

**Forests for Tomorrow  
Business Planning Meeting  
October 29, 2019  
Synopsis**

**November 2019**

*Sponsored by  
Resource Practices Branch*

*Office of the Chief Forester Division*

*BC Ministry of Forests, Lands, Natural Resource Operations and Rural Development*



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| <b>Forests For Tomorrow: Business Planning Meeting 2019</b> |  |   |                    |                  |
|---|--|---|--------------------|------------------|
| <b>Dates:</b>   | October 29 2019 8:30 - 4:30pm  |   |                    |                  |
| <b>Location:</b>  | Pacific Gateway 3500 Cessna Drive, Richmond  |   |                    |                  |
| <b>Expected # of people:</b>                                | 30-40 people   |   |                    |                  |
| <b>Objectives:</b>  | (1) Collectively develop actions to help achieve multiple program goals in a more efficient and integrated way<br>(2) Review first draft of the 2020/21 Annual Operating Plan and discuss next steps |   |                    |                  |
| <b>Start Time</b>   | <b>Topic</b>   | <b>Activity</b>   | <b>Time Needed</b> | <b>Lead</b>      |
| 8:30 AM   | <b>Welcome, safety &amp; Introductions</b>   | Introduction  | 0:10               | Facilitator      |
| 8:40 AM   | <b>1 FFT Strategic Planning</b>  | Presentation/ Discussion<br>Big Picture versus the Local View   | 0:40               | Neil             |
| 9:20 AM   | <b>2 FFT-Supporting Integrated Stewardship Strategies</b>  | Presentation/ Discussion<br>How can this be put into practice?  | 0:40               | Craig and Neil   |
| 10:00 AM  |  | <b>Health Break</b>   | 0:15               |                  |
| 10:15 AM  | <b>3 Opportunity Mapping and Assessment Update</b><br>• MPB<br>• Wildfire<br>• What's treated-What's left-where is it?   | Presentation/Discussion/Questions<br>How do proceed in the most effective manner? Is the ISS all we need                        | :45                | Ljiljana, Certes |
| 11:00 AM  | <b>4 FFT Program Updates (short snappers)</b><br>• Audits/Monitoring<br>• Planning Tool<br>• Recipient/Planning<br>• Drought Sites Contract<br>• BCTS ITSL program                                   | Presentation/Discussion/Questions   | 1:00               | Various          |
| 12:00 PM  |  | <b>LUNCH</b>  | 0:45               |                  |
| 12:45 PM  | <b>5 Coordination and Planning of Provincial Silviculture Program</b>  | Presentation/ Discussion<br>FCI and FFT – what, where and when. Once again, how do we both achieve our goals for another year ? | 1:15               | FCI/FFT          |
| 2:00 PM   | <b>6 Current Reforestation</b>   | Presentation/ Discussion  | :45                | Brendan          |
| 2:45 PM   |  | <b>HEALTH BREAK</b>   | 0:20               |                  |
| 3:05 PM   | <b>7 Timber Supply Mitigation</b>  | Discussion  | 0:45               | Ann              |
| 3:40 PM   | <b>S.108</b>   | Presentation/Discussion   | 0:40               | Lee-ann          |
| 4:20  | <b>Moving Forward</b>  |   | 0:10               | Neil             |
| 4:30 PM   |  | <b>Adjourn</b>  |                    |                  |

## **Purpose of this Synopsis**

Forty-nine (49) British Columbia (BC) Ministry of Forests, Lands, Natural Resource Operations and Rural Development staff from Districts, Regions, BC Timber Sales, and Branches, attended the FFT Business Planning Meeting held on October 29<sup>th</sup>, 2019 in Richmond, BC. Meeting participants are listed in Appendix 1.

The two objectives for the meeting were:

1. Collectively develop actions to help achieve multiple program goals in a more efficient and integrated way.
2. Review first draft of the 2020/21 Annual Operating Plan (AOP) and discuss next steps.

The purpose of this Synopsis is to provide a summary of discussion highlights and action items from the Business Planning Meeting for participants, and others that may be interested who did not attend.

## **Welcome, Safety and Introductions**

Bryce Bancroft facilitated the FFT Business Planning Meeting and described meeting logistics including safety considerations. Staff were asked to stand up if this was their first FFT Annual Meeting – and about one-half of the participants stood up. Staff were then asked to stand up who represented the various Ministry ‘Areas’ in BC: Coast, North, and South, and Branches – and to indicate their name and office location. Attendees well represented each of the Areas.

## **Session 1: FFT Strategic Planning**

Neil Hughes led discussions on this topic noting there is about \$100 million of silvicultural activities combined from FFT and the Forest Carbon Initiative (FCI) for next fiscal year. During the meeting, we need to examine provincial goals and strategies and the relationship to local needs; and have a discussion on focus and accountability in a time of fiscal tightening.

In the agenda there will be an opportunity to discuss high level strategies in relation to changing government priorities; have a detailed review of the components of the provincial silviculture activities you deliver; do a first review of the 2020/21 AOP and who is doing what, where and what does the future look like regarding FFT and FCI; and finally to discuss some things we are working on via FFT Program Updates.

What had the provincial silviculture program been doing the last 15 years? FFT represents government responsibilities to respond to catastrophic disturbances such as the Mountain Pine Beetle (MPB) and wildfires by improving regeneration and growth. The program has enabled knowledge extension through meetings with District and Regional staff. FFT was initiated in 2004 and is now the longest running silviculture program in BC.

Why has FFT been successful? It has well defined objectives and clear criteria. The pre-uplift allowable annual cut (AAC) for nine interior Timber Supply Areas (TSAs) affected by the MPB and wildfires was 28.4 million m<sup>3</sup>, the uplift to allow for the salvage harvesting of killed stands was 42.8 million m<sup>3</sup>, with a mid-term timber supply forecast of 18.2 million m<sup>3</sup>, and a long-term timber supply forecast of 25 million m<sup>3</sup>. The FFT Current Reforestation Priority Unit

Ranking criteria prioritizes investments in those TSAs that are impacted most by the MPB and wildfires such as the Lakes and Quesnel TSAs.

FFT has reforested 140,000 ha, and fertilized 180,000 ha leading to about 4 million m<sup>3</sup> of added AAC in 65 years from FFT investments. With the support of FFT and FCI we now have the largest pool of young stands on the land base.

With the catastrophic 2017 and 2018 wildfires, there seems to be more conversations now about stocking standards aimed to reduce wildfire risk with less discussion on how to increase timber supply in some areas. There is concern about wildlife and habitat including moose, caribou, and goshawks. There is now the need to address the spruce and fir bark beetles infestations in some areas. Reductions in timber supply, lumber markets are down, and there are impacts from tariffs leading to job layoffs. The \$100 million that FFT/FCI plans to invest next fiscal year can help offset those impacts.

FFT over the next 5 years – where are we going? The 2013-2017 FFT Strategic Plan has a list of goals. It is time to update the FFT Strategy, but not sure if it is time to change the goals as they appear good.

The new reality is need to address wildlife, water, carbon, timber and tourism in collaboration with First Nations. On one hand tree planting has become fashionable given need to sequester carbon to help offset climate change, yet on the other hand there is growing concern about the use of herbicides to protect reforested areas and to aerial fertilization to increase tree growth.

What are the provincial silviculture goals? It is a bit complicated. FFT targets provide baseline investments, while FCI and Low Carbon Economy Leadership Fund (LCELF) targets are considered incremental when accounting for carbon sequestration. The Chief Forester is asking for a Provincial Silviculture Strategy to address goals.

The Arrowsmith TSA Integrated Stewardship Strategy (ISS) provides harvest, silviculture and retention strategies in consideration of timber and non-timber values. ISSs are expected to morph into Landscape Level Plans (LLPs) under FRPA. How will carbon stocks fit into the ISSs and LLPs, how will we determine priorities?

Change always brings opportunity. The BCTS relationship is strong and interest in further developing the synergy of using FFT to help out with ‘difficult’ profiles is growing e.g. ICH and ESSF stands of decadent western redcedar and western hemlock (CwHw); CWH stands of decadent western hemlock and balsam (HwBa); fire killed interior Douglas-fir (Fdi) and lodgepole pine (Pli) stands. This is particularly so where bioenergy facilities are struggling and need fibre.

FFT is expected to continue to focus on the planting of trees to rehabilitate forests, and to carry out incremental investments to help mid-term harvests and values. Next fiscal year that is targeted to be the planting of 25 million seedlings, and the fertilization of 17,000 ha. The FFT allocation for 2015-2019 has been relatively stable at \$48.6 million per year with \$39.4 million for Current Reforestation and \$9.2 million for timber supply mitigation.

We will need more focus and accountability next fiscal year. If government revenues are down, then budgets may be tightened. There is heightened interest at the District level in silviculture e.g. surveys, overstory removal, Innovative Timber Sales Licenses (ITSLs), and spacing – with around \$55 to \$60 million currently within the FFT AOP for next fiscal year. There is less funding than interest even if we are able to maintain the \$48.6 million budget.

We need to carefully consider how expenditures are allocated to make sure they turn into actions. Over the next two months, we will need to trim about \$10 million from the AOP.

PwC has a good process checking on the FFT spending by Recipients. We need a similar process for the tracking of FFT spending by BCTS and Districts. For example, we had to pull out \$3 million in FFT funding recently to address government budget needs.

What is in store for the future? ISSs and LLPs; ITSLs and FLTCs for bioenergy activities; more landscape level fires?; increasing pressure on mid-term timber supply throughout the province.

FFT is the longest running and most successful Silviculture Program in the province; let's keep that going in 2020.

Q: Can private funds be donated for reforestation?

A: FFT have been accepting tree planting donations by corporations. FCI may be better able to address private donations than FFT, as they have had experience with Uber. There is also issue of private land owners asking for spare seedlings, but FFT does not have surplus seedlings.

**Action #1:** If interest is expressed by private donors to invest in reforestation in BC, they should be asked to contact Leith McKenzie at FCI.

FCI has asked for an extension of the federal Low Carbon Economy Fund (LCEF) but have not heard anything yet. This was expected given the recent federal election. Still waiting for new federal government agenda. It was noted that public recognition of the need for tree planting to sequester carbon is way ahead of government.

## Session 2: Landscape Level Planning

Craig Wickland described Landscape Level Planning (LLP) and how it has evolved from Silviculture Strategies (SS). LLPs are Tactical Plans similar to those recommended by the Forest Practices Board<sup>1</sup>. LLPs are part of intended phase 2 changes to FRPA.

In 2001 we began with Type 1 SS; the SS process improved over time to Type 4 SS, then to Integrated SS that were later called Integrated Stewardship Strategies (ISS). The four ISSs underway are for the Fraser TSA, the Sunshine Coast TSA, the Bulkley TSA, and the Cranbrook/Invermere TSAs. These are now morphing into LLP.

The scale of LLP is the management unit (TSA or TFL). The intent of LLP is to:

- Resolve overlapping government direction;
- Coordinate resource management objectives, targets and strategies at the landscape level; and
- Provide opportunities for meaningful engagement by Indigenous Nations and communities.

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<sup>1</sup> Forest Practices Board. June 2019 Special Report. Tactical Forest Planning: The Missing Link Between Strategic Planning and Operational Planning in BC. <https://www.bcfpb.ca/wp-content/uploads/2019/07/SR58-Tactical-Forest-Planning.pdf>

The development of LLP will be a collaborative process. LLP will be informed by:

- Higher level plans (e.g. land use plans for the area)
- Government objectives for resource values that are set in law
- TSR and AAC, and
- Input from Indigenous Nations, communities, and industry stakeholders.

LLP is not a land use planning process. Given the magnitude and impact of the 2017 and 2018 wildfires, we are finding communities to be particularly interested in strategies that can reduce wildfire risk.

The hierarchy of planning includes:

- Land use planning that provides landscape level objectives
- Landscape level planning for management units that will replace FSPs
- Operation plans for roads and blocks
- Site Plans.

LLP direction will inform proposed forest operations of agreement holders on topics such as:

- The site and location of cutblocks and roads,
- Non-timber values (e.g. biodiversity), and
- Reforestation strategies.

Why do we need LLP? FRPA has provided a framework for managing forest resources at the stand or site level, but collaborative planning remains a challenge at the landscape level. New or increasingly more important concerns or interests have emerged including:

- Cumulative effects of forest operations on water, wildlife habitat, biodiversity, and visual quality;
- Catastrophic effects of natural disturbances such as wildfires and insect infestations;
- Landscapes once dominated by mature and old forests have been transformed to ones dominated by comparatively young forests; and
- Communities and Indigenous Nations are demanding a stronger say in how our forests are managed.

Who will write LLPs? In all cases the process will be collaborative. It is envisioned that government would write LLPs for TSAs, and that the tenure holder would have the option to do so for TFLs. Community Forest Agreement holders, and First Nations Woodlots that are large can write LLPs or defer it to the nearby TSA. Woodlots would be exempt from LLP.

When will LLPs be required? The legislation and regulations enabling LLP is expected to be enacted in early 2021. The existing LLP pilots will help inform the regulations. Forest management will transition from FSPs to LLPs over the course of the next decade. The order by which management units transition will be guided by the presence of willing partners (e.g. local First Nation support) and land management concerns.

The outputs of LLPs will include strategies, management regimes and targets at various scales (e.g. landscape and/or ecological unit). The strategies may include a:

- Retention strategy
- Harvest strategy
- Wildfire risk reduction strategy
- Silviculture strategy.

BC Wildfire Services is preparing a wildfire landscape level plan that we need to integrate into LLPs. The vision is that LLP will have a silviculture strategy (SS); that there will be objective-based SS for the wildland urban interface (WUI), caribou, etc.; and that maintenance will be required after free growing (i.e. a silviculture regime is needed) such as fertilization and management of rotation length.

Q: How might LLP address old growth management areas (OGMAs)?

A: Land use plans address how much old growth to protect. LLP can co-locate values where OGMAs are located in areas that conserve other values (e.g. species at risk). Also existing OGMAs may be impacted by wildfires. Should we move them? There is research in the Coast where OGMAs have been burned to help address this question.

Comment: Non-functioning OGMAs due to wildfires are an issue in the Thompson/Okanagan Region. There is a public aspect that needs to be addressed when deciding what to do. It is unclear who the decision-maker is on OGMAs. The issue needs to be addressed by a clear lead.

Craig noted that there is a prescribed fire group and funding support for prescribed fires. Need a silviculture regime, and if prescribed fire is part of it, it needs to go back to ISS table to address.

Where there is an ISS table, we need to look to them for helping to prioritize FFT and FCI investments.

There was comment that in the Quesnel Type 4 SS there was a regime for some areas to plant with higher densities, fertilize and space. Targets for achieving planting densities and fertilization have been met in Quesnel but not spacing as yet.

An Arrowsmith ISS regime for planting cedar (to manage values where getting cedar back is very important) calls for the spacing out of western hemlock if it overtops the cedar; and that when planting cedar use high densities and high quality select seed.

It was noted that many ISSs, given risks such as climate change, have ‘green’ areas where it is good to invest; ‘yellow’ areas where investments are a ‘maybe’; and ‘red’ areas where it is not good to invest. Staff who are involved in silviculture investments need to be part of the LLP process as it likely will also have investment strategies.

Q: If Type 4 SS or ISS are not driving the AOP process, what is?

There was response that contractors are hired to look after opportunities across the Region – as many areas don’t have an ISS, and many Type 4 SS are not that useful for driving investment. Another response was that the 2017 and 2018 fires have been driving opportunities to invest recently.

Another response noted that in the Kamloops area, reforesting fire damaged areas is a priority. Not a lot of fertilization has been occurring here but with FCI that maybe changing.

It was also noted that you need a good inventory to select areas, and discussion with licensees about their operating areas (e.g. where they are not going to harvest) to identify investment priorities. There is a challenge with using the inventory as it is outdated with new fires.

Q: How will priority areas be decided to do LLP work?



A: Which Districts are volunteering to pilot LLP given current workload. In Kamloops, the LLP will build on the wildfire LL plan. Some Districts are not interested in leading LLP while others are. The Province recently introduced legislation in October 2019 to implement the UN Declaration on the Rights of Indigenous Peoples (UNDRIP). The BC *Declaration on the Rights of Indigenous Peoples Act* will influence the partnership that is developed with First Nations on LLP.

An important consideration with LLP is to positively influence forest health through planting densities and mixed species. What are we trying to grow? is a key question that needs to be addressed in LLP.

Q: Fires and the MPB are drivers in the Southern Interior and the North on investments; what are the key drivers on the Coast?

A: Wildfires are a priority here too. Also fertilization where 3000 ha are being treated in two Districts with funding split from FFT and FCI. The priority is to reforest burnt areas, and to fertilize key areas. The responder hopes that LLP will not change what is currently being done.

It was noted that investment programs like FCI and FFT are responding to issues such as fire while LLP is forward looking to reduce wildfire risk.

There is not enough funding to invest everywhere where we identify priorities so, for example, if there are lots of elk that might significantly impact discretionary reforestation efforts, don't invest.

Q: What about collaboration with First Nations, shared decision-making and Government-to-Government (G2G) working groups as it relates to LLP?

A: This is in discussion. An issue on TFL 37 was that the 'Namgis First Nation, the main First Nation with asserted territory in TFL 37, had issues raised at the cutting permit level. It was realized that they need to be involved at the start via LLP. So Western Forest Products is working with the 'Namgis on the LLP pilot for the TFL.

In the Kamloops TSA LLP pilot, there are many First Nations who have interests in the TSA. So it is more complicated there with need for some kind of First Nations liaison. There are no answers there yet as the nature of the collaboration is being worked on.

Each management unit is unique. Expect G2G approach for Modernized Land Use Planning (MLUP) where objectives are being changed. When G2G agreement is reached, it is endorsed by Cabinet and First Nations. First Nations were not that involved in many previously approved strategic land use plans; thus the Premier mandate to the Ministry on MLUP. Priorities for MLUP will be based on First Nations issues. Given this, it is important the LLP process get First Nations involved early on in the process.

Q: How does LLP and ISS link to the FFT Strategic Plan?

A: LLP may identify areas where we need to reduce root disease by stumping, which can then reduce Operational Adjustment Factors (OAFs) used in TSR from the default of 15% to 5% thereby mitigating impacts on timber supply. Addressing root disease allows us to plant Douglas-fir and to fertilize consistent with the general direction provided in the Strategic Plan.

## Session 3: Current Reforestation: FFT and FCI

### FFT

Brendan Brabender introduced this topic. The increased reforestation demand is being driven by the 2017 and 2018 wildfires with FCI providing needed short-term funding. This increased demand impacts nursery and planting capacity.

Resource Practices Branch (RPB) roles is related to: (i) provincial coordination/practices; (ii) FFT delivery; (iii) FFT contribution to Low Carbon Economy Leadership Fund (LCELF); and (iv) s.108 estimation and payment.

In 2018, RPB worked with BCTS and the Western Forestry Contractors' Association (WFCA) on nursery capacity but unfortunately 20 million seedlings did not find homes as there was not enough nursery space. In 2019, RPB worked with BCTS, WFCA, and industry to improve nursery capacity – and indications are that the issue has been resolved. Based on recommendations from a report on this issue, nursery capacity has increased with longer term contracts, and the use of smaller and more consistent stock size.

Nursery demand continues to increase with predicted sowing of close to 318 million seedlings in 2020. Of the 318 million, about 196 million are from Licensee Funded Programs (LFP), 47 million from BCTS, 36 million from FCI, 26 million from FFT, 9 million from s. 108, 3 million from FESBC, and about 1 million from other sources. Other sources of demand include Alberta given their fires. This underscores the importance of getting good estimates in the AOP.

It was noted that government is paying for a substantial portion of this demand with 120 million seedlings in 2020 (i.e. BCTS, FCI, FFT, s. 108, and FESBC).

When comparing 2020 sowing AOP and Actual by District, it as noted that some Districts are not delivering on what was planned in the AOP. The FFT AOP had 30.2 million identified, whereas actual was 25.7 million for 2020. Part of this discrepancy is the possible confusion of what to enter in the AOP by fiscal year. What is sown this fiscal year should be in this fiscal years AOP.

The provincial planting demand is primarily for Spring planting with about 212 million in 2018 increasing 25% to about 250 million in 2020. In 2020 by comparison, summer planting is projected to be about 55 million, and Fall planting at about 9 million. Although total planting is up, the amount of intended Spring planting is a concern due to labor shortages (tree planters) – need more planters and need to plant these within a defined biological window. Extending the planting window (planting trees earlier than usual and/or later than normal (after June 21<sup>st</sup>) and a reduction in planting targets are being considered to address the short term labor issues.. For example, if seedlings are planted in Summer (when Spring planting is needed) by contractors who can not find enough tree planters and this results in poor FFT reforestation success, then we may need to consider reducing are targets.

Incremental FFT planting and fertilization are eligible for cost-recovery under the LCELF. The baseline for FFT was determined assessing historical program delivery from 2007 to 2016, where 16 million trees were planted on average per year, and 17,000 ha were fertilized on average per year. The FFT incremental investments above those baselines have occurred in the last three fiscal years and those cost recoveries come back to the Ministry.

Brendan offered some considerations for FFT Current Reforestation program looking forward:

- Manage towards a 24-25 million tree planting program
  - Support low-value fibre utilization (expanded ITSL criteria)
  - Support summer/fall planting programs
  - Support on-going LCELf cost recovery
  - On-going collaboration and joint planning with FCI
  - Alignment of FFT activities with ISS/LLP
- Extension and research
  - Dry site establishment
  - Assisted migration (Climate Change Informed Stocking Standards – CCISS tool) trials (e.g. one per year)
  - Improved planning and tracking.

## **FCI**

Mike Madill presented on FCI's Forest Carbon Reforestation Program. BC's forests can make a significant contribution towards meeting provincial and federal objectives for mitigating climate change through:

- Increased sequestration of carbon by trees into wood (e.g. reforestation, fertilization, increased tree density); and
- Reduced emissions (e.g. reduce or eliminate burning such as slash burning).

Funding comes from FESBC project approvals and LCELf. Canada and BC have signed a Low Carbon Economy Leadership Fund (LCELf) agreement to spend up to \$290 million from 2017/18 to 2021/22 on enhancing carbon sinks and reducing GHG emissions from the forestry and agriculture sectors. \$150 million will be spent by FESBC, and \$140 million will be allocated to FCI through a cost recovery model. Proposals go to FESBC for funding reforestation of burned areas.

FCI eligibility-GHG criteria involves a two-part GHG benefit criteria:

- An annual net (relative to baseline) increased GHG sinks or decreased GHG emissions must occur before 2050; and
- Cumulative difference of the GHG balance between baseline and with action scenarios must be positive by 2050.

Cumulative difference includes biomass burned (pile burning) as a result of over story removal in conjunction with a site preparation treatment and the laying to waste of standing forest fibre.

FCI reforestation eligibility criteria includes that an area must:

- Have no legal reforestation obligation
- Have been surveyed and determine to be either NSR or under-stocked.

The reforestation treatment regime cannot include pile burning of waste material.

Treatments cannot include knocking down over story and burning; if over story knock down, must leave it alone or grind it. As a consequence, many FCI projects involve under planting. A danger tree assessment by a certified danger tree assessor under WorkSafe BC is undertaken before under-planting to address planter safety.

FCI reforestation delivery includes (as with FFT) BCTS, Districts, and recipients under contract with PwC. BCTS delivers about 60% of the program, there is one District project, and the rest is delivered through PwC.

Over 30,000 ha have been under-planted in southern BC since 2005. Significant portions of the 2003 McGillvray Lake and Mclure fires have been successfully under-planted. A best practices guide for under-planting has been prepared.

FESBC funded the planting of 10.4 million FCI trees in the spring of 2019 on areas burnt by the 2017 Cariboo Region and Elephant Hill wildfires. 22 million trees are being grown for planting in the spring of 2020. 34 million seedlings have been sown for planting in 2021. Approved FESBC funding is in place to plant 74 million FCI trees by the spring of 2021 (Provincial and Cariboo project totals).

Current Fall 2020 sowing plans are for planting in 28 million trees in Cariboo region in 2022. This is based on the work of survey crews and opportunity maps. Funding is partially confirmed for this level of program delivery.

LCELF was supposed to end in 2021, but FCI hopes to have this extended to 2022 given that FESBC funding can be carried over from one FY to the next.

Some of the challenges are deciding which area should be funded by FCI versus FFT. Also FESBC projects with others may involve reforestation. This then may involve divving up areas between these programs.

FCI is exploring Fall planting to spread the workload for planters. Fall planting generally means use of smaller stock types when planters can then carry more seedlings. If Fall planting looks bad given weather conditions, we can save the trees for planting later. FCI intends to monitor survival with experimental Fall planting projects.

Q: What is logic with use of bioenergy such as pellets for carbon storage?

A: There is higher GHG emissions from nitrate smoke if open pile burned than with burning bioenergy in a high energy facility. There is same CO2 emissions, but not the other bad GHG associated with open burning.

**Action #2:** Recent guidance on contract practices will be re-sent by Brendan or a link provided on server.

It was noted that the Ministry recently worked with WFCFA to address tree planter work shortage issues; some of the suggestions included:

- Getting 1000 more tree planters
- Increasing the planting season by 10 days
- Ideally start early e.g. snow plowing to plant early
- Having few down days; being flexible.

If it is a hot, dry spring, it can get messy trying to plant 250 million seedlings. It was also noted on dry sites, if you plant too late you are likely to get a failed plantation. Sometimes plantation failures are blamed on drought when late planting was in fact the issue.

Q: Is referral of projects to First Nations part of the guidance? and if so, it should be done early

A: With both FFT and FCI, Districts do the consultation with First Nations. Sometimes the feedback entails doing an Archaeological Impact Assessment (AIA).

An example was provided in one District where a 2000 ha fire needed treatment; First Nations were provide the intended regime of treatments including site preparation and bought in to need to treat the area.

## Session 4: Section 108

Lee-ann Puhallo addressed FRPA s. 108 – restoring stands after a damaging event. Her outline included:

- Background – What is FRPA s. 108?
- Current state of the Liability Account
- What to pay attention to
- The Cariboo Wildfire Recovery Area
- The outlook from the 2019 season

What is FRPA s. 108? It provides relief of obligation to young stands (pre-free growing) that are damaged by events such as wildfire, or payment to restore the stand to the stage it was at prior to damage. S. 108 decisions have been delegated to the District Manager, and can be further delegated. Payment is coordinated through Resource Practices Branch. There is a one year timeframe from final submission to payment. FRPA s. 108 website provides links to legislation, regulation, FRPA Bulletins and training on this topic.

The FRPA s. 108 Liability Account. Currently there is \$112 million set aside in the liability account. This includes the amount Treasury Board provided from BC Wildfire Service account due to 2017 and 2018 fires. 572 applications for funding have been submitted after October 31, 2017 that involve 2403 different activities. Recent requests include the 2007 to 2019 fire years. The total requested is about \$24 million with nearly \$4 million approved, about \$15 million submitted and under review, and about \$5 million in draft funding applications.

What to pay attention to

- The application may signal the ‘Yes’ indicator requesting obligation relief, but also list activities and costs to restore the stand. Do they want funding or relief of the obligation?
- Cause of damage – did the obligation holder contribute to the damage?
- One decision with phased payments – need clear description of evidence required and process to request the next payment.
- BCTS – FFT ITSLs do not have obligation, so don’t qualify for s. 108 – plan to restore with funds in your FFT AOP
- District Manager obligations (SSS/FSMF) are not eligible for s. 108 – submit the plan to restore to Branch
- Relieved obligations need to have a plan to restore via your FFT AOP.

Cariboo Wildfire Recovery Area

- Over 2500 standard units (SU’s) impact by the 2017 and 2018 wildfires
- The Cariboo and Thompson Okanagan Regions have a working group between government and industry led by Darcy Lillico
- An alternative methodology and guidance has been completed for Relief of Obligation requests within and outside of RESULTS
- Development of alternative methods to apply for funding and timing of payments in under development.

How did we do in 2019? Good news – there was low impact on the Net Area to be Reforested (NAR), no impacts on SSS/FSMF openings, and no impacts to FFT-ITSLs.

Q: Why relieve the holder of the obligation?

A: Evidence suggests it was near free growing; or it is not in the public interest to pay for restoration costs; or if we don't have the funding in the Liability Account.

Districts need to determine what caused the damage. Did a subcontractor to the obligation holder cause the damage? Was there due diligence based on a C&E review?. What if drought caused the damage but they did not do due diligence?

Q: Why only one approval process?

A: We are looking into multiple approvals. For example, now they get the funding in advance of restoration. If actual costs are lower than in their submission, they keep the surplus funds. If actual costs are higher than approved, the licensee is on the hook.

There was comment that a large area that was relieved of obligation is now being addressed by FFT and FCI.

## **Session 5: Timber Supply Mitigation**

Ann Wong presented on Timber Supply Mitigation (TSM) Investments, and also on the Community Forests and Woodlot Association Programs. The purpose of TSM is to invest in treatments to accelerate the growth of existing stands. TSM priority areas are those impacted by catastrophic disturbance or constrained timber supply. The main investment is fertilization with some spacing activities.

Why fertilize? Fertilization increases tree growth; mitigates projected timber supply shortfalls; reduces rotation to achieve planned stand diameter and volume; increases piece size and merchantable volume if rotation not reduced; optimizes benefits from other treatments such as spacing and pruning; and increases carbon sequestration.

The Silviculture Funding Criteria document addresses stand selection criteria. For the Coast, for example, fertilization should focus on 40-80 year old Douglas-fir stands, with some effort in Sitka spruce stands.

The fertilization program in 2019/20 includes 17,000 ha treated by FFT, and 15,000 ha treated by FCI. Fertilization normally occurs in the 3<sup>rd</sup> or 4<sup>th</sup> week in September for the Interior, and in the Fall for the Coast. About 34,000 ha have had fertilization surveys. There has been continued coordination of FFT/FCI fertilization activities through two working groups (Interior and Coast), provincial fertilization strategy, and coastal FFT Fall field tour that was well attended and included researchers.

Other fertilization work includes a brochure on fertilization effects on timber and non-timber values that summarizes previous reports. There is already a 2006 brochure on "Forest Fertilization in BC" posted on the Ministry website that speaks to 'Why fertilize?' Water monitoring projects have been completed for Powell River Community Forest, and in the Prince George, Chilliwack and North Islands Districts. There are also current water monitoring projects in Sea to Sky and Cariboo-Chilcotin Districts. Resource Practices Branch is seeking to fill a new forest research position on fertilization. This position would focus on educating the public about forest fertilization, and expanding the stand selection criteria.

Fertilization issues and challenges include:

- Sustaining provincial (FFT and FCI) annual targets of 32,000 ha and 37,000 ha with 21,000 on the Coast
- Aerial applicator capacity and competitive bids
- Fertilization across fiscal years and budgeting
- Addressing First Nations concerns.

Q: When fertilization occurs, how do we ensure the stand is not prematurely harvested? We need to wait 5-10 years for the benefits to be realized.

A: There is nothing legal to stop the stand from being harvested. Through discussions with licensees, they generally take those stands off their development plans. Licensees can get the information that the stand was fertilized and when from RESULTS – so they are generally aware.

There was comment that a harvest strategy is part of ISS and LLP and part of that strategy will likely be to not prematurely harvest fertilized stands.

There were discussions in 2004 and 2005 about keeping harvests off of recently fertilized stands – this underscores the need for planning.

The FCI target of 20,000 ha is not all on the Coast as about 5000 ha will be in the Interior Wet Belt. Also, FCI will fertilize outside the THLB, and in April providing a longer season for applicators.

Q: Why might FCI fertilize outside the THLB?

A: Carbon sequestration; there is great benefit 10 years after treatment. We sometimes are able to fertilize twice on a young stand. Also for some non-timber benefits.

There was comment that we have lots of hemlock stands on the Coast, but how do different hemlock stands respond to fertilization on the North Island?

There was a District staff comment about liking both programs – FCI and FFT. For example, the public and First Nations may be supportive knowing it is about carbon sequestration but perhaps less so if the purpose is strictly to improve timber supply.

Q: How do we determine ROI?

**Action #3:** RPB to provide consultant Steve Stearns-Smith contact information to FFT delivery staff should they need assistance on determining the 2% ROI criteria.

Q: What have been the results from water monitoring?

A: Slight increases but nothing that is unhealthy.

There was comment that in Chilliwack there was very little difference in water quality before and after fertilization.

Juvenile spacing stand selection criteria is based on achieving 2% return on investment (ROI). Based on a spacing report, potential sites for spacing include Interior dry belt Douglas-fir (outside of mule deer winter range), repressed pine, and alder and cedar on the Coast. In 2019/20, 200 ha of Interior Douglas-fir and 413 ha on the Coast were spaced. The 2020/2021 spacing request from Districts is for 1,115 ha in the Interior, and 465 ha on the Coast. Normally you space first, then fertilize.

The 2019/20 Community Forest and Woodlot projects include:

- \$2.6 million allocation across 12 Community Forests and 4 Woodlots

- About 71% of the projects were Current Reforestation (CR) and 29% TSM
- This year the sowing is being done by Resource Practices Branch.

The 2020/21 Community Forest and Woodlot planning process involves:

- Summer: Associations complete project plans from their members
- September: List is provided to Resource Practices Branch and then circulated to Districts for review and consideration
- Sept-Oct: Districts add projects to the AOP if it has District support.

Total request for 2020/21 is \$4.5 million for 23 Community Forests and Woodlots. There are 31 CR and 10 TSM project proposals.

## **Session 6: Opportunity Mapping and Assessment Update**

Given need to have adequate time to discuss other sessions it was decided to cancel this session.

## **Session 7: Coordination & Planning of Provincial Silviculture Program**

Neil introduced this topic by noting that there is about \$108 million in the AOP for FFT and FCI – we don't have the funding to support all the requests but it shows the high level of interest.

Brendan compared the AOP with the seedlings in SPAR for planting in 2020. There is 23.6 million seedlings in SPAR and 31.2 million in the AOP leaving a 7.6 million difference. For some Districts, the difference is substantial. Some of the difference is due to errors in the AOP and/or SPAR submissions. Other differences may be legitimate, for example, where we are paying to use licensee seedlings, this would not be SPAR.

Some of the confusion is how the AOP is completed. Don't enter the trees you are sowing right now – you know that. You enter in October of this FY in the AOP the number of trees you would like to sow next fiscal year in 2020/21. The 22.8 million sowing request for 2020/21 in the AOP is the lowest in 6 years. Ann sent out a short guidance document on completing the FFT sharepoint AOP.

The ratio of surveys to actual areas treated tends to be 3:1 in the North due to MPB, and 1:1 in the South due to fires. The planned site preparation for 2020/21 is 6,891 ha, and planned over story removal is 3,246 ha.

The provincial summary tables allow for cost benchmarking. For example costs typically range between \$18 to \$22/ha for recce surveys; between \$50 and \$60/ha for full plot surveys; \$15-\$18/ha for site treatment plans; \$25-\$29/ha for ITSL surveys; and \$32-\$39/ha for free growing surveys on FFT stands. Planting costs range from \$0.57 to \$0.68 per seedling.

**Action #4:** Brendan will send format for entering costs per activity to FFT delivery staff.

Q: How do you address layout activity costs for site preparation in the AOP?

A: Put it in as planting costs

There was comment that there is a layout row in the AOP.

It was noted that you can split or lump costs. PwC has decided to split and has put this information in their data base e.g. cost of using tea bags.



About 3-4 Districts are using teabag fertilizer in planting. There was comment that it would be good to get more detail on these costs in the AOP.

When contract bids are closed, you can update the costs in the AOP to reflect actual costs. It was noted that FFT and FCI don't have to go to the cheapest bidder. We want to be a leader. If a bidder for reforestation includes aggressive mechanical site preparation (MSP) and use of teabags, and this makes sense, then they may be preferred over a lower bidder who does not include MSP and use of teabags.

One way to handle this is to have the contract bid be about basic planting. Then negotiate adding to the lowest qualified bidder, for example, the use of teabags to the contract.

That said it was mentioned the bid that proposes the best treatments for the site to help ensure reforestation success needs to be considered. MSP is dropping off when likely more is needed.

It was noted that sometimes to increase success means lowering the area to be treated given available funding.

There was comment that we need larger stock. A response was that this is a nursery capacity issues with the push for smaller stock; but if you need larger stock, order it. If regeneration success good, then trying lower stock may be ok. If a brushy, dry site, then don't use lower stock.

There is a 26,000 ha fertilization 'ask' in the FFT AOP including 6,000 ha for the Coast, and 20,000 ha for the Interior. The baseline for the Interior is typically 11,000 ha. Consider moving the excess ask to FCI as it is incremental to baseline FFT performance.

Nadina District fertilizes every two years in part to address First Nation issues. The consultation often begins in the Spring; however they recommend information sharing earlier in January.

Q: What are requirements if any for public notification of fertilization?

A: It is at your discretion e.g. using community newsletter.

District staff said he speaks to regional district (elected officials) as public concerns tend to go to them. Sometimes contractors get the brunt of the concern which they do not want.

In another District, potentially affected stakeholders and residents were contacted; there were only 3 residents potentially affected; the main issue was with the trappers.

As noted earlier, people tend to be on-board with fertilization if done because of climate change, and more likely raise concerns if done to improve timber supply.

TFL licensees, some Community Forests and Woodlots, often help to deliver the fertilization program in TSAs. The Williams Lake Community Forest delivered the entire fertilization program for the Williams Lake TSA. Western Forest Products does the fertilization for Vancouver Island and sees if woodlots are interested.

FCI AOP sowing of 28 million seedlings for 2020/21 is entirely in four Districts: Cariboo-Chilcotin at 13 million, 100 Mile House at 6 million, Quesnel at 5 million, and Thompson Rivers at 4 million.

FCI TSM includes nearly 43,000 ha of fertilization surveys, and 21,000 ha of fertilization.

It was noted that last year's split between FFT and FCI worked well but there are also challenges. For example:

- FCI operating areas focus on Cariboo fires. If over story knocked down but not burned then FCI. If ITSL used, then FFT.
- For surveys, collaborate. If FCI survey but not eligible, don't stop as it might be FFT eligible and vice versa.
- The Cariboo Region is a huge area to treat due to fire impacts; there is a capacity issue but we have time to spread treatments over time (unlike in the Coast where are major brushing concerns with delays in reforestation)
- FCI is onboarding with new FCI staff.

## **Breakouts**

Break-out groups were formed to address the following. Assuming FCI funding is continuing long term and the province is trying to deliver a \$100 million program:

- How is the current delivery process working for your area? In terms of planning activities and budgeting for the work.
- How or what would you change for a long term program delivery?
- What opportunities or problems do you see at your local level for FFT and/or FCI to help you achieve your local goals?

## **Group One**

### How is it working?

Pros:

- Budget allocation is good
- Keep it clear in budget (e.g. difference between FFT and FCI is good)
- Geographic split between FCI and FFT has been positive for implementation
- Branch and Regional support for Districts has been good
- Where joint input from stakeholders has occurred, response has been positive
- Recipient implementation of program was great thanks to hard work by PwC

Cons:

- AOP difficult to use, make it user friendly
- Need more partnerships with First Nations
- Running out of 'low hanging fruit' for treatments
- Capacity issues at all levels in BCTS, FLNR, PwC, recipients
- Turnover in staff and experienced contractors; need dedicated staff

### What would you change?

- One program for the Province
- Get rid of March 31<sup>st</sup> fiscal year end deadline
- Model out next 25 years of potential for the province
- Get permanent dedicated staff focused on the one plan that crosses 25 years
- Improve RESULTS as a planning tool for future silviculture investments
  - Maybe RESULTS is not the answer but we need something
- Actual vs planned – how to tighten existing gap
- How do we learn from our investments e.g. did we achieve the minimum 2% ROI?

- Improve inventories and decision tools

#### Local level opportunities and problems

- Need more usable data/inventory e.g. using LiDAR and UAVs
- More District buy-in from District Manager
- More staff
- More direction for First Nations e.g. information sharing early on
- Consistency should be a focus
- Priority in the Districts should be better known. Where should the investment funds go? And have this identified through a planning process
- Better inventories
- BCTS management support

Q: How to get District Manager buy-in?

A: Talk to District Manager regarding the business plan; use FFT performance measures e.g. local jobs, increased volume; that FFT work meets Service Plan objectives.

There was comment that this is difficult for those early in the program as they are not able to do this yet. A response was that staff need a District Manager conversation regarding AOP with endorsement or at least awareness.

There was comment that the silviculture program is an easy sell. And that the same could be said also about ITSLS.

### **Group 2**

#### How is it working?

Working well:

- Operating area concept for FFT and FCI – zoning for funding

Issues/tricky:

- Non-Cariboo sowing targets not well defined (need better communication)
- Tricky – funding ‘rules’ are not always the most efficient for survey/recees
  - Timing for verification (recee) and working towards target (not achieved/needed) (know ecosystems and refine targets)
- OK – region does surveys and communications of results back is tricky
- Want FCI roll-out again
- Tricky – recipient communication of plans to the land manager – better communication needed
- Problem – too many people on land to ‘grab the work’
- Different TSAs need to be consistent in types of projects e.g. District A is rehabilitating roads with FCI, while District B is creating new roads.

### **Group 3**

#### Is current delivery process working?

- Budgeting – One recipient or multiple recipients may not be cost-effective. Which is more efficient in \$? Or internal delivery?
- Are silviculture priorities being met?
- Need clear instruction from Branch through to Districts regarding priorities

- Need clear roles and responsibilities and targets that integrate wildlife and other values
- Need to combine expertise between funding groups
- Should have one reforestation program and determine funding after
  - More than just timber and carbon – needs to include fires, wildlife, etc.
- Problem: too many projects unknown and not prioritized
- Effort wasted to determine what is going on in Region
- Experts needed for regimes and site plans consistently across landscape
- Need centralized location for tracking
- Problem: FCI and FFT have separate objectives
- Solution: Spatial plan based on objectives then determine funding

#### **Group 4**

##### Is current delivery process working? - Summary

- In general, things are working well; we have separated FFT and FCI areas geographically
- Concern that FCI survey may be missing information that could inform other programs
- It is now more costly to reforest as brush hazards increase with time

##### Is current delivery process working? – Flip charts

- Initially FCI has focused sowing on the Cariboo fires
- Fire-damaged stands needing to be knocked down (e.g. in Nadina) have gone to FFT
- FCI have done surveys which they have sent to FFT if not FCI eligible
- In 2018, FCI could not survey fires in the North due to timing issues
- There should be one survey (for FCI and FFT) with different funding pots
- The Cariboo region could sustain a planting program of 20 million seedlings per year for many years due to fires; virtually an unlimited program – the issue is having the capacity to address
- Need to collaborate with First Nations in the Nadina and with other fires adds complexity
- Cariboo does not have brush issues like the Coast – so can spread out the planting
- In the longer term with two programs, need to coordinate stand maintenance and follow-up work
- FCI recipient surveys - if they are better funded by FFT, should they proceed under FCI? Audit issue
- In 100 Mile House TSA, we have a dead over story and tall grass; we need to remove the over story, undertake mechanical site preparation to address the grass, and then plant
- Over time the risk to under-plant will increase as the dead overstory creates more danger trees
- FCI can't use ITSLs (one of eligibility criteria is that the overstory fibre can't be used)
- FCI is onboarding for new staff.

## Session 8: FFT Program Updates

### FFT Monitoring and Audits

Ljiljana Knezevic presented on this topic. She has worked on FFT since 2005 for Districts, then Region, and now Branch. She acknowledged BCTS, Districts/Regions, and PwC for their amazing delivery of the FFT program. Starting in 2020 there will likely be increasing emphasis on accountability e.g. if budgets shrink. We will need to address this by doing more monitoring.

The objectives for monitoring are:

- To help improve performance and achieve results. Its goal is to improve current and future management of outputs, outcomes and impact
- Consistency in program delivery
- Learn from each other (share the best management practices).

There are two types: budget monitoring and performance monitoring. Budget monitoring includes quarterly updates on: (i) funds awarded; (ii) paid to date; and (iii) available funds.

Performance monitoring includes addressing the following questions:

- Are we achieving the FFT objectives?
- Do we follow all the standards?
- Is vegetation management working for us?
- Are we being consistent in developing treatment prescriptions and performing wildfire and beetle surveys?
- Are we prescribing the right treatment?

FFT intends to increase PwC audit budget to address District delivery.

### PwC Audits

Colin Campbell then discussed PwC role with FFT in audits. PwC has been working on third party recipient delivery of FFT since 2002. They have a dedicated management team. The recipient model includes: (i) Area based tenures (TFL licensees, Community Forests, Woodlots); and (ii) Implementation recipients e.g. via forestry consulting firms). PwC services to FFT include: (i) project management; (ii) monitoring and risk assessment; (iii) information management (FIRS); and (iv) financial control, achievement reporting, and audits.

PwC has three types of audits: (i) comprehensive performance and financial audits; (ii) surveillance audits; and (iii) remote performance and financial reviews. The last type of audit is new and is used for the best performers where it can be undertaken over the phone.

The outcome of the office and field component audits include: (i) non-compliance where corrective actions is required; (ii) opportunities for improvement where recipient does not have to make changes; and (ii) good management practices have occurred that are highlighted in the audit.

PwC develops an annual audit plan, undertakes the audits, develops findings, prepares audit report, and undertakes an annual management review. The annual management review summarizes overall audit findings.

PwC third party recipient audits could be used or modified for BCTS and District audits.

Q: Does PwC assess if project is FFT eligible or not?

A: During an audit of a PwC Recipient, we always assess if the project is eligible for FFT funding (i.e. is the project consistent with the LBIS Silviculture Funding Criteria for Forests For Tomorrow). Eligibility is also determined when the initial project is submitted to PwC prior to any work starting

Q: Do you check survey plot?

A: Yes will run a spacing plot

PwC is administering 114 FFT projects with total funding of nearly \$17 million. Projects include Current Reforestation and Timber Supply Mitigation and include the broad range to FFT activities such as surveys to site preparation to planting to fertilization.

Project implementation successes have been driven by:

- Experienced recipients who are familiar with the FFT program or have had a previous relationship with PwC as a recipient
- Recurring or continuing projects where planning/surveys/prescriptions/tendering occur in Year One, and treatments occur in Year 2 (such as fertilization and planting)
- Projects in AOP have been ‘vetted’ by District staff (e.g. for Community Forests and Woodlots)
- District/Regional support for project activities including First Nation information sharing and planning
- Synergies with other funding programs e.g. FCI and FFT fertilization.

Project implementation challenges include:

- New recipients where FFT program understanding and recipient expectations are poor
- Industry capacity issues
- Project is not ‘shelf ready’ where planning to treatments within one fiscal year is difficult
- Regulatory hurdles such as navigating First Nations information sharing
- Funding dis-continuity if funding priorities are shifted (e.g. one year there was no funding for fertilization)
- Fiscal year end – March 31 deadline issue.

Q: Does PwC use contractors for their audits?

A: The audits are completed by a combination of PwC staff and contract auditors for both the Performance (ie. forestry focused) and Financial (accounting focused) audits. It is a requirement in PwC’s contract with Resource Practices Branch to sub-contract a portion of the audit program to third parties.

Colin mentioned that PwC is in constant contact with recipients and check on milestones. A licensee or company will have separate recipient agreements for FESBC and FFT delivered projects.

Q: Is PwC involved in AOP?

A: PwC typically is not involved in the AOP.

The overall approach in general includes: (i) PwC getting an allocation letter; (ii) PwC entering into a recipient agreement including to a commitment to standards appropriate to project; (iii)

project sign-off by professional and submission of invoices. PwC's FIR data base supports its management of projects and information.

Q: How can small contractors get involved?

A: Put in bid on projects as it is a competitive bid process.

### **Budget Planning Tool**

Brendan presented on the need for an improved tool for budget planning. After a needs assessment, and contract bid, a contractor was hired to do a report on the recommended tool to use. They recommended LRM in part because BCTS has had experience and success using the tool. Because of data integrity concerns, we can't use BCTS' LRM; however Operations Division has indicated that FFT can use their LRM. Phoenix was a second choice by the contractor but at the time it was not spatial – and now it is spatial.

Q: Would the new tool replace the AOP?

A: Yes

Q: Why can't we use the silviculture planning functions in RESULTS?

A: Enhancements to RESULTS may help in that regard. Even if we use a new budget planning tool, we will still need to enter data in RESULTS.

### **Drought Sites Contract**

John Hopper led this topic noting that Colin Hegan at Forsite has been hired to prepare BMPs for improving regeneration success and forest establishment on dry sites in the Thompson Okanagan region. The BMPs will be summarized by BEC and suitable for inclusion in a field guide.

Silviculture activities that can improve establishment include site preparation, stock type, species selection/mixes, planting density, stock handling, planting timing/season, teabags, silviculture systems, and other contributing factors.

The contract has an option to renew so that next FY it would be possible to address another area and problem, for example, to do BMPs for frost prone sites in the Cariboo.

The office component includes review of literature regarding: (i) regeneration in drought prone areas; and (ii) climate change impacts and projected changes in growing water deficits.

The field component includes: (i) liaise with ministry and industry silviculturists regarding drought mitigation techniques and access to data on drought impacts on plantation performance; (ii) site inspections of recent drought impacted plantations; and (iii) site inspections on recent successful plantations in drought prone sites to assess success factors. The field component is 80% complete but nothing compiled yet

Preliminary results indicate:

- Mortality is 80-100% of 2017 plantations impacted in some areas, and about 15% in other areas
- Three site categories recognized: extreme dry/dry/standard operating procedures (SOP)
- There is poorer results on dry sites than on extreme dry sites due to grass competition being more severe on dry sites

- Prompt reforestation after harvest or aggressive mechanical site preparation (MSP) is necessary
- Shaded microsites only required on extreme dry sites (e.g. IDFxh2)
- Timing of planting is critical; plant driest sites earliest and in order of snowmelt; if you plant late it will fail
- Standard stock size adequate if regime followed
- If preferred regime not possible, large stock size can increase probability of success
- Small stock size should only be considered on SOP sites with preferred regime
- One shot: if preferred regime not followed, high probability of failure in drought years and limited ability to rectify
  - You can't fill plant due to grass competition
  - If unsuccessful, you need to start over
  - Even if stumping occurs, you need MSP

Research opportunities include:

- More ad hoc trials needed: operational staff should be encouraged to do trials during planting
- Look at stock type performance at a variety of microsites: no MSP, moderate MSP, aggressive MSP, high burn severity
- Teabag efficacy at establishment

### **BCTS ITSL Program**

John concluded by mentioning five additional stand eligibility criteria documents have been created since the 2014 stand eligibility policy to address specific stands:

- Expanding the eligibility (2016 draft adopted in 2017)
- Peace Liard specific criteria (2017)
- HwCw trial criteria (draft 2019) – could also apply to Hemlock/Balsam
- Sx beetle/mixed Sx beetle MPB (draft 2019)
- Wildfire eligibility criteria (draft 2019).

Q: Are the criteria vetted through legal channels?

A: Neil and others review them; they also go to BCTS for review

It was noted that ITSLs are competitively sold. ITSLs have added 10 million cubic metres in market place; there is high demand for fibre but costs are high.

Decadent HwCw stands have a current low or negative MAI; most should be converted to Df stands.

It was mentioned that there is an ITSL agreement and new BCTS Service Agreement with Office of the Chief Forester that helps ensure that BCTS continues to support FFT delivery.

### **Moving Forward**

Neil wrapped up by saying that the FFT and FCI programs are being collaboratively delivered; that said there can be further improvements. We share a common goal for establishing the best forests we can.

**Thanks again for your participation!**



## Appendix 1: List of Workshop Participants

An attendance list was distributed but some participants may not have received it and may have been inadvertently overlooked in the list below.

| Name                   | Organization   |
|------------------------|--|
| Sheri Baker            | Stuart Nechako District                                |
| Bryce Bancroft         | Facilitator, Symmetree Consulting Group Ltd.           |
| Jacek Bankowski        | Prince George District                                 |
| Shelley Barlow         | Quesnel District                                       |
| Natasha Boettcher      | Chilliwack District                                    |
| Brendan Brabender      | Resource Practices Branch                              |
| Kerri Brownie          | BC Timber Sales Branch – Campbell River                |
| Scott Byron            | BC Timber Sales – Stuart-Nechako                       |
| Colin Campbell         | PricewaterhouseCoopers                                 |
| Grace Chomitz          | BC Timber Sales – Prince George                        |
| Kris Cooke             | Thompson Rivers District - Clearwater                  |
| Kevin Derow            | Okanagan-Shuswap District                              |
| Kari Doyle             | Thompson Rivers District                               |
| Alycia Fennings        | Cascades District                                      |
| Clayton Franz          | BC Timber Sales - Kamloops                             |
| John Hopper            | Resource Practices Branch                              |
| Neil Hughes            | Resource Practices Branch                              |
| Jason Hutchinson       | Campbell River District                                |
| Tristan Jordan         | South Island District                                  |
| Morgan Klassen         | BC Timber Sales – Cariboo-Chilcotin                    |
| Ljiljana Knezevic      | Resource Practices Branch – Prince George              |
| Richard LaBoucane      | West Coast Region                                      |
| Katherine Lawrence     | Sea to Sky District                                    |
| Sara Lazaruk           | Forest Carbon Initiative - Vanderhoof                  |
| Darcy Lillico          | Cariboo Region   |
| Heather MacLennan      | Thomson Rivers District - Clearwater                   |
| Garrett Macklam-Harron | BC Timber Sales – Cariboo-Chilcotin                    |
| Mike Madill            | Climate Change and Integrated Planning Branch          |
| David Majcher          | 100 Mile House District                                |
| Leith McKenzie         | Climate Change and Integrated Planning Branch-Kamloops |
| Timothy O'Rourke       | Climate Change and Integrated Planning Branch-Kamloops |
| Lynn Palmer            | Sunshine Coast District                                |
| Melanie Plett          | Climate Change and Integrated Planning Branch          |
| Lee-ann Puhallo        | Resource Practices Branch – Prince George              |
| Katherine Rogers       | BC Timber Sales - Babine                               |
| Katrina (Nina) Sigloch | Thompson Okanagan Region                               |
| Aaron Smeeth           | West Coast Region                                      |
| Gary Sorensen          | Thompson Rivers District                               |

|                    |   |
|--------------------|---|
| Andy Spangl        | BC Timber Sales – Peace-Liard             |
| Carolyn Stevens    | Resource Practices Branch – Prince George |
| Dawn Stronstad     | Nadina District                           |
| Jack Sweeten       | Chilliwack District                       |
| Miodrag Tkalec     | Mackenzie District                        |
| Kona Van Diest     | BC Timber Sales Branch – Campbell River   |
| Mary Viszlai-Beale | Fort Nelson District                      |
| Terje Vold         | Note taker                                |
| Eric Wahn          | Selkirk District - Nelson                 |
| Craig Wickland     | Resource Practices Branch                 |
| Ian Wiles          | Selkirk District - Nelson                 |
| Kristine Wilker    | Cariboo-Chilcotin District                |
| Ann Wong           | Resource Practices Branch                 |