No ☐

(b) the teacher(s) or community group leader(s)?

Yes ☒

No ☐

18. Was the program relevant to the school curriculum or community group's interests?

yes, it provided an introduction to the forest

19. Were there an adequate number of activities?

Yes ☒

No ☐

If no, what other activities would you like to see?

20. Were the activities appropriate for the age range of your group?

Yes ☒

No ☐

If no, were the activities too advanced or too elementary?

21. Is there anything you would like to see added, deleted or changed in the program?

No.

22. What did you and your group enjoy most during the program and why?

The collecting of forest items.

23. What did you and your group enjoy least during the program and why?

Nothing

24. Were you satisfied with the facilities at the Demonstration Forest?

Yes

☒

No

☐

If no, why not? Do you feel this affected the quality or delivery of the program?

25. Are there additional facilities (or improvements to existing ones) that you would like to see?

No

26. Overall, how would you rate the program?

Poor ☐

Fair ☐

Good ☐

Excellent ☒

27. Do you plan to return?

Yes ☒

No ☐

If no, why not?

28. Additional comments and/or suggestions (use other side of page if necessary):

SEYMOUR DEMONSTRATION FOREST EDUCATION PROGRAM

SCHOOL & COMMUNITY GROUP PROGRAM EVALUATION

1. Name of your school or community group: _____
2. Name of teacher(s) or group leader(s): _____
3. Date of your program: _____ 4. Weather: _____
5. Name of your guide (program leader): _____
6. Duration of program: _____ 7. Grade/age range of your group: _____
8. Number of individuals in your group: _____
9. Was duration of program: Too long _____ Too short _____ About right _____
10. Was group size: Too large _____ Too small _____ About right _____
11. Was the quality of introduction:

Poor _____
Fair _____
Good _____
Excellent _____
12. Do you feel the program helped your group to develop an increased awareness of integrated resource management principles in the Seymour Demonstration Forest?

13. How would you rate the discussion of resources of the Seymour Demonstration Forest?
(please rate for each resource):

	Poor	Fair	Good	Excellent
Water	_____	_____	_____	_____
Forestry	_____	_____	_____	_____
Fish	_____	_____	_____	_____
Wildlife	_____	_____	_____	_____
Recreation	_____	_____	_____	_____
Land/soil	_____	_____	_____	_____
Education	_____	_____	_____	_____

-- SCHOOL & COMMUNITY GROUP PROGRAM EVALUATION -- PAGE 2 OF 3 --

14. What (if anything) would you have liked the program leader to discuss in more detail?
15. What (if anything) did you feel the program leader spent too much time on?
16. Do you feel your group could understand the program leader? (Please elaborate on answer.)
17. Did the program meet the expectations of:
- | | | |
|--|-----------|----------|
| (a) the students or community group members? | Yes _____ | No _____ |
| (b) the teacher(s) or community group leader(s)? | Yes _____ | No _____ |
18. Was the program relevant to the school curriculum or community group's interests?
19. Were there an adequate number of activities? Yes _____ No _____
If no, what other activities would you like to see?
20. Were the activities appropriate for the age range of your group? Yes _____ No _____
If no, were the activities too advanced or too elementary?
21. Is there anything you would like to see added, deleted or changed in the program?

-- SCHOOL & COMMUNITY GROUP PROGRAM EVALUATION -- PAGE 3 OF 3 --

22. What did you and your group enjoy most during the program and why?

23. What did you and your group enjoy least during the program and why?

24. Were you satisfied with the facilities at the Demonstration Forest? Yes _____ No _____
If no, why not? Do you feel this affected the quality or delivery of the program?

25. Are there additional facilities (or improvements to existing ones) that you would like to see?

26. Overall, how would you rate the program?

Poor _____ Fair _____ Good _____ Excellent _____

27. Do you plan to return? Yes _____ No _____
If no, why not?

28. Additional comments and/or suggestions (use other side of page if necessary):

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS EVALUATION.

Appendix E

Advertising

Summer Programs Seymour Demonstration Forest


Our quality of life and standard of living are affected by the condition of our drinking water, of our forests and of our fish stocks. As demands on these resources increase, knowledge about them becomes important to all of us.

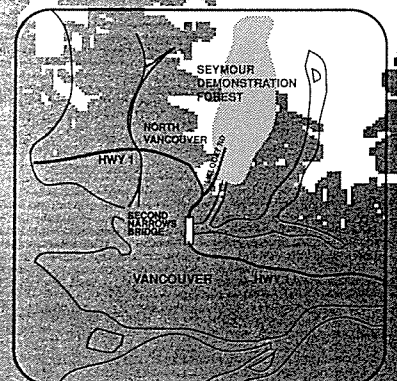
Nowhere else so close to the city can you see examples of forestry, watershed management and fisheries management side by side. Learn "first-hand" about forestry techniques, water care, salmonid enhancement projects, wildlife management, and recreation planning.

If you have an organization or group that is interested in the environment and resource management projects phone 987-1273. We'd be happy to arrange a free tour for your group.

For individuals and small groups we offer free forestry "drop-in" tours every Sunday from June 27 through October 17, except Thanksgiving Sunday, October 10.

Times: 12:00 pm and 2:30 pm
Information : phone 987-1273

 **Greater Vancouver
Regional District**
*Creating Our Future
Steps to a More Livable Region*



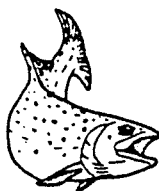


EXPLORE THE SEYMOUR DEMONSTRATION FOREST

The natural resources we find in watersheds are too important to be taken for granted. Our quality of life and standard of living are affected by the condition of our drinking water, of our forests and of our fish stocks. As demands on these resources increase, knowledge about our watersheds becomes important to all of us.

The Seymour Demonstration Forest is an outdoor classroom in a Greater Vancouver Regional District watershed. It provides a working example of how our watershed resources are managed. At the Seymour Demonstration Forest you can:

- **Experience** the magnificent wilderness -- the Seymour Valley -- in Greater Vancouver's backyard.
- **Discover** your precious natural resources -- drinking water, forests, a fish hatchery, recreation areas, wildlife and wildlife habitat.
- **Explore** a living, breathing, dynamic exhibit of integrated resource management.
- **Learn "first-hand"** about forestry techniques, water care, salmonid enhancement projects, wildlife management, and recreation planning.



We are now registering groups for education programs at the Seymour Demonstration Forest. Our professional guides are dedicated to environmental education.

Programs Offered at the Seymour Demonstration Forest

School programs (free) • March 2 - June 25 • for all levels, from kindergarten through to college and university.

Community group programs (free) • March 20 - November 12 • for community groups such as environmental clubs, Scouts, Guides, seniors, etc.

Sunday tours (free, no registration required) • June 27 - October 10 • This is a drop-in program on Sundays. Specific hours for these tours will be posted at a later date.

Watershed Wonders (\$25.00 registration fee) • July 12 - August 20 • This is a day camp for children 6 - 12 years of age that runs for four days. Hands-on activities, arts and crafts, games and stories are just some of the highlights of each four-day session.

For registration or more information, please contact SDF Education Program at (604) 987-1273



"The prosperity of a region is rooted in the health of the ecosystems that support it - the land, the air and the water."

Creating Greater Vancouver's Green Zone

 Greater
Vancouver
Regional
District
Creating Our Future