

Sechelt Community Projects Inc. Community Forest

**Draft Operational Plan
August 2006**

Prepared for : Sechelt Community Projects Inc.

Prepared By : Smart Forest Planning
Brian R. Smart, RPF, RPBio
Halfmoon Bay, B.C.

Table of Contents

<i>Purpose of the Draft Plan</i>	3
<i>Purpose of Operational Plan</i>	3
<i>Operational Plan Revision and Opportunity for Public Input</i>	3
Revisions to be made by Professional hired by SCPI:.....	3
Timing of Revisions:.....	3
Community Advisory Group Review:	4
Public Input Opportunities:.....	4
<i>Resources to be Managed</i>	4
Timber.....	4
Water.....	5
Biodiversity.....	5
Trails.....	5
Recreation	6
Commercial Vegetation Harvest.....	6
Personal Harvest of Food and Craft Supplies	6
Aesthetics.....	7
<i>Silviculture Systems to be Utilized within the Community Forest</i>	7
Extended Rotation Management.....	7
Current Age-class Distribution Challenges for Extended-Rotation	8
Extended Rotation Management Harvesting Strategies	8
Blowdown Management	10
Timber Inventory	10
Access Management	11
Specific Management Policies and Values:	11
Right of Ways	11
No Clearcutting.....	12
Slash Burning.....	12
Pesticide Use.....	12
Riparian Management Zone Widths	12
Long-Range Planning	12
Firewood Availability	12
<i>Community Advisory Group Feedback:</i>	12

Purpose of the Draft Plan

The purpose and intent of this draft operational plan document is to provide a framework of a Community Forest (CF) operational plan for the public to review. It is hoped that it will initiate constructive feedback that will provide input for developing the final Operational Plan for the CF.

Purpose of Operational Plan

The purpose of the Operational Plan (OP) is to guide the operations of the community forest in accordance with the values of the community and, at the same time, to provide the public with a comprehensive means of reviewing the planned operations of the CF. It consists of written text and maps, providing information regarding:

- Resources and resource values that are being managed, and their locations,
- The locations of planned operations,
- Types of harvesting, silviculture and other activities that will be carried out within the community forest tenure area,
- What products the CF will produce and provide, and
- Policies regarding development, harvesting and management of timber and non-timber resources.

Although the operational plan is not a requirement of provincial legislation, the level of involvement expected by the Sunshine Coast Community in the management of the CF necessitates producing this type of plan. The CF Management Plan specifically states that an operational plan will be developed in order to address public involvement and incorporate public input.

Operational Plan Revision and Opportunity for Public Input.

Revisions to be made by Professional Hired by SCPI:

Changes to the CF OP will only be made by a Registered Professional Forester hired by Sechelt Community Projects Inc. (SCPI).

Timing of Revisions:

The OP can be revised whenever the CF management staff feels that revisions are required. Potential revisions must be approved by the SCPI Board of Directors. Potential changes and subsequent changes to the operational plan will be posted on the CF web site.

Potential changes to the OP may wait until others are ready to minimize the time required of the SCPI Board of Directors.

The OP will be officially updated annually, with an official public review period.

Community Advisory Group Review:

The Community Advisory Group (CAG) will review any proposed changes to the OP other than those it initiates itself. The CAG's recommendations regarding the proposed changes will be passed on to the CF Forest Manager and to the SCPI Board of Directors for review.

Public Input Opportunities:

Although the OP will be officially updated annually with a review period, it may be reviewed and commented upon at any time by any member of the public.

Resources to be Managed

Timber

At the present time Timber harvesting is the main financial opportunity for the CF. For the 5-year probationary period, the AAC is set at 20,000 m³ per year. This volume will be cut in a variety of areas using a range of retention harvesting methods that are suited to the ecosystem's natural disturbance types.

Timber harvesting will be planned and conducted with final product in mind. Marketing of timber products will begin prior to block layout and harvesting to ensure the best value and use of the timber is achieved.

Timber products that support local industry will be given special consideration. Such considerations will vary on the specific customer and product, but may include harvesting of timber and production of logs that:

- Are of specific species, size and grade,
- Require sensitive harvesting techniques to preserve their appearance,
- Are of manageable volumes for customers, and
- Suits the manufacturing schedule of local industry

The timber from the CF will not be subsidized for local industry; fair market price will be applied.

Customer requests for specific products will be accepted.

Salvage opportunities will be managed on an individual basis, and salvage proposals will be accepted.

Water

Water resources within the CF consists of lakes and streams that provide the following values:

- Domestic water consumption (three Community Watersheds),
- Aquatic ecosystems supporting biodiversity,
- Aesthetics, scenery, and community setting, and
- Recreation uses such as swimming, fishing and boating.

The OP contains only indirect water management activities; those designed to maintain water qualities and aquatic ecosystems through minimizing the influence of other resource uses. There are no plans to provide, or license, water-based products and values.

Biodiversity

In addition to the landscape unit planning old growth management areas and wildlife tree retention already implemented within the CF area, the following will be done to further maintain biodiversity within harvested areas:

- Large snags will be retained within wildlife tree patches where practical,
- Under-represented tree species will be retained within wildlife tree patches, such as those including Sitka spruce and Western yew,
- Natural Rhododendron patches will be retained,
- Veteran trees will be retained wherever it is practical,
- Only native tree species will be used for reforestation of timber crops,

Trails

The network of trails in the Sechelt area are a valuable resource. They are widely used by local residents and are also a significant tourist draw to the area. They are used for hiking, biking, horses, motorcycles and quads, access for utilization of non-timber resources and cross-country skiing.

The existence of trails does not preclude the use of other resources, such as timber or vegetation harvesting. The management of trails will occur on a site-specific basis rather than one policy applied to all situations.

Harvesting of timber in the vicinity of trails may occur, and the management of the trail may include a range of scenarios including: moving the trail, moving the block, restoring the trail following harvesting, fall-away-yard-away or variation of post-harvest retention density.

SCPI will not assume the liability of any trail structures built by individuals or groups that are not part of an official CF recreation project. Structures such as bridges, bike ramps, jumps and shelters will not be protected during harvesting activities unless they have become part of an official CF recreation resource, and specifically included in a management plan.

Recreation

Recreation within the CF areas includes a wide spectrum of activities. Forest-based recreation is greatly valued by local residents and is a significant draw for visitors to the Sunshine Coast.

Proposals by individuals to commercially manage recreation resources will be accepted.

While there may be opportunity for commercial recreation management within the CF area, the degree to which commercial use influences local resident recreation opportunities must be carefully considered.

Commercial Vegetation Harvest

The CF contains valuable vegetation that may be harvested commercially for products such as:

- Decorative foliage,
- Natural oils production,
- Medicinal purposes,
- Food, and
- Branch furniture components

While there are no operational or management plans for these items at the present time, the economic contribution to the local community from the utilization of these resources is significant and will eventually have to be managed and supported.

The management of these resources can often be included with access considerations for recreation, timber harvesting, and retention areas.

Proposals for the management of these resources will be accepted.

Personal Harvest of Food and Craft Supplies

As with commercial vegetation harvesting, personal gathering and use of food and craft supplies products is not managed at this time, and there are no operational plans to manage these items. If personal and commercial harvesting interests being to clash a management and operational plan for these resources may have to be developed.

Aesthetics

The forest surrounding Sechelt provides a beautiful setting for the community as both a scenic backdrop and at the stand level. Timber harvesting has significant potential to influence the viewscape of the CF.

Operations will be planned to minimize their visual impact, not by attempting to make harvesting invisible, but by utilizing landscape design techniques to blend in the harvesting pattern with the natural forest landscape mosaic. This will be accomplished by utilizing varied amounts of post-harvesting tree retention, following irregular-shaped natural features for harvest boundaries, and by minimizing road right-of-ways. Blocks planned in highly visible areas will have visual impact assessment images produced to ensure this can be done.

At harvesting sites, slash and debris will be managed to minimize the messy appearance of slash. This may include stacking of potential firewood pieces for public access, burning of roadside slash piles, chipping and hauling away slash and wood debris and machine piling of debris.

Silviculture Systems to be Utilized within the Community Forest

The lower areas of the CF are within the Coastal Western Hemlock very dry maritime (CWHxm1) and the Coastal Western Hemlock dry maritime (CWHdm) biogeoclimatic units. These areas are very well-suited for the growth of Douglas-fir, cedar, alder and bigleaf maple. In order to fully utilize the productive capacity of the majority of these sites, growing the species listed above, even-aged management is favoured. This does not mean widespread clearcutting, but even-aged management systems following natural disturbance patterns. The main strategy is to provide near full light exposure to the new crop when it is established.

Not all harvesting will intend to regenerate a new crop; some partial harvesting may leave trees to continue growing to produce specialty products. Some stands within the CF chart are fully stocked at this point and their added increment between now and a future harvest would be minimal. This provides an opportunity to utilize the growing potential of these fully stocked stands that are far past maximum increment; they can be partially harvested now and they will grow back some of the harvested volume in time for a final harvest. The volume removed on the partial cuts will grow back in volume on the remaining trees, in higher value, until final harvest time.

Extended Rotation Management

In order to produce the products that will have the most potential to support local-value-added industry, trees must be grown that will provide the raw materials for these

opportunities. Short-rotation forestry, producing a maximum amount of fibre per hectare, produces lower-value sawlogs suitable for highly mechanized mills producing dimension lumber, engineered panel fibre and pulp, not specialty and value-added products.

To support the local production of specialty forest products and value-added opportunities on the Sunshine Coast, some trees will have to be grown under an extended-rotation management regime, to produce large, higher quality logs that will produce higher value products. Such higher quality products that may be produced through extended rotation management include:

- Cedar and Fir house logs
- Large construction timbers
- Free of heart centre (FOHC) timber-framing beams
- Clear lumber from pruned trees,
- Large dimension poles and pilings
- High grade veneer peeling logs
- Large sawlogs for specialty cut sawmills.
- Hardwood sawlogs removed at intermediate harvest

Along with the production of these products comes a smaller proportion of lower-value pulp wood and waste.

The CF tenure itself allows the economics of extended rotation forestry to work. Clearcutting and volume maximization does provide the best return on investment based on log sales. The inclusion of the community values, local economy spin-off effects, niche marketing, and community use of profits, however, changes the calculations, including non-dollar values in the justification for undertaking this approach.

Extended rotation management will be applied at the lower level CWHxm1 and CWHdm biogeoclimatic subzones. The generally-lower productivity of higher elevation sites, along with the lower relative values of higher-elevation species, does not offer the same opportunities.

Current Age-class Distribution Challenges for Extended-Rotation

The present age-class distribution of the CF stands may make the implementation of this system difficult for the first two decades. There is likely not enough mature forest to meet the 20,000m³/year cut for every year and some stands will likely have to be cut with the objective of keeping the CF financially viable rather than meeting long-term stand management goals. The timber inventory, described below, will provide the information required to implement extended rotation to the greatest possible extent.

Extended Rotation Management Harvesting Strategies

There are a number of harvesting strategies to be used to manage a stand within an Extended Rotation regime. Although each stand will be assessed and managed based on

its own attributes, the following is a description of the main strategies to be applied within the CF to implement extended rotation forestry:

1) Harvest of a previously unmanaged stand

Remove the majority of the stand volume leaving veteran and good form retention fir and cedar at a variable density appropriate for retention following natural disturbance. Consider salvage of blowdown and harvesting requirements to access retained trees: retain trees close to roads where possible and leave lower density in middle. Plant fir & cedar.

2) Preliminary harvest of unmanaged stand that will be left until final scheduled cut.

In this cut remove all species not desired for the final crop (grand fir, hemlock) and all trees of poor form (crooks, indicators of defect, small crown/height ratio, scars,) and then remove subdominant cedar house logs that are large enough to meet high grade specs. Look for and harvest unusual feature logs (arches, posts). Remove subdominants and co-dominants to meet desired final density (which is based on site productivity and time until final cut). Plan final crop products now to set final harvest date considering required dimensions, grades and other attributes.

On an average site for the CF, leaving a nearly full crown of dominants(75%+) will produce roughly 10m³/ha/year,(much better on some sites) so if a stand starting with 1000m³/ha is to be left for a further 30 years, remove approximately 300m³/ha in this cut.

3) Second harvest following a harvest as in # 1 above:

Remove some of the large dominants left from #1 harvest and leave veterans and veteran recruits to density appropriate for natural disturbance. The timing of this harvest will depend on the productivity of the site and the products to be obtained from these trees. These dominants will be growing within an immature, managed stand that will need to be protected. (Heli single-stem is a good option for cedar poles. Open canopy may allow grappling without having to top trees. Roads will be available as landings, stems will be uniform for heli-lift optimizing. With higher grades, the elimination of falling break can completely offset the cost of single-stem harvesting. This is especially true for cedar poles.)

4) Final harvest following a #2 harvest:

Remove all volume leaving veterans and vet recruits. Plant fir & cedar

5) Preliminary cut of planted, managed stands

Depending on the stand; the volume, size of trees, potential products, productivity and other attributes, this may be from 40-60 years.

These cuts should be designed to remove merchantable volume as well as prepare the stand to add more high-grade volume to stems of good form, considering potential products to be produced at final harvest. There may be cedar house logs and poles at this entry. Alder should be removed at this harvest. There will be a

high percentage of pulp, this may make this entry economically marginal. If this is the case consider either leaving the stand for longer until a partial harvest is more economical , or if this is not likely due to density, remove more volume initially.

6) Final harvest of managed stands

Same as harvest #4, above.

Blowdown Management

It is inevitable that some leave trees will be blown down. This must be kept in mind during the planning of harvesting and stand management prescriptions. Trees that are to be retained are likely required as veterans, veteran recruits, or those of good form and of higher value left for additional growth. Blowdown is expected, and it should be utilized whenever possible. This can be facilitated by locating the majority of leave trees close to roads and on easily accessed terrain, leaving the lower-density retention areas further in the block and on difficult terrain.

Retention prescriptions should expect blowdown and leave additional trees to ensure that the retention target is maintained. In the case where additional trees are left and none are lost to wind, a small scale harvest opportunity exists.

Timber Inventory

One of the greatest challenges for the CF is to develop an appropriate timber inventory system for the CF. It will be required to develop the AAC for the CF following the 5-year probationary period, as well as to facilitate an extended rotation management regime. The inventory will be based on the resources and values within the tenure area, the management values of the community and the products the CF has potential to produce.

The inventory must be based on very specific potential forest products within each stand. The inventory must include:

- A stand-based tally estimating the volume of individual products that will be available and expected harvest year,
- A schedule of required silviculture treatments to produce the desired products from each stand,
- Access requirements similar to that of a total chance plan,
- The harvesting system required for the products being grown,
- Site productivity estimates
- Non-timber values to be managed at the site level.

It is also important to ensure that past silviculture investments are properly tracked and those stands are properly managed.

Access Management

The CF road network, if managed correctly, can be a permanent asset, reducing long-term costs and environmental impacts. Roads built within the CF for timber harvesting will provide access for non-timber resource uses. Each proposed road development must consider the influences it may have on the other values in the development area.

Access management will be an ongoing consideration, and will include the following points:

- Main haul roads will generally be left open after harvesting use, although they may be in a deactivated state,
- Cross ditches will not be impassable to 4x4 traffic,
- Pipe culverts may be removed and replaced by rock fill “Squamish” culverts,
- Roads may be gated during operations for the security of equipment,
- Roads may be gated if dumping of garbage becomes a problem,
- Temporary roads may be rehabilitated and planted,
- Temporary roads may be rehabilitated and planted retaining trail status, and
- Road use for non-timber resources is to be considered in the long term.

Specific Management Policies and Values:

The following policies have been developed to address issues raised regarding forestry operation that have been voiced at various times on the Sunshine Coast over the last several decades.

Right of Ways

The right of ways for logging roads will be as narrow as they can practically be for an operation. Clearing width will depend on factors such as:

- Worker safety,
- The type of operation being undertaken,
- Equipment being used,
- Soil conditions and materials available,
- Slope,
- Visual sensitivity,
- Tree lengths being handled, and
- Visibility for traffic.

No Clearcutting

Clearcutting, the removal of all trees within a prescribed area, will not be utilized as a silvicultural system within the CF tenure area. Even-aged management will be used, but each harvested area will retain trees from the stand for biodiversity, visual, and silvicultural values. Boundaries and retention densities will be irregular matching the pattern that wildfire and other natural disturbances might produce.

Slash Burning

Broadcast burning of harvested areas will not be undertaken. Plantable spots for regeneration will be produced by hand, machine or at time of planting.

Slash piles will only be burnt for fire hazard reduction purposes. All other piles will be chipped and removed, or left for coarse woody debris and small animal habitat.

Pesticide Use

Pesticides will not be used for silvicultural purposes within the CF. Pesticides will only be considered for treatment of forest health issues (insects or disease).

Riparian Management Zone Widths

As stated in the FSP, the width of riparian management zones and retention levels within reserve zones will be determined on site by qualified professionals.

Long-Range Planning

Many aspects of the operational plan will address long-term planning and management strategies. The OP shows not only areas considered as THLB but also all areas where harvesting will *not* take place. As non-timber resource information gets formalized it will be added to the operational plan. Following the completion of the timber inventory the THLB will be further refined and long term road requirements can also be mapped.

Firewood Availability

Fire wood is an important resource for many coast residents, and access to firewood within the CF area will be provided. Firewood cutting opportunities will arise following harvesting, some silvicultural treatments

Community Advisory Group Feedback:

The Community Advisory Group was asked to provide some preliminary input to assist in developing the operational plan. The following is a list of questions posed to the CAG and the resulting feedback that has been used in the initial Draft Operational Plan

Q: The Community Forest is a forest license like any other company (somewhat). So what would you like to see different about the way this company operates in the forest that you have seen in other operations?

- What is the Mission Statement of the Community Forest?
- It would be good to include the Long Term goals stating how the Community Forest plans to be positioned in the Industry/Market place now and in the Future.
- Other than just Planning for the Future there should be Benchmarks that are measurable.
- Smaller roads, large rocks for seepage instead of culverts at certain spots.
- Retain some older trees next to the deactivated road/trail
- Higher VQO for the Inlet taken from residential properties in West Sechelt.
- Retention of all old vets surrounded with maximum wild life tree patches.
- Operational plans to deal with endangered red listed plant, bird and amphibian species.
- Yearly open houses to discuss 5 year plans like in the past.
- Public accountability must rank at the top. The entire operation including every value is expected to meet the needs and concerns of the general public. This is far from any ordinary forest operation.
- Improved operator public relations is also expected. Here better liaison, improved signing, and the best harvesting and post operation practices possible are expected.
- The too often accepted massive waste problem needs to be controlled.
- Public tours would go along way towards improved trusting relations.
- There is a wide range of good and bad harvesting going on. Seems to be a problem of the fox guarding the henhouse. So now under this forest licence lies the opportunity to do it right. Minimize waste, good safe operations, good PR. it all can be done to a much higher standard.
- Erosion control can be managed to provide the best runoff control and eliminate most siltation.

What forest practices do you like, dislike, hate, admire, wish for etc?

- I dislike deactivation of roads and landings.
- It is questionable on the benefits of leave strips and riparian zones in some areas.
- I would like to see more Harvesting methods that utilize Slack lining, Sky-lining, or Drop-line Carriages in sensitive areas.
- Code +++ riparian setbacks more in tune with the Fish Protection Act for private land.
- Dislike the non collaboration within Forestry Companies, in planning their harvest.

- Should be ecosystem based planning within the landscape unit. Multi-aged stands should exist at the urban interface.
- If harvesting continues at the rate that it has over the last few years, all of the second stage forest will be cut at the urban interface and the community will have no easy access to mature forests.
- Policy on herbicide/pesticide use is very controversial.

What non-timber forest values would you like to see managed for in a better way within the community forest?

- there should be areas where the public can have access to firewood.
- What is the cost benefit analysis to the Community Forest managing these non-timber forest values?
- Will these non-timber forest values be utilized or will they just be topics for discouraging harvesting in the Community Forest?
- recreation - trails
- educational / interpretive signage
- Air quality - minimal burning, alternate method?
- Mushroom harvesting
- Eco system preservation
- Recreation
- Education
- Full integration of the SEI information into operational plans.
- A greenway plan for trail network through wild life tree patches, wetlands sensitive ecosystems , views etc.
- Crowston Lake, Big Tree high on the priority list.

What aspects of timber management and product marketing would you like to see?

- A Sustainable Forest.
- No harvesting of old growth Class 8 or 9
- Local businesses should have priority access
- Locally grown, local harvested, locally milled.

What resources are the most sensitive to other resource uses?

- Riparian areas
- Old growth management areas OGMAS
- All specified ecosystems
- Wetlands