2023 – 2028 Operations Plan

Community Forest K3F

Operational Plan Guidelines
for the
SUNSHINE COAST COMMUNITY FOREST

Revised
November 2023

Original Published Date
February 2011

SUNSHINE COAST COMMUNITY FOREST

Table of Contents

November 2023 Operations Plan Summary

The Operation Plan serves as our primary means of communication, outlining our harvesting and road activities for the upcoming five years. With robust community involvement, we aim to create a harvesting strategy that aligns with the forest's diverse needs.

The operation planning process is continually evolving in conjunction with our Community Forests. In April 2021, we re-introduced this Operating Plan, emphasizing extensive engagement with the local community, government authorities, and the Shishalh Nation. Subsequently, the BC Government initiated substantial programs addressing old growth deferrals and regulatory modifications. Additionally, we've been diligently crafting our Ecosystem Based Management (EBM) plan, initially introduced in the April 2021 version of the Operating Plan. As we prepare for a major overhaul of planning in 2024, this 2023 Operating Plan has been revised to encompass the interim strategies, which we are pleased to share with our community.

In summary, this document outlines our present status, encompassing proposed cut-blocks, harvest schedules, a transitional EBM strategy, and updates on completed harvesting activities.

Ecosystem Based Management

In 2021, we introduced the concept of Ecosystem-Based Management (EBM) into the Operating Plan. Since then, significant advancements have been made in EBM inventories and related studies[1]. A Management Brief[2] has been crafted, outlining the framework for the potential realization of EBM.

We are pleased to announce that key elements of EBM are integrated into this document, however the EBM report is draft and will be ready for release for public review in early 2024.   This plan introduces Conservation Areas (formerly known as Landscape Reserve Design) integrated into the plan, incorporating foundational components of unique ecosystems conservation for the long term. Approximately 41% of our forests fall under Conservation Areas, aligning with SCCF policies that support EBM, including 1) No

---

[1] https://www.sccf.ca/ebm
[2] https://www.sccf.ca/_files/ugd/5b0e15_daa3af675a404852a95911646c8f87a8.pdf

4

harvesting of Old Growth forests 2) A moratorium on logging in the Chapman Watershed 3) The protection of vulnerable ecosystems and species at risk.

Furthermore, this plan emphasizes our shift from Clearcutting to Retention silviculture systems. Retention silviculture takes a stand-level approach to sustainable ecosystem management, prioritizing the preservation of the structural elements within the original stand within a cutblock. This approach is designed to uphold long-term ecological diversity and meet local management objectives. Harvest openings are not bad if done in way that supports ecosystem health, promotes biodiversity and sustains tree growth to support the community in future generations. Retention Systems allows this to occur.

The 2023 Operating Plan also incorporates the implementation of Intermediate (Partial Cutting) practices to enable commercial thinning and address wildfire risk reduction. Approximately 25% of our harvesting is planned as Intermediate Cuts.

This 2023 to 2028 Operating Plan reflects our ongoing progress as we actively move closer to full EBM implementation in the future.
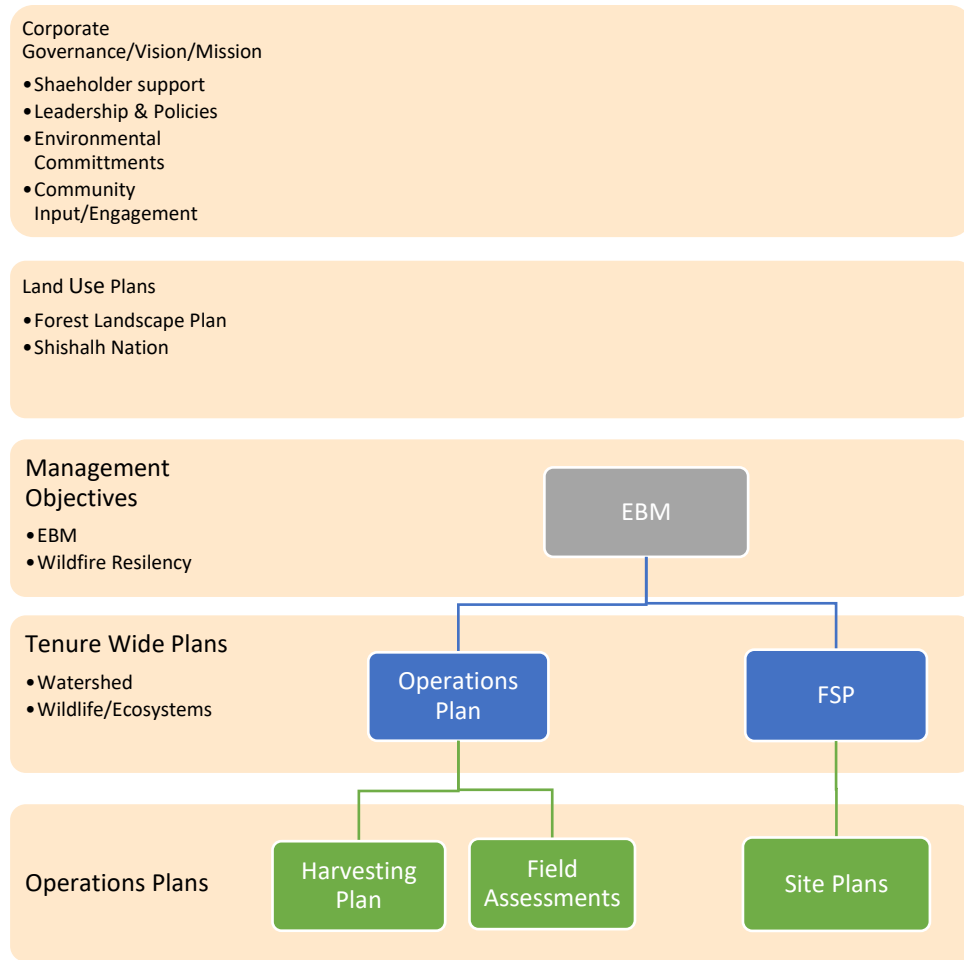
Figure 1: Hierarchy of Planning

Ecosystem-Based Management (EBM) is the driving force behind our operations. It commences with effective corporate leadership, well-informed policies to instill positive change in providing an unwavering commitment to environmental stewardship and active engagement with the community. Our 2023 Operations Plan is consistent with EBM and our corporate vision.

The Sunshine Coast Community Forest is committed to being a leader in ecosystem-based management, and to steward our tenure in a sustainable, respectful manner that advances all our communities

Forest Stewardship Plan and Forest Operations Mapping

In 2024, Government will introduce Forest Operations Mapping to all Forestry Licencees in British Columbia. Our Community Forest has volunteered to introduce Forest Operations Mapping (FOMs) as part of pilot program to provide guidance to other Community Forests in the province.

The **Forest Operations Map (FOM)** is a tool developed by the British Columbia government to enhance transparency of operational planning and to provide engagement opportunities for interested members of the public and community stakeholders[1]. It is a prerequisite to obtaining a **Cutting Permit (CP)** or **Road Permit (RP)**, and allows the public to comment on planned forestry operations[2].

The FOM is a map-based tool that allows the public to view and comment on planned forest operations that require cutting permits or road permits[3]. The FOM online portal is a website where Forest Stewardship Plan (FSP) holders can voluntarily publish a FOM to meet the new requirements[3]. The requirement to publish a FOM only applies to FSP holders, meaning any agreement holder under the Forest Act that is required to prepare an FSP[1].

To comment on our Operations Plan, we will require the community member to logon to the FOMs website and log their comments or concerns related to the specific block. Comments are shared with SCCF and the Ministry of Forests and we will be asked by the Ministry to consider the comments prior to a Cutting Permit or Road Permit being issued. Familiarity with this process is encouraged as all future harvesting plans by all forestry licensees will be using this process for comment and review as of April 2024. Please see our website to view the tutorial on how to use the system. If the comments are non block specific, we will have a form available to fill out for these types of comments.

Based on previous feedback, we have attached our Forest Stewardship Plan (Appendix 2) for reference in order for the reader to understand our legal requirements for harvesting and forest management.

Thank you for time to review this plan.

Warren Hansen, RPF
Managing Forester

Preamble

Sunshine Coast Community Forest Ltd (SCCF) is a municipal corporation whose sole shareholder is the District of Sechelt. SCCF has a Community Forest Agreement K3F (Est 2007) with the Ministry of Forests which provides the opportunity to manage local timber harvesting for the benefit of the community.

This Community Forest Agreement defines boundaries in three areas around Sechelt, creating an Area Based Tenure. This does not give the Community Forest any ownership rights to the land, but provides the opportunity and obligation to manage the area harvesting a replaceable amount of timber each year. This means that we only harvest what we can grow sustainably. This amount of timber is known as the Allowable Annual Cut (AAC).

Created in 2011 by the Community Forest Advisory Committee (CFAC), SCCF produces this Community Forest Operational Plan (CFOP), which includes guidelines and maps to provide the public with a practical explanation of how the Community Forest will be managed, and where the AAC will be harvested for the following 5 years. This is done with consideration for a variety of forest values, economic, environmental, and social benefits, and compliance with the laws, policies, and regulations of the federal and provincial governments.

The CFOP is updated annually to consider changes in community priorities, forest conditions, regulations, or harvesting-operations volume. It is more than a document – it is a proactive process for the community to participate in the operational planning of the SCCF. The *shíshálh* Nation participates in the process as part of our Community and the stewards of their swiya in which we operate.

CFOP is a plan to act in parallel with the Ecosystem Based Management (EBM) to be in place at a future date. Components of EBM will be integrated as the harvest plans progresses through stakeholder engagement, inventories are released and stewardship areas are refined.

Ecosystem Based Management

The Sunshine Coast Community Forest (SCCF) is of significant cultural, spiritual, recreational, scenic, and economic value to the community. To balance ecological integrity with economic benefits, SCCF is transitioning to an ecosystem-based

management (EBM) approach in forestry. This involves collaborative planning with the shíshálh, provincial, regional governments, and the public. The document outlines EBM, emphasizing its aim to manage human activities while preserving healthy ecosystems and supporting sustainable native species and human activities. The focus is on forest management practices, biodiversity, and the interconnectedness of ecosystems, resources, and societal values. EBM-based forest management, although relatively new, aims to sustain healthy ecosystems, biodiversity, economic opportunities, social values, and future options, incorporating ongoing monitoring and a precautionary approach due to inherent complexity and uncertainties, especially with a changing climate.

The Operations Plan incorporates the core principles of an Ecosystem Management system.

- Reflects a stage in the continuing evolution of social values and priorities; it is neither a beginning nor an end.
- Place-based and the boundaries of the place must be clearly and formally defined.
- Maintain ecosystems in the appropriate condition to achieve desired social benefits.
- Takes advantage of the ability of ecosystems to respond to a variety of natural and man-made stressors, but all ecosystems have limited ability to accommodate stressors and maintain a desired state
- May or may not result in emphasis on biological diversity.
- Sustainability, if used at all in ecosystem management, should be clearly defined—specifically, the time frame of concern, the benefits and costs of concern, and the relative priority of the benefits and costs.
- Scientific information is important for effective ecosystem management, but is only one element in a decision-making process that is fundamentally one of public and private choice.

Purpose of Operational Plan Guidelines

The purpose of the CFOP is to guide the planning and execution of operations of the SCCF in harmony with the values of the community. At the same time, the CFOP provides the public with a comprehensive means of reviewing the planned operations of the SCCF in clear and understandable language. The CFOP consists of written guidelines and maps, providing information regarding:

- Location of Conservation Areas;
- the locations of planned harvesting operations;
- types of harvesting, silviculture, and other activities that will be carried out within the SCCF tenure area;

- types of forest products the SCCF will produce; and
- the development, harvesting, and management of timber and non-timber resources.

It is important for the community to understand that the CFOP guidelines are just that— *guidelines*. While they set the intended general direction for harvesting, site conditions, field discoveries or other findings made by professionals may necessitate changes. In such cases, the rationale will be provided and documented in the Site Plans.

Public Input and Operational Plan Revision

Obtaining Public Input

The permanent Community Forest Agreement was awarded on May 30, 2011, and Community Forest Operational Plan was developed to provide public discussion and input into operational procedures for the management of the SCCF. The CFOP describes the basic scope of forest management activities that may be used within the SCCF, and the intent is to answer operational questions asked by the public. It provides a framework on which to build on the values expressed in the community.

Through the CFOP planning process, SCCF will engage with the public with operational detailed maps showing future block development up to 5 years. The intent is to highlight new planned blocks and roads when they occur on the plan, and to solicit comments for those blocks for a 30-day review. During this proposal stage of CFOP, SCCF will be accepting comments for review and consideration. Other public engagement efforts will include open houses, presentations to community associations, or face-to-face meetings with concerned stakeholders.   The open houses are open to the public and are advertised in the local newspapers and on the website so that the public has an opportunity to participate in this process. The public, First Nation and Local Government's role in the CFOP process is to review the document and make suggestions for consideration.

In addition to presenting the CFOP to the public, further outreach efforts will be made to engage with the District of Sechelt, *shíshálh* Nation, SCRD, and the following Community Associations: Sandy Hook, Halfmoon Bay, West Sechelt, Roberts Creek, Tuwanek, Davis Bay/Wilson Creek/Selma Park.

A summary of comments and recommendations will be completed by SCCF Management and brought to the SCCF Board of Directors for review and approval. An approval decision will mean that further field location and planning may proceed. A compendium of public comment and review will be made available on our website. Stakeholders directly affected by operations may be consulted further for feedback as the

block passes different gates in the CFOP plan. It is important to note that as the block progresses through the gates, it will be more difficult to change block/road plans.

In subsequent years of the CFOP Plan, these blocks may show the level of progress of cutblock development planning such as:

- Block Proposed
- Block Proposed and Previously Referred
- Block Engineered (Plans complete, assessment complete)
- Block in Cutting Permit (Plan approved by FLNRO)
- Block Harvested
- Block Planted
- Block Free Growing

We believe this CFOP process will be more interactive and current, allowing public participation to help guide our operations into the future.

Revisions to Be Signed by the Professional Forester

Final changes to the CFOP will be signed and sealed by a Registered Professional Forester, co-signed by the SCCF Managing Forester and the Chair of the Board.

Forest Operations Mapping (FOMs)

The **Forest Operations Map (FOM)** is a tool developed by the British Columbia government to enhance transparency of operational planning and to provide engagement opportunities for interested members of the public and community stakeholders[1]. It is a prerequisite to obtaining a **Cutting Permit (CP)** or **Road Permit (RP)**, and allows the public to comment on planned forestry operations[2].

The FOM is a map-based tool that allows the public to view and comment on planned forest operations that require cutting permits or road permits[3]. The FOM online portal is a website where Forest Stewardship Plan (FSP) holders can voluntarily publish a FOM to meet the new requirements[3]. The requirement to publish a FOM only applies to FSP holders, meaning any agreement holder under the Forest Act that is required to prepare an FSP[1].

To comment on our Operations Plan, we will require the community member to logon to the FOMs website and log their comments or concerns related to the specific block. Comments are shared with SCCF and the Ministry of Forests and we will be asked by the Ministry to consider the comments prior to a Cutting Permit or Road Permit being issued. Familiarity with this process is encouraged as all future harvesting plans by all forestry

licensees will be using this process for comment and review as of April 2024. Please see our website to view the tutorial on how to use the system. If the comments are non block specific, we will have a form available to fill out for these types of comments.

shíshálh Nation Relationship

On October 4, 2018, the Foundation Agreement was signed by shishalh Nation and BC, committing the parties to Shared Decision-Making (SDM) for land and resource authorizations throughout the swiya (lands, birthplace, world, "Territory" of the shishalh Nation).

The shishalh Nation, as the governing entity for the stewardship of their lands and resources, is engaged in a shared decision-making **(SDM)** process with the province of British Columbia (B.C.). This process, outlined in the Foundation Agreement, involves the joint review of applications for various authorizations related to land and resources within the shishalh swiya. A joint B.C.-shishalh Working Group, comprised of representatives from both entities, assesses applications and makes recommendations to a Board, which includes members from shishalh Nation, B.C. Ministry of Forests and the Ministry of Indigenous Relations and Reconciliation (MIRR). If consensus cannot be reached, an issue is brought to a Solutions Forum. The overall aim is to incorporate shared decision-making into all provincial authorization decisions within the shishalh swiya.

Periodic meetings are held with *shíshálh* Nation representatives to discuss forestry-planning issues, cultural and Archaeology site surveys, Cutting Permit issuance, and other current issues. As part of SDM, the *shíshálh* Nation reviews every block for cultural significance prior to harvesting.

Management of Resources

Conservation Areas (Previously known as Community Stewardship Areas)

Along with EBM, to protect and plan for future non timber opportunities, the Community Forest recognizes many community values within our forest management areas. Through previous stakeholder engagement initiatives, we have provided planning areas that shows the community of areas being managed specifically for alternative uses, values, and concern mitigation. Conservation Areas for management consideration are:
Long-term deferral areas are areas which require buffers or management of a value requires timber to be retained for a rotation or more. Examples as follows:

- Old growth and Old growth recruitment
- Unstable terrain/steep slope
- Environment
- Species/plant communities at risk; fragile or rare ecosystems (i.e., marbled murrelet, northern goshawk)
- Water licence intake protection
- Riparian reserves
- High cultural/archeological significance areas
- Alternative harvest management areas are areas where community values require special harvest strategies/techniques to help mitigate concerns:
- Recreation
- Wildfire interface management areas
- Community watershed management
- Community interface areas
- Short-term deferral areas – where deferring timber is required to meet a desired management objective
- Mushroom gathering
- Long-term or Extended rotation strategies
- Visual Quality Objectives (i.e. two pass harvest entries)

Water

Water resources within the SCCF include lakes, wetlands, and streams. They provide many values:

- Domestic water supply under provincial water licenses
- Aquatic and riparian ecosystems supporting biodiversity, unique and fragile ecosystems
- Aesthetics, scenery, and community setting
- Recreation uses such as swimming, fishing, and boating
- Salmon and resident fish-bearing streams

The CFOP covers only indirect water-management activities—those designed to maintain water quality and aquatic ecosystems by minimizing the impact of other resource uses. The Community Forest considers water to be one of the highest-value resources in the tenure area and will consider various options above and beyond provincial regulations to preserve water quality including:

- leave trees alongside S6 streams, which are small, non-fish bearing streams not in a community watershed where leaving trees is generally not required,
- leave wider riparian areas than required to maintain stream bank integrity,

- incorporate retention areas adjacent to stream channels to provide greater protection to water quality.

Every consideration is given to protecting waterways where safety and operational requirements allow.

Community Watersheds

There are three Community Watersheds that overlap with the Sunshine Coast Community Forest chart area:

- Milne Creek (includes Trout Lake)
- Chapman Creek
- Gray Creek

The SCCF Board of Directors has decided that no harvesting will take place within the Chapman Creek Community Watershed for the 25-year term of the SCCF (effective 2011). This decision has been made to address the following concerns:

- The Chapman Creek watershed was heavily harvested in the past and needs to hydrologically recover

- Past harvesting and road construction resulted in some slope instability resulting in landslides. Many roads and slopes may be still unstable and new operations could exacerbate these problems. Detailed hydrological studies have been completed (Horel et al) and recommendations have been accepted by the board. More studies are likely to be done to provide better information about the Chapman Creek Community Watershed before any operations will be considered.

Forestry operations will be planned within the Gray Creek and Milne Creek Community Watersheds. These plans will be referred to local governments, shíshálh Nation and the public having an opportunity for input into those plans. These areas will be managed in the "Water Quality Zone". Approaches are as follows:

- **Watershed Assessments**: Qualified professionals will conduct watershed assessments (ABCFP and Peng 2008; 2010; 2020) every 5 to 10 years to ensure that harvest levels will remain at or below very low risk levels to water quality and flow (e.g., EBA 2000).
- **Limited Harvest:** Most areas within the zone will have no harvest (e.g., Chapman Creek Watershed). In areas where harvest can occur, the retention system will be used to maintain forest influence over 100% of the block. This means that all areas of the block will be within a tree height of the block edge, an internal retention patch or individual

14

dispersed retention trees. Shelterwood systems may also be used but must ensure forest influence is maintained over the whole block for the entire rotation.

- **Conservation Network:** The conservation network will contribute areas that recruit old forest in the Water Quality Zone, with greater amounts of conservation network focused in these zones than in some other zones.
- **Wildfire Risk Management**: In areas where the Water Quality Zone overlaps with the WUI, management actions will be guided by the Wildfire Risk Reduction Plan currently in preparation, ensuring alignment with BC government directions.
- **Road Management**: Roads will be carefully built and managed according to recommendations in Carson and Maloney (2021) and ABCFP and PENG (2012;2021) standards

Conservation Areas, for the most part, have considered providing buffers on streams based on the presence of a riparian ecosystem and is typically more wider than the current regulatory requirement. When a stream does not have the level of conservation protection, the need for, and sizes of, riparian reserve and management zones will be determined in the field by professionals as stated in the SCCF Forest Stewardship Plan (FSP). The size of riparian reserves on streams is specified in Forest Planning and Practices Regulation (FPPR), sections 47, 48, and 49. However, depending on site conditions, these reserves may be larger, as determined by a qualified professional who will consider the following:

(i)   the need to buffer the aquatic ecosystem of the stream, wetland, or lake from the potential introduction of materials that are deleterious to water quality or fish habitat;

(ii)   the need to conserve the riparian habitat for biodiversity, ecosystem function and wildlife habitat management purposes;

(iii)   the need to protect the integrity of the reserve zone by buffering with retention in the management zone;

(iv)   the effect of trees and understory vegetation on water quality or fish habitat;

(v)   the need to maintain stream bank and stream channel integrity;

(vi)   the relative importance and sensitivity of different riparian classes of streams, wetlands, and lakes;

(vii)   the type, timing, or intensity of forest practices that are to be carried out;

15

(viii)   worker safety; and

(ix)   other factors determined by the professional in the Site Plan.

Biodiversity

Biodiversity management is guided by our EBM, through conservation areas and stand level practices. It takes into consideration the Landscape Level and extends beyond the SCCF tenure area to include Old Growth Management Areas (OGMAs), seral stage (forest-stand age) distribution, and ecosystems at risk. OGMAs and Wildlife Tree Retention Areas (WTRA) retention are implemented within the SCCF tenure area thereby providing additional biodiversity and future old-growth recruitment. All blocks are assessed by Forest Ecologist to ensure that the EBM guidelines are followed.

The following best management measures will further maintain biodiversity within harvested areas:

- Large snags will be retained within wildlife tree patches where operational safety allows, as they provide valuable habitat for many animal species.
- Under-represented tree species, such as Sitka spruce and western yew, will be retained within wildlife tree patches.
- Natural rhododendron patches will be retained.
- Veteran trees will be retained wherever it is operationally feasible.
- Only native tree species will be used for reforestation of timber crops.
- Incorporate irregular boundaries in the cutblock design to improve the interaction of terrestrial species and ecosystems between the non-harvest versus harvest portion of the block.
- Employ a Retention Silviculture System with more than 50% forest influence as dispersed or groups of retained trees in the cutblock.
- Meet the Coarse Woody Debris targets as stated in our FSP.

Variable Retention[3]

As a foundational management direction, in the next 5 years, 100% of SCCF blocks are planned to be non-clearcut using Variable Retention principles (Silviculture Systems-pg. 21). Variable Retention will be the primary system as long as it's safe, can achieve the biodiversity targets for the site and we can grow the right tree species for the site. There may be blocks that may need to be clearcut to achieve other targets such as managing for forest insect and disease, but these blocks will be the exceptions instead of the norm.

---

[3] Variable Retention, Wikipedia, 2021/03/25 https://en.wikipedia.org/wiki/Variable_retention

Areas other than OGMAs may be designated for retention to maintain specific high-biodiversity values.

Legacy Tree and Special Tree Protection
The Pacific temperate rainforests ecoregion of North America is one of the richest and most diverse temperate forest ecoregions on earth. These coastal rainforests contain enormous trees, referred to as "legacy trees", which are a result of the area's favourable growing conditions, including mild year-round temperatures and heavy rainfall. Legacy trees are exceptionally large and old, and a unique feature of British Columbia's coastal forests.
Our Community Forest recognizes that legacy trees have important cultural, aesthetic and ecological value. These trees play an important role in habitat conservation by bridging old-growth characteristics into second growth stands. In addition, large trees are increasingly supporting the growing ecotourism economy as valuable destinations in and of themselves. In that context, SCCF's aim is to keep all legacy trees throughout our Community Forest and our protocols for doing so are outlined in our Best Management Practices for Legacy and Special Tree Protection.

Invasive Species

Noting the extensive range and diversity of invasive plants in our Community Forest, SCCF is focusing on eliminating the potential for invasive plants by grass seeding disturbed soils. Legally the SCCF is required to manage for invasive plants as identified in the Forest and Range Practices Act (FRPA) Invasive Plant Regulation. Through the removal of potential seed bed via grass seeding we can eliminate the introduction and/or spread all invasive plants that could threaten Sensitive Sites. Our comprehensive Best Management Practices for Invasive Plants identifies our strategy in detail.

Identified Wildlife Management

The only species listed in the Ministry of Environment's Identified Wildlife Management Strategy that exists within the SCCF tenure area is the Marbled Murrelet. There is potential for Northern Goshawk in the area, and a survey was conducted in Summer, 2023 with no recorded observations.

Marbled Murrelet nesting habitat has been identified and mapped within the SCCF and approved by the Ministry of Forests, Lands and Natural Resource Operations and Rural Development. The Order specifying the legal set aside of potential Marbled Murrelet has been met outside the Community Forest, and there is no requirement to set more area aside within the Community Forest. However, current areas shown as potential Marbled Murrelet habitat in the Community Forest will remain standing.

Elk and Deer Management

Large numbers of elk and deer (ungulate) populate the forest in, and surrounding, the SCCF. Habitat areas such as sites of high deer use for winter browse and warming (south-aspect open forest) have been identified and mapped. Continuous forestry operations will open up forest canopies to allow more natural browsing within these forest stands. Stand harvesting and rehabilitation (spacing and thinning) will provide a mosaic of browse areas across the landscape to be used by these and other animals.

Deer and elk populations do not require intensive management in this area. The low elevation sites with mild winter climates and extensive areas of browse supply their needs well.

Elk and deer impact forestry plantations and add a significant cost to silviculture. They spend much of their time in plantation areas because of the increased availability of food in the newly formed shrub and herbaceous layers that grow following harvesting. Unfortunately, deer and elk often eat the new seedlings and damage young trees as they rub the velvet off their antlers. Mesh enclosures or cones are often required to protect the seedlings.

Timber

Timber harvesting is the main financial opportunity and obligation for the SCCF.

Legally, the Community Forest's Allowable Annual Cut is established at 20,000 cubic meters (m3) per year. However, in response to Ecosystem-Based Management (EBM) and government strategic initiatives, the SCCF Board has opted to temporarily reduce the AAC to 15,000m3. This adjustment aims to alleviate harvesting pressure during the planning and implementation of EBM and other initiatives. SCCF policy remains that we will:

- maintain an economic contribution from the forest to the local Sunshine Coast and provincial economies;
- provide sustainable local employment;
- continue to rehabilitate unproductive or low-productivity, unmanaged, and diseased stands naturally regenerated from past logging.

The AAC will be harvested using a range of retention-harvesting methods suited to the area's ecosystems. The 2023 Operation Plan will introduce new harvesting methods of partial cutting for commercial thinning, research and wildfire treatments. Timber harvesting will be planned and conducted to produce a variety of forest products, some of which are key to local Sunshine Coast value-added customers. Marketing of timber

18

products will be determined prior to annual harvesting to ensure that the best value and use of the timber is achieved.

Timber products that support the local forest products manufacturing industry will be given the highest sales priority. Considerations will vary depending on the specific customer and forest product, and 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 and grade;
- are of manageable volumes for customers; and
- suit the manufacturing schedule of local value-added industry.

The timber from the SCCF will be sold at market prices or better. Requests from local customers for specific forest products will be given priority. This will include special harvesting plans and timing to accommodate these requests.

Free to cut firewood will be made available to our community on the block after harvesting or processed and delivered through our award-winning community firewood program.

Salvage opportunities will be managed on an individual basis, and salvage proposals will be developed in conjunction with annual harvesting plans.

Soils

Maintaining soil integrity is vital to managing future forest resources. All harvesting and other forestry activities will be planned in such a way as to minimize soil disturbance.

Measures to maintain soil integrity include:

- deactivation and reforestation of non-permanent road systems or those that are no longer required;
- grass-seeding of exposed mineral soil;
- minimizing new road construction by incorporating old roads into the block designs;
- surveying for soil compaction following harvesting as needed;
- avoiding broadcast burning of slash, leaving organic debris on site for decomposition.

Karst

Karsts are a natural geological feature that have been identified in the Community Forest. The SCCF will manage those sites according to Provincial policy. Planning will consider significant karst features with the objective of protecting them.

Forest Recreation, Trails, and Sites

The SCCF areas include a wide spectrum of outdoor recreational opportunities. Our community greatly values forest-based recreation, which is also a tourist attraction for some visitors to the Sunshine Coast. The extensive network of trails in the Sechelt area is a particularly valuable resource. They are mostly used for hiking, mountain biking, horses, motorcycles, and ATV's; access for harvesting of non-timber resources; and cross-country skiing. Harvesting of timber on or near trails may occur and the management of those trails may include:

- moving the trail,
- inclusion in retention of buffer zones,
- redesigning the block,
- restoring the trail following harvesting,
- minimizing damage by fall-away-yard-away, or
- variations of post-harvest retention density.

The management of trails will occur on a site-specific basis rather than by one broad policy applied to all situations.

The appropriate management of recreational resources is a goal of the SCCF. A recreational resource is a landscape feature with the potential to be used for a specific recreational activity. This potential must be recognized and options for continued future use considered in forest management planning.

The SCCF will continue to develop an inventory of recreation values and implement specific planning over time. This inventory lists natural and historical features for any recreational use within the SCCF tenure area; it will be used to ensure that areas of high recreation value are recognized and managed so as not to decrease their value. To date, the SCCF has mapped known trails in and around the SCCF tenure area. Some trails have been GPS mapped by the public and we greatly appreciate this information. This trail inventory will record types of usage, specific recreational or ecological importance, and other information regarding appropriate management techniques for the trail area.

Sechelt Heritage Forest/Hidden Groves

The Sunshine Coast Forest District has a Co-operative Management Agreement with the District of Sechelt for maintaining the Sechelt Heritage Forest recreation site (FRPA

Section 56), and the SCCF is not involved in the management. Objectives for the Sechelt Coast Heritage Interpretive Forest Site, set by the District Manager, Ministry of Forests, Sunshine Coast Forest District, recreation project 16660-6206—locally known as the Sechelt Heritage Forest—are as follows:

The objectives are to manage the Sechelt Coast Heritage Interpretive Forest Site, for a road access, non-motorized recreation experience. Opportunities for forest education, interpretive walking, and exploring activities will be available. Natural and social history of the Sandy Hook area shall be provided through the educational and interpretive component of the management of the site.

The Sechelt Heritage Forest is also designated as an OGMA and is excluded from timber harvesting as described in the Chapman Landscape Unit Plan.

Hidden Groves

Included within REC 16660-6206 is Hidden Groves which has been designated a high-value recreational area on the urban interface. It is managed by the Sechelt Groves Society in cooperation with the Recreation Sites and Trails BC and SCCF. It consists of approximately 60 ha of forest along the east side of Sechelt Inlet Road, across from the Sandy Hook Road intersection. Many excellent trails have been built to enable people of varying abilities to view a wide range of old- and second-growth forest ecosystems. Work continues on these trails in order to improve access and to lead to additional natural and managed forest features. The Hidden Groves website can be viewed at: www.hiddengroves.ca

Non-Timber Forest Products

The SCCF contains valuable vegetation that may have the potential to be commercially harvested in the future for products such as:

- decorative foliage,
- edible mushrooms and other fungi,
- natural oils,
- medicinal ingredients,
- food, and
- branch furniture components.

The *shíshálh* Nation harvests many non-timber resources for traditional uses as food and for producing baskets, tools, and other art and craftwork.

The harvesting of non-timber forest products (NTFP's), such as those listed above, is unregulated within the province at this time. It has been found difficult to license, plan, enforce, and monitor in BC because there are no provincial policies in place. There are no

SCCF operational or management plans for these resources at the present time, except to identify and map any exceptional resource areas. In the event that there are commercially viable proposals, management strategies would be added to the Forest Management Plan.

Personal Harvest of Food and Craft Supplies

As with commercial vegetation harvesting, personal gathering and use of food and craft supplies products is not currently managed, and there are no plans to manage these items at this time. The public can go out and harvest any non-timber forest products wherever they desire.

Aesthetics

The forest surrounding Sechelt provides a beautiful setting for the community as both a scenic backdrop and at the forest-stand level. Timber harvesting has a temporary potential to change the viewscape of the SCCF wherever visible from Sechelt. The result of harvesting could be either unattractive colour changes (such as a solid brown colour) or too angular a shape. These views are short-lived, as the vegetation comes back quickly as the seedlings get taller. Within five years, the view again takes on a green colour.

Visual Quality Objectives (VQOs) have been set by the MOF for the SCCF area. These VQOs are, however, general in nature, and more detailed assessments of the visual effects of harvesting may be required on a block-by-block basis.

Harvesting operations are 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 is accomplished by utilizing tree retention, following irregular-shaped natural features for harvest boundaries, and by minimizing the size of road right-of-ways. Potentially visible blocks planned in highly visible areas will have visual impact assessment images produced to assist in their visual landscape design.

Wildfire Management

Wildfire Risk to Forests and Community

The beautiful neighbourhoods peppered with large trees, rustic cabins nestled in forests, and the beautiful beaches that characterize life on the Sunshine Coast, also contribute to its vulnerability to wildfire. This area where community intermingles with the natural environment is called the wildland urban interface. It is at a greater risk of catastrophic wildfire, and on the Sunshine Coast makes up a staggering 441 km2. Mountainous geography and water restrict most areas to one or sometimes two points of access, both

on a neighbourhood and on a regional scale, and this challenges emergency response planning. As our climate changes, our communities are increasingly aware of this risk, and interested in seeing it addressed. As a community-led organization with a forest stewardship mandate, this is a high priority for the Sunshine Coast Community Forest. The SCRD partnered with the shíshálh Nation, Town of Gibsons, and the District of Sechelt to commission a Community Wildfire Protection Plan (CWPP) with funding from the Union of British Columbia Municipalities and the Community Resiliency Investment Program. This work included wildfire risk assessments on public land within the wildland urban interface. The consultants identified extensive areas at high risk of wildfire including in Egmont, Pender Harbour, Halfmoon Bay, West Sechelt, Sechelt Inlet, Roberts Creek, Port Mellon, and Gambier Island. The plan included 43 recommendations towards making our communities more resilient to wildfire. Many of these have been done or are underway.

How to reduce the risk of wildfire spreading through the Community Forest

Using the groundwork laid by this Community Wildfire Protection Plan as an information springboard, we have engaged the foremost experts in BC to look at the role the Community Forest can play. We have engaged Frontera Forest Solutions specializes in fuel management, fire risk assessment, fire ecology and restoration, and prescribed fire planning. They have partnerships with the University of British Columbia which is leading forest fire mitigation research, and have worked with other community-based forest stewards like First Nations and Community Forests around the province. Locally managed forests like these are at the forefront of implementing wildfire mitigation projects, including the iconic story of the Logan Lake Community Forest's success. The work the project team will be undertaking over the next year includes

Phase 1: Fuel Management Planning within the Sunshine Coast Community Forest

This will involve gathering all available relevant data from the CWPP and from the community forest's own forestry planning dataset, such as old growth and ecologically important areas to be protected, and to identify any key datasets missing. This information will be used to inform burn modelling to show where wildfire threat, spread, and vulnerability risks are greatest. Lastly, field work will be conducted to ground truth the data and modelling output in the areas where wildfire threat and potential risk is high or extreme.

Phase 2: Identification of Proposed and Prioritized Fire Mitigation Projects in the Community Forest

A series of proposed risk reduction projects will be developed. Each proposed project area will be identified including such information as threat and risk levels, forest characteristics, and availability of grant funding. Visual modelling outputs showing vulnerability and hazard will be included.

23

Phase 3: Discussing the findings with the Sunshine Coast Community

The information generated by this process will be shared for discussion with community on priority areas and next steps.

Coastal forests see fewer fires than the interior, however the risk of large fires on the coast increases with the longer, drier summers. Projects that reduce fire risk usually involve removing "Fuel", such as logs on the forest floor and dead lower branches on trees. With EBM on Biodiversity and Ecosystems Conservation, "dead" wood is one of the six measurable attributes of old forest conditions, and an important part of forest habitat. Our Operations Plan has included proposed Wildfire Risk Reduction treatments for public review and consideration. Block AN29-CT and AN14 are harvest blocks with an emphasis on conducting treatments to reduce wildfire risk reduction.
There will be difficult decisions to be made to balance ecosystem health with reducing known extreme fire risk to those ecosystems, and to our communities.

Timber Management

The Timber Resource

Age Class Distribution

The vast majority of the SCCF tenure area is second-growth forest of either post-logging or post-fire origin. Harvesting began in the Sunshine Coast about a century ago and has been almost continuous ever since. Some old-growth forest remains in higher elevations as stands that were not chosen for harvesting due to their quality and the economics of the stands. Very few patches of old growth remain in the lower elevations of the SCCF, and those that do have been set aside as Old Growth Management Areas (OGMAs) or as SCCF conservation areas.

Harvesting rates increased during the 1930s through the 1950s, and then again in late 1980 until the present. Subsequent to this harvesting history, the SCCF has a somewhat irregular age class distribution that impacts our cut rate today. The current Allowable Annual Cut rate of 15,000m3/year (voluntarily reduced from 20,000m3/year) reflects EBM and commitments to other policies.

Old Growth

Figures in this section are approximate, based on 2022 inventory data.

In the Sunshine Coast Community Forest, the amount of old-growth forest over 250 years old is 502 hectares. None of these areas will be harvested. In the 1880s, the most accessible timber was harvested first, and harvesting progressed through the old growth

upwards on the slopes with scattered wildfire burns contributed to the majority of the current old forest is in higher elevations, adjacent to and in the Tetrahedron Park.

Most small patches of lower-elevation old growth are protected in OGMAs and in our EBM Conservation Areas. Additional patches have been discovered during our field work and by community members, and these have been recorded and will not be harvested because of their importance for biodiversity. These forested areas will continue to age, with some younger stands earmarked to eventually becoming old growth as well, increasing the amount of old growth in the Community Forest over time.

Old Growth Panel Recommendations

In 2019, the Government of British Columbia appointed a panel to conduct an Old Growth Strategic Review by engaging the public and providing direction on an approach to Old Growth management that is driven by British Columbians' perspectives and values. They held over 200 meetings in 36 communities and considered input from over 18,000 individuals. The resulting report calls for a paradigm shift in the management of Old Growth forests.

We support the [Old Growth Strategic Review Panel's report.](#) We are proactively planning our current and future operations with respect and consideration to the panel's recommendations in anticipation of government regulations and policies outlining the specific requirements. One way we have done this is by completing a vegetation analysis of the Coastal Western Hemlock zone identified by the panel as having a deficit of Old Growth, and set aside candidate areas to recruit into Old Growth so that in the future our Community Forest will have these highly valued and ecologically important old forests. Our Conservation Area reflects this commitment of protection of existing Old Forest and Recruitment Candidate stands from younger forests.

Unmanaged Second-Growth Stands

Many stands were harvested in the past and were left to regenerate naturally and now comprise a large proportion of today's mature forest. Unfortunately, the quality of these forests is questionable due to their unmanaged state. Some have regenerated very well into stands of healthy mature Douglas-fir-dominated stands of good value. Other stands were left and grew into low value stands of mostly poor hemlock. These stands may contain varying amounts of the following attributes:

- old surviving cedars damaged by the original logging that continued to grow in very poor form and partially decayed due to old scarring or infestation of powder worm;

- old-growth hemlock of the previous understory infected with hemlock mistletoe and/or rot from scars;
- Douglas fir trees that have grown leaning away from competing deciduous and other coniferous trees, resulting in irregular sweeping form;
- stands of irregular spacing resulting in many small, marginally merchantable stems and a high volume of waste, and some large trees with very large branches and knots as a result of growing in wide open areas;
- species occupying sites to which they are not well-suited. This is common of western hemlock in drier, low-elevation stands and Douglas fir in higher, wetter, colder areas of high snowpack.

The presence of these stand attributes lowers the value of the overall forest and also reduces the number of management options available.

Managed Second-Growth Stands
Starting in the mid-1960s, planting became the normal reforestation method and stands were managed to varying degrees of intensity, including spacing, fertilization and, in the 1990s, some pruning. Some of these planted stands are now maturing and are uniform in appearance, as they are well-spaced and close in size; the canopy is even and high. The stands that were spaced in the 1970s and 1980s are even more uniform. These stands will be very profitable for the Community Forest, as they will yield a high proportion of merchantable volume, easy to harvest, and require very little manufacturing and sorting.

Species Distribution

The lower-elevation areas of the SCCF are almost entirely coniferous stands, consisting mostly of Douglas fir, western red cedar, and western hemlock with smaller amounts of western white pine, lodge pole pine, Sitka spruce, red alder, and big leaf maple. Further up, in the Gray, Chapman, and Angus Burnett areas, other coniferous species occur, including amabilis fir, Pacific silver fir, yellow cedar and mountain hemlock. Other species, such as Pacific yew and bitter cherry, exist in these areas but are not considered to be part of the timber inventory. The species breakdown within the timber-harvesting land base of the SCCF tenure area is as follows:

Species	% Occurrence
Western and mountain hemlock	35
Douglas –fir	30
Western red cedar	15
Amabilis and silver fir (commonly referred to as balsam)	15
Yellow cedar, or cypress	5

Lower-elevation stands are generally most well suited for reforestation with Douglas fir and red cedar, which are the predominant species planted. Some sites where root rot is present may be stocked with western white pine or red cedar. Western hemlock invariably regenerates naturally and makes up a small component of a managed stand. Higher-elevation sites will most likely be planted with red cedar, yellow cedar, and amabilis fir, while mountain hemlock will naturally seed itself and be accepted.

Silvicultural Systems

Silvicultural systems are systematic treatments of a particular forest site undertaken to grow specific species and forest products, and to produce specific forest attributes. A silvicultural system is not only a type of harvesting system; it also includes the subsequent strategy to grow the next stand of trees through to rotation or to meet stand-attribute objectives. As legally required, the SCCF will be reforesting harvested sites with species suitable to the area's biogeoclimatic subzone and site series, and as per regulations respecting stocking standards. Local contractors are used whenever possible for harvesting and planting. Planting is completed as soon as possible after harvesting to prevent invasive plants from establishing. Suitable silvicultural systems will be applied for the natural disturbance type of site in order to regenerate a forest with a higher degree of natural attributes.

The lower areas of the SCCF 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 big leaf maple. In order to fully utilize the productive capacity of the majority of these sites, growing the species listed above using even-aged management is favoured. This does not mean widespread clear-cutting, but even-aged management systems following natural disturbance patterns that have been studied in the past. The main strategy is to provide near full-light exposure to the new crop when it is established.

Not all harvesting is intended to regenerate a new even-aged crop. Some partial harvesting may leave trees to continue growing to produce specialty forest products. Some stands within the SCCF are fully stocked and their added increment between now and a final 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.

Variable Retention

Variable retention is a general term used to describe harvesting that retains a variable amount of the previous stand across the harvested area or areas.

It's a relatively new silvicultural system that retains forest structural elements for at least one rotation in order to preserve environmental values associated with structurally complex forests.

Some examples for environmental values are forest cover connectivity, soil stabilization, microclimate under retained trees, habitats associated with live or dead trees and species diversity due to habitat preservation, and wildlife corridor preservation. Variable retention also aids in emulation of natural disturbances by leaving behind some residual structure from previous stand which is typical for stand replacing disturbances. Traditional silviculture systems such as clearcut, patch cut, shelterwood, etc. are focused on maximizing timber production and future regeneration of the trees. Variable retention on the other hand is focused on what is retained.

Variable retention minimizes the impact of logging operation by leaving biological legacies such as coarse woody debris (nurse logs and snags). Either few trees or many trees can be retained under the variable retention system, and trees can be retained in patches (aggregated retention) or left uniformly throughout a stand (dispersed retention); hence the name "variable retention." It is a technique for retaining trees as key structural elements of a harvested stand for at least until next harvest rotation in an effort to maintain species, habitat diversity and forest-related processes.

There are four key mechanisms through which variable retention is presumed to maintain biodiversity:

- By providing a constant supply of structural features that are at high risk to being lost due to modern forestry practices and that are known to be important to habitat availability, such as large trees, very young trees, snags, and coarse woody debris
- By providing adequate refuge for sensitive species that will colonize the surrounding managed forest environment as it develops suitable conditions
- By establishing habitat patches, Patch dynamics, that can serve as stepping stones for the dispersal of newly produced offspring, seeds, and spores
- By increasing the structural diversity of managed stands

Where we are able to apply this concept, the result is a stand with older attributes. The SCCF will apply variable retention techniques on all suitable harvesting blocks according to the characteristics of the stand, biological features, safety, economics, and terrain. Harvested areas within variable retention areas will regenerate even-aged stands and the

28

increased light levels on the ground will allow vigorous growth of the newly reforested areas.

Trees are left within a variable retention system to meet a number of objectives:

- Large veteran trees are kept for biodiversity reasons.
- Large older trees with scarring or evidence of wildlife use may be left as wildlife trees, individually or in patches.
- Unusually shaped trees that are interesting for recreational viewing or ornamental use may be preserved.
- An even distribution of large high-quality trees may be retained to continue growing for an additional rotation to provide large, high-quality logs for value-added industry.
- Small understory cedars may be left after harvesting to continue growing to become crop trees in the next rotation; retained for commercial thinning time or for First Nations use.
- Selected trees may also be preserved as riparian buffers or as part of visual-quality strategies.
- Where possible, small cedars are left along S6 and ephemeral creeks to enhance the riparian ecosystem.

When selecting trees for retention, it is necessary to evaluate their potential to withstand wind. In all retention systems, loss of retained trees from blowdown is to be expected. Areas other than OGMAs may be designated for retention to maintain specific high-biodiversity values.

Harvesting Approach and Silvicultural System

The method of removing all trees within a designated area, commonly known as clear-cutting, will be employed sparingly, limited to small patches. This practice will be integrated into a mosaic that mirrors natural disturbance patterns and forms a component of the variable-retention silvicultural system. From an ecological standpoint, this silvicultural approach is deemed suitable for the majority of the SCCF timber harvesting land base. Given the light requirements for productive growth, conifer crop trees, particularly Douglas fir and cedar, thrive in environments with high light levels.

Selective Logging

Selective logging is a general term used to describe any harvesting that selects some trees and retains others.

Salvage

Salvage of blow down or other dead and down timber will be managed on a site-specific basis.

Standing snags are not to be cut down in salvage operations unless there is a specific safety hazard covered by WorkSafe BC or only with the approval of the Managing Forester.

Single-Tree Selection or Intermediate Cutting

Single-tree selection and Intermediate Cutting is the harvesting of specific individual or groups of trees within a stand and removing them, leaving the majority of the stand intact. Openings are a limited in size up to 0.25ha and up to 50% of the stand basal area. This system may be used in certain types of stands of varying age classes within the SCCF and may not be appropriate for all stands and species. Ecosystem dynamics over the long term must be fully considered whenever using any silvicultural system in meeting the obligations and requirements of provincial legislation. Commercial thinning is an example of this system.

Extended Rotation Management

In order to produce high-value products that will have the most potential to support local value-added industry, trees must be grown in a manner that will provide the appropriate fibre for these opportunities. Short-rotation forestry, producing a maximum amount of fibre per hectare, yields lower-value sawlogs suitable for highly mechanized mills producing commodity products, engineered panel fibre, and pulp; short rotation may not be supportive of specialty and value-added products.

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

- cedar and fir house logs;
- large-construction/timber-frame timbers;
- "free of heart centre" (FOHC) timber-framing beams;
- clear lumber for siding, fencing, and fascia;
- poles and pilings;
- high-grade veneer peeling logs;
- large sawlogs for specialty-cut sawmills;
- hardwood sawlogs removed at intermediate harvest;
- lumber for doors and moulding material.

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

Extended Rotation management is not biodiversity enhancement or producing old growth habitat as SCCF is managing for those values in other ways (Wildlife Tree Retention Areas, Riparian Reserves, Old growth veteran trees and dispersed wildlife trees); nor, can it be practiced everywhere with the CFA. Sites must predominantly Douglas-Fir leading, on a good site (SI_{50} of 35m or greater), is a candidate harvest area, and has timber between ages 60-80 years of age. Logs produced from the final cut of an Extended Rotation trees will be between 120 years and 160 years of age.

As an area-based tenure (ABT)—unlike a volume-based tenure with an undefined area—the SCCF can only log inside our own defined area. In other words, we harvest what we grow, meaning that we are sustainable.

Volume maximization forestry provides the best return on investment based solely on log sales. The inclusion of community values, local economy spin-off effects, niche marketing, and community use of profits, however, changes the calculations in the justification for undertaking this approach.

Extended rotation management can 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 SCCF timber profile may make the wide scale implementation of extended rotation difficult for the first two decades. The new timber inventory, described below, will provide information needed to plan extended rotation to the greatest possible extent, yet still achieve SCCF objectives.

Extended Rotation Management Harvesting Strategies

There are two main approaches to the extended rotation strategy being applied in the Community Forest now: (i) increase in rotation age and (ii) stand-level tree retention.

The Community Forest is currently cutting an AAC that is significantly below the productivity or Mean Annual Increment (MAI) of the tenure. The result is that the overall volume of timber on the tenure is increasing, and the average age and size of timber is increasing. This provides the option for future SCCF managers to choose an AAC that

31

retains a higher average stand age or to increase the cut and harvest more volume. This decision will be required about 20 to 30 years from now. An overall increase in rotation age results in a higher percentage of forest in later seral stage, providing related biodiversity benefits, as well as aesthetic and recreational opportunities.

Stand-Level Tree Retention

Stand-level tree retention, as the name indicates, is the retention of some of the trees in a harvested stand, allowing them to continue growing. The strategy is to gain high value increments as the retained trees form large logs that can be used for a wider range of products supporting the local specialty and value-added industry. Not all stands are suitable for this approach, and the following points must be considered prior to implementing stand-level extended rotation:

- Is the overall stand value high enough to be able to afford harvesting without harvesting the potential extended rotation trees? Many stands, such as unmanaged second growth, would not qualify.

- Are the trees wind-firm or are they susceptible to blowdown? Attempts to retain cedar understory trees to be an extended rotation crop of house logs may not be successful in all situations.

- Is the site good enough to allow the trees to grow to be large, high-grade logs in one more rotation? Some poor-to-medium sites will not grow large enough trees to make stand-level retention worthwhile. Small peeler logs may be more profitable on such sites.

- The density of retained trees must not be too great or the light levels may not be sufficient for the regenerating new trees. Research trials have shown negative effects of overstory shading on Douglas fir. The crowns of the retained trees may double in size in 10 years (as did those in the Roberts Creek BC Timber Sales demo block), so what may look sparse at the time of harvest will fill in significantly.

- Is the volume needed now? The standing timber inventory supports the 20,000 m3/year AAC. Leaving trees behind in every stand may require more hectares be harvested.

Blowdown Management

When utilizing partial harvesting systems, it is inevitable that some retained trees will blow down. This must be considered during the planning of harvesting and stand-

management prescriptions. Some retained trees selected may become veterans or veteran recruits while others displaying good form have the potential for and potential for higher value if left to grow larger.

Retention prescriptions should expect blowdown and leave additional trees to ensure that the retention target is maintained. Blowdown should be utilized whenever possible. This can be facilitated by leaving the majority of trees close to roads and on easily accessed terrain, with lower-density retention areas further in the block and on difficult terrain. In the case where additional trees are left and none are lost to wind, a small-scale harvest opportunity may exist.

Riparian areas and wetland area soils are particularly susceptible to blowdown. Retention of canopy in riparian areas is often a requirement or part of a biodiversity management strategy. Planning of harvesting should avoid blowdown causing large upturned root systems to expose soils within the stream channel, which leads to siltation, erosion and potentially degrade the aquatic ecosystem. Riparian reserve and management zones will be designed to minimize blowdown; however, it is likely that some may occur. Where possible, retention areas can incorporate riparian zones for increased protection. When blowdown in riparian areas occurs, the fallen trees will provide value as coarse woody debris in the riparian area for both aquatic habitat and for terrestrial habitat for species such as amphibians; salvaging may also occur.

Canopy pruning treatments help to avoid blowdown in susceptible areas and will be undertaken where feasible.
Small trees, such as cedar, are frequently left throughout blocks to grow into future crop trees. It is common for these trees to blow down because they were previously sheltered by the canopy.

Timber Inventory

One of the greatest long-term challenges for the SCCF is to develop an accurate timber inventory system for the SCCF. Standard Timber Supply Analysis (TSA)-level inventory information is not sufficient for the specific products and value maximization opportunities of the Community Forest. The TSA-level inventory provides a solid foundation on which to build a more accurate analysis. Local knowledge and resource management zonation must then be included to accurately define the timber-harvesting land base and subsequent AAC.

Typically, inventory describes species distribution, age, height, stocking volumes, and other such basic information. It is developed in order to produce a TSA-wide determination of the AAC, and is never expected to be accurate at the stand level.

33

Acceptable stand level data errors for this type of inventory can be as high as +- 50%, because these errors even out over a large area. This is not adequate for the specific needs and objectives of the Community Forest.

The SCCF needs a timber inventory that it can use to plan all aspects of forest-based resource management and, for timber, one that will provide information for addressing the following timber supply and operations management considerations:

- What is the sustainable rate of cut for the tenure?
- What is the rate of cut for the individual compartment areas of the tenure?
- What timber products can be harvested from which stands and when?
- What annual harvest of specific timber products can be expected.
- How much area will be harvested?
- How much road building is needed each year?
- How much road must be maintained by year?
- What silvicultural activities are scheduled—by year, by area?
- Where are non-timber values located and how do they affect planning our operations?
- What poor stand conditions exist and how can they be addressed?

The SCCF inventory must be based on very specific information on each stand. The inventory information must include:

- a stand-based tally, estimating the volume of individual products that will be available and their expected harvest year;
- a schedule of required silviculture treatments to produce the desired products from each stand;
- access requirements;
- the harvesting system required for the products being grown;
- site productivity estimates;
- non-timber values to be managed at the site level; and
- very accurate timber mapping using high quality ortho, satellite, or Lidar images in conjunction with Geographic Information System (GIS) mapping. Timber polygons must be mapped based on operational constraints as well as traditional forest typing.

This type of inventory will record the resources and values within the tenure area, the management values of the community, and the products the SCCF has potential to produce. It will also be used to facilitate the development of a stand-merchandising

management regime. It is important to ensure that past silviculture investments are properly mapped and tracked and that treated stands are managed appropriately.

Inventory Work to Date

Current SCCF staff began working on inventory data prior to the issuance of the probationary SCCF tenure. Initial work used the latest Ministry of Forests TSA forest inventory and applied local knowledge to better estimate the THLB and productivity. Since that time, the following tasks have been completed:

- Accurate inventory polygons have been developed for the entire SCCF tenure area. The polygons are forest and operationally based and mapped with GIS using ortho-images.
- A product and operational activity-based inventory database has been developed for the GIS application.
- Twenty years of timber have been identified and mapped, with detailed product information gathered for each stand.
- The 20 to 40 year timber supply has been identified and mapped based on a combination of local knowledge of stands and existing inventory information of stand age and past treatments.
- Silvicultural plans have been added to the inventory database

VRI Inventory

A new Vegetation Resource Inventory (VRI) for the SCCF tenure was done in 2010/2011 and updated yearly. As EBM is built out, the AAC will be revised accordingly.

Access Management

The existing SCCF road network is a permanent asset, reducing long-term costs and environmental impacts.

Roads built within the SCCF for timber harvesting will provide access for timber and 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 the protection of water quality and access structures is a requirement under FRPA. Planning this protection will include the following:

- Main haul roads will generally be left open after harvesting use, although they may be seasonally deactivated.

- Cross ditches will remain passable only to high-clearance 4x4 vehicles.
- Culverts may be removed and replaced by rock fill "Squamish" culverts.
- Roads may be closed during harvesting operations for the security or fire hazard conditions.
- Roads may be closed if garbage dumping or vandalism becomes a problem.
- Temporary roads may be de-built into trails and planted.
- Road use for non-timber resource access will be considered.
- Roads will also be retained for fire suppression access.
- Recreational access in high use areas will be considered in the planning process.

The roads in the Community Forest are publicly owned and managed by the Ministry of Forests. Some are still the responsibility of the previous licensees and some are private. Road use agreements must be signed with private road owners prior to the SCCF using the roads for timber hauling.

While the responsibility of a road may lie with another company or the Ministry, the SCCF will provide information regarding required maintenance for safety and environmental protection at any time. Such information can be directed to the Ministry of Forests through the SCCF.

Forestry Road Right of Ways

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

- Worker safety
- The type of operation being undertaken
- Location of ballast pits, landings, turnouts, and rock quarries
- Size of the equipment being used
- Soil conditions and materials available
- Slope
- Visual sensitivity
- Tree lengths being handled
- Visibility for traffic

Silvicultural Treatments

Silvicultural treatments are intensive stand-tending activities aimed at directing the growth of a stand to develop the desired size for a product or value. The following silvicultural treatments or practices may be undertaken within the SCCF tenure area:

Spacing

Spacing is the reduction of the number of trees growing on a site to provide final crop trees adequate space to grow as desired. These stands are typically up to twenty years of age. Very often more trees regenerate on a site than the site can support to maturity. If left unmanaged, the trees compete for light, nutrients, and water, leaving all trees smaller and suppressed. Spacing accelerates the hydrological recovery of stands and leaves individual trees with adequate nutrients, moisture, and sunlight for healthy growth.

During spacing, trees are manually cut down with a chainsaw and left on-site to decompose back into the soil. Thick spacing slash will be cleared off high use trails. Trees are chosen as crop trees according to a stand-tending prescription that lists the priority of species for crop trees. Trees of smaller size, close spacing, and poor physical form are thinned out. Thinning reduces inter-tree competition for light, nutrients, and moisture, and concentrates the productivity of the site on the growth of a smaller number of trees, producing larger, higher-quality timber.

Spacing and Pruning can also be used for wildfire risk reduction treatments and to enhance old growth attributes for recruitment purposes. The operations plan will show where these treatment are proposed.

Fertilization

Fertilization is used to increase the productivity of a site when the lack of nutrients is the limiting factor in the good growth of a stand. Nitrogen, in the form of aerially applied urea prills (round pellets resembling tapioca) is the most common forestry fertilization used on the BC Coast. Fertilization can be effectively used to increase the rate of growth on a site to reduce the time that a stand may be ready for harvesting.

Fertilization will not be undertaken within the Gray and Chapman Creek Community Watersheds.

Brushing

Brushing is the removal of non-crop tree vegetation that is hindering the growth of the crop trees on a site. Brushing is usually undertaken using a chainsaw, circular brush saw, or Sandvik (similar to a machete). Herbicides will not be used for brushing within the SCCF unless a serious forest health incident compels that use.

Stand Rehabilitation

Stand rehabilitation is the treatment of a stand of trees that has not developed to the desired values that the site is capable of producing. Many such stands exist within the SCCF tenure area from natural reforestation that resulted in mistletoe-infected hemlock

and small damaged cedar stands. Many of these stands are now stagnated due to disease, are of poor form and very low commercial value, and are not contributing to the productivity of the tenure.

Stand rehabilitation involves removing diseased trees, undesirable species, or trees of poor form. This can be done individually or by clearing the site entirely and then planting to the appropriate stand species. If the trees are large enough, harvesting may produce some commercial value, although not enough to offset the costs of the treatment. Such sites can be planned to be treated at the same time as economically viable harvesting of adjacent stands.

Commercial Thinning

Commercial thinning is the selective harvesting of trees within a thirty to fifty year old stand to provide better growing conditions for the remaining trees to develop desired stand attributes. Typically, trees are removed to provide optimum spacing for the remaining trees by removing stems of smaller dimensions, poorly formed trees, undesired species, closely spaced trees, and trees that have grown to the size of such products as cedar house logs and utility poles. This is an example of intermediate cut system.

Pesticide Use

Pesticides will not be used for silvicultural purposes within the SCCF.

Site Preparation

Site preparation is used to prepare an area for planting that may have soil compaction from machines or deep accumulations of slash that cannot be planted. Most site preparation will be undertaken with an excavator, piling brush and scooping up soil to loosen it. This is most often completed as the final phase of harvesting.

Prescribed and Cultural Burning

Cultural burning is a significant practice in Coastal British Columbia, with deep roots in Indigenous traditions and contemporary relevance for land stewardship and wildfire management.

Cultural Burning: Indigenous cultural burning has existed since time immemorial, with traditional knowledge passed down from generation to generation. In general, the term "cultural burning" refers to the intentional use of fire at a broad scale on the land that is led by First Nations or is based in First Nations' distinct cultural values, perspectives, or

practices1. This practice has helped manage wildfires, benefited food supplies, and encouraged diversity of local plant and wildlife.

Prescribe Fire: Prescribed fire is the planned and intentional use of fire on a specific land area. It is one of the most ecologically appropriate and relatively efficient means for achieving a range of objectives. These objectives can include habitat enhancement, preparation for tree planting, or disease eradication.

Intersection of Indigenous and Western Fire Management: The Province's use of the term "cultural and prescribed fire" is intended to acknowledge Indigenous cultural burning as distinct from prescribed burning, while also acknowledging the intersection of Indigenous and Western fire management as both are practiced today.

Challenges and Future Directions: Despite the province's support for cultural burning, plans to burn often fizzle out because of approval delays. B.C. was the first province in Canada to ban cultural burns with the Bush Fire Act of 1874, which resulted in a loss of firekeeping knowledge and impacted the ecosystems and landscape we see today. The Province intends to work in partnership with Indigenous peoples to co-develop a policy and program framework for cultural and prescribed fire that aligns with the UN Declaration and provides the foundation for a sustainable, long-term, and co-managed approach.

SCCF is committed to develop cultural burning opportunities with the Shishalh Nation. Our **Block EW16** provides this opportunity to develop important skills and knowledge for wildfire risk reduction in managing fire dependent ecosystems, to assist with benefited food supplies, and encouraged diversity of local plant and wildlife for the Nation.

Slash piles will be burnt for fire hazard reduction purposes and to ensure plantability to achieve stocking standards. Some piles may be left to decompose naturally within blocks if they are not considered to be a fire risk. SCCF are seeking ways to reduce slash burning to reduce smoke emissions such as mulching and integrating debris when rehabilitating road or grinding debris using mechanical means (if feasible).

Ungulate Browse Protection

The SCCF tenure area hosts a large population of deer and elk, both of which find coniferous seedlings to be delicious. In order to prevent ungulate browsing, two popular methods are used locally: protective plastic panel-board cone or mesh tubing covers, or the application of "Plantskydd"-type repellents. The plastic covers are effective, but they

are expensive and unsightly, and produce large amounts of plastic waste. Plantskydd repellent is a pork-blood-derived product that is sprayed onto the conifer foliage. It smells of blood, theoretically alarming the ungulates that predators may be dining in the area, and keeping them away from the plantation. It may be used on all seedlings or it may be effective if only used on the periphery of a plantation where browsing is concentrated.

Long-Range Planning

Adaptive Management

Under an Ecosystem Management Model, adaptive management ensures that the SCCF is managed in a manner consistent with the community's values. It is an integral part of forest management activities, and is undertaken by:

- Conducting post-harvesting field tours to assess how the harvesting plan met the intentions of the planners in consideration of public input.
- Developing an understanding of how pre-harvesting plans affect operations and actual post harvesting site conditions and appearances to inform future planning.
- Assessing effectiveness of windthrow management techniques. Whenever trees are retained within a block they are susceptible to windthrow. Sites where retained trees have blown over will be studied to improve retention strategies in the future.
- Keeping in touch with changing values. All values, both social and economic, change over time. Constant public involvement and solicitation of public input is essential to ensure that forest resource management meets current and expected future needs.

Firewood Availability

Firewood is an important resource for many coast residents, and access to firewood within the SCCF area is provided by piling firewood-suitable pieces of wood at roadside separated from other slash to allow people easy access to it. Personal use firewood permits are made available to the public following harvesting and some silvicultural treatments.

Making firewood available helps to prevent illegal firewood cutting. Illegal falling is rising dramatically in recent years. This is costly on many fronts, as the falling is conducted in an unsafe manner, freshly cut trees are being marketed as seasoned firewood leaving our community out of pocket for firewood they can't safely burn, and a tree worth $4,000 to our local economy is reduced to about $600 worth of firewood for one individual.

The Community Forest started a Firewood Program in 2021 due to the unmet need for firewood in our community. We had been referring people looking for firewood to local suppliers who were not taking new clients, receiving unprecedented reports of timber poaching for firewood, and thought helping meet the need for firewood could help address both problems.

By providing employment to people with barriers to traditional employment, we have also addressed other needs in the community learned what it means to be an inclusive employer. We were so grateful to have this recognized as a finalist for an Untapped Award.

Community Interface Wildfire Planning

Our CFOP discusses Wildfire Management considerations throughout the document. We are notably stepping up our efforts to divert material from slash piles for firewood, reducing fire risk and burning requirements. The Community Forest harvest operations follow the procedures within the Wildfire Act and Regulations and incorporate recommended procedures designed to reduce the risk of wildfires.

Beyond our Operating Plan, we hosted the Urban Interface Fire Prevention event in 2019 where we invited our community to a presentation and discussion with experts of fire ecology and interface fire behaviour, and we hosted a private planning session with our expert speakers and local fire departments and emergency planning staff. We also started in 2019 an Earth Day initiative of giving away drought tolerant native Fire Smart plants – in 2019 and 2020 we acquired 442 plants for this, and approximately 80% were given out to our community, with the leftovers being planted by some of our volunteer directors undertaking invasive species removal projects with other community groups. We also funded a Structural Protection Unit for the Sechelt Fire Department in 2019, including training for all Sunshine Coast fire departments.

Community Wildfire Planning requires a larger strategy than one tenure holder which is why we have hosted and engaged in public conversations around it. We note with interest that the SCRD has developed a Community Wildfire Protection Plan along with 43 prioritized recommendations, some of which appear to provide some high level direction as to the involvement the Community Forest may have in mitigating wildfire risk to our community.

How to reduce the risk of wildfire spreading through the Community Forest

41

Using the groundwork laid by this Community Wildfire Protection Plan as an information springboard, we have engaged the foremost experts in BC to look at the role the Community Forest can play. In 2023, we have engaged Frontera Forest Solutions specializes in fuel management, fire risk assessment, fire ecology and restoration, and prescribed fire planning. They have partnerships with the University of British Columbia which is leading forest fire mitigation research, and have worked with other community-based forest stewards like First Nations and Community Forests around the province. Locally managed forests like these are at the forefront of implementing wildfire mitigation projects, including the iconic story of the Logan Lake Community Forest's success.

The work the project team will be undertaking over 2023 and 2024 includes

Phase 1: Fuel Management Planning within the Sunshine Coast Community Forest

This will involve gathering all available relevant data from the CWPP and from the community forest's own forestry planning dataset, such as old growth and ecologically important areas to be protected, and to identify any key datasets missing. This information will be used to inform burn modelling to show where wildfire threat, spread, and vulnerability risks are greatest. Lastly, field work will be conducted to ground truth the data and modelling output in the areas where wildfire threat and potential risk is high or extreme.

Phase 2: Identification of Proposed and Prioritized Fire Mitigation Projects in the Community Forest

A series of proposed risk reduction projects will be developed. Each proposed project area will be identified including such information as threat and risk levels, forest characteristics, and availability of grant funding. Visual modelling outputs showing vulnerability and hazard will be included.

Phase 3: Discussing the findings with the Sunshine Coast Community

The information generated by this process will be shared for discussion with community on priority areas and next steps.

Coastal forests see fewer fires than the interior, however the risk of large fires on the coast increases with the longer, drier summers. Projects that reduce fire risk usually involve removing "Fuel", such as logs on the forest floor and dead lower branches on trees. With EBM on Biodiversity and Ecosystems Conservation, "dead" wood is one of the six measurable attributes of old forest conditions, and an important part of forest habitat. Our Operations Plan has included proposed Wildfire Risk Reduction treatments for public review and consideration. Block AN29-CT and AN14 are harvest blocks with an emphasis on conducting treatments to reduce wildfire risk reduction. It is also important to note that working with Shishalh Nation is an effort to reintroduce fire back

into the landscape guided by indigenous knowledge of culture burning practiced since time immemorial.

There will be difficult decisions to be made to balance ecosystem health with reducing known extreme fire risk to those ecosystems, and to our communities.