Workshop Workbook

Land Based Investment Strategy (LBIS): Forests for Tomorrow (FFT) Planning and Delivery Workshop

Sponsored by

Resource Practices Branch BC Ministry of Forests, Lands and Natural Resource Operations

Ministry of Forests, Lands and Natural Resource Operations

Workshop Organizers:

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Assembled by: Terje Vold, Contract Support

> September 30th – October 1st, 2015 Richmond, British Columbia

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Agenda

	Land Based Investment Strategy (LBIS): Forests for Tomorrow (FFT) Planning and Delivery Workshop Location: Executive Airport Plaza Hotel & Conference Centre 7311 Westminster Highway, Richmond, BC V6X 1A3
	DAY ONE: WEDNESDAY, SEPTEMBER 30 TH , 2015
	Program delivery
8:30 am	Coffee/tea available – meet and greet
9:00 am	Meeting Logistics – Nigel Fletcher Welcome and Introductions – Dave Cornwell
9:15 am	Introduction to the FFT Fall Workshop – Perspectives – Gerry MacDougall
10:00 am	Coffee break
10:15 am	Session 1: UAVs – their potential and current projects / initiatives within FFT – Janet Mitchell (FPInnovations) / Dave Weaver
11:00 am	Session 2: GRIM modeling - Jim Goudie
11:30 am	Session 3: 2014 and 2015 fires and Section 108 – Nigel Fletcher
12:00 pm	Lunch – everyone on their own
1:20 pm	Session 4: Enhancing the use of residual fiber / Increasing BCTS effectiveness – the provincial ITSL program – Mike Madill / John Hopper / Matt LeRoy
2:00 pm	Session 5: 2016 / 2017 AOP activity, priority filtering & budget review; numbers compiled to date – Matt LeRoy / Nigel Fletcher
3:00 pm	Coffee break
3:15 pm	Session 6: GAR update, budgets, RESULTS track, etc. – Al Powelson / Matt LeRoy
3:45 pm	Session 7: The process for assessing large operational fires / various times of aerial photography: conventional (plane), satellite and UAVs – Ljiljana Knezevic / Caitlin Harrison / Nigel Fletcher
4:30 pm	Day One wrap-up – Jennifer Davis
4:45 pm	Adjourn

	DAY TWO: THURSDAY, October 1 ST , 2015
	Strategic objectives
7:30 am	Coffee/tea available – meet and greet
8:00 am	Recap on Safety procedures Housekeeping items from Day One – Nigel Fletcher
8:15 am	Session 8: Forest Health – spruce beetle, Douglas-fir beetle, what's coming – Tim Ebata
9:00 am	Session 9: Targeting investments in forest growth (silviculture) – potentially treatable areas, provincial overview, flexibilities and FLTCs, ramping up current reforestation - Neil Hughes/ Matt LeRoy
10:00 am	Coffee break
10:15 am	Session 10: Optimizing the timber land base through integrated management for multiple values / implanting a strategy for species at risk and wildlife management initiatives / wildfires and burnt OGMAs – How can Integrated Silviculture Strategies (landscape level planning) help achieve these goals – Paul Rehsler / Al Powelson
11:05 am	Session 11: Chief Forester's direction for FFT – Diane Nicholls
11:50 am	Lunch – everyone on their own
1:10 pm	Session 12: Timber Pricing that represents fair market value / Managing risk regarding future climate uncertainty / Innovative approach for the forest sector – FFT as the flagship for climate change (stocking standards) and innovation (direct seeding, spacing) –Kevin Astridge
1:35 pm	Session 13: FFT A class seed use, seed inventories, orchard production forecast, seed purchase –Susan Zedel
2:00 pm	Session 14: Conversation with Executive – Forest Sector Competitiveness and Key Initiatives – the mid-term timber supply and FFT's role / Developing bio- economic strategies (post-MPB interior transition response) – Dave Peterson
2:50 pm	Session 15: First Nation perspectives / Enhancing First Nation's role in forest sector – Keith Atkinson (BC First Nations Forestry Council)
3:30 pm	Workshop wrap-up and evaluation – Jennifer Davis and Matt LeRoy Recap meeting action items Please complete the Workshop Evaluation Form before leaving
3:40 pm	Adjourn and thanks for you participation!!

Day One – Program Delivery

Meeting Logistics

Nigel Fletcher will lead the workshop overall and describe meeting logistics.

Welcome and Introductions

Dave Cornwell will welcome workshop participants and will ask for introductions. Although most people know most of the other participants at the meeting, there are participants who you may not know. It would be worthwhile therefore if participants could briefly introduce themselves in terms of your name and the organizational unit you work for. A list of meeting invitees and FFT contacts is provided in Appendix A. An attendee sheet will be circulated for you to complete.

Purpose of this Workbook

The purpose of this Workbook is:

- To provide a guiding framework for the workshop participants to address key objectives in support of the LBIS Forests for Tomorrow (FFT) program
- To provide a reference material for those who are interested but could not attend the meeting as well as for meeting participants
- To set the scene for a meeting that is intended to be interactive, informative, practical and insightful.

Pre-Workshop input was sought from workshop invitees. This input is included in the Workbook as it helps inform various sessions of the meeting. Thanks to all 18 individuals who kindly provided input!

Capturing Workshop Discussions

We will be capturing the discussions at the Workshop in two ways:

- We will use flip charts to capture key discussion points and action items
- We will be using a Livescribe Smart Pen to provide an audio recording solely for the purposes of assisting us in summarizing key Workshop discussions.

A Workshop Synopsis will be prepared and distributed to all meeting participants and also shared with other others who could not attend but may be interested.

Introduction to the FFT Fall Workshop - Perspectives

Gerry MacDougall, Regional Executive Director – Cariboo, will provide an introduction to the FFT Fall Workshop including perspectives that can help shape workshop discussions.

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Session 1: UAV's – and potential for use for FFT

Janet Mitchell (FPInnovations) and Dave Weaver will be discussing unmanned aerial vehicles (UAVs) – their potential and current projects/initiatives within FFT.

What questions do you have about the use of UAVs to support your FFT work?

Where's FFT's (Branches) comfort level at with UAV's and what experience is there with accepting these as FG surveys on coast, in the interior?

What check and balances policy wise need to be considered (i.e. ground checks of aerial estimates? FH walkthroughs, do only certain stands qualify at this time like monocultures, single story etc?

Aerial photography potential? Altitude abilities, and distance of control?

What is the cost to use them and be trained for them? What is the range of these UAVs? What are the ideal conditions to use them? What is the availability to district offices to use them?

Can they replace ground plots for data collection on SDM blocks with difficult/ expensive access, or would there still be a need for some ground sampling?

What distance can the operator be away from the UAV?

How dense a stand can they fly in?

Can we see some example photos, are they high or low altitude?

I want to see the final product, quality and level of details. How much does it cost?

Is there any appetite from Government to purchase UAV's or to contract UAV services for forestry applications? Should Districts/Regions/Branch obtain drones, how much training would be needed for staff to fly UAV's?

I can see them being used for recce's, treatment stratification (brushing, wildfire, beetle activity, etc.), and in some cases for surveys – is program considering purchase of one(s)?

We are currently trying to find sites for a FPI trial next week and issues are line of site. It will be interesting to see if the drone can be used to detect understory regeneration in mpb stands and how large an area you can cover when maintaining line of site. I will have more questions after next week, I'm sure.

How, if at all, the potential of UAVs may be enhanced with broad availability of 2014/2015 LiDAR data and derivatives

Session 2: GRIM modeling

This session will be led by Jim Goudie (Forest Analysis and Inventory Branch) who will discuss and describe the Gall Rust Impact Model (GRIM). GRIM could prove useful for timber supply projections, the evaluation of silviculture regimes, and other decisions.

What questions do you have about the above topics that you want answered at the FFT workshop? What is GRIM?

What about B+ seed for high rust potential areas.

Do we need to be producing genetically resistant pine or should we be changing the stocking standards and planting pine to a much higher density so the rusts cannot spread through it so easily?

I'd love to hear any/all info on this.

What geographical location do we have PLi seed resistant to commandra and gall rusts. Do we have any results?

Notes

Session 3: 2014 and 2015 fires and Section 108

Nigel Fletcher will describe the impact of the 2014 and 2015 wildfires and implications on Section 108 funding that FFT provides.

What questions do you have about recent fires as they relate to FFT and section 108?

As a BCTS Silviculture Forester is there a way to manage section 108 and FFT activities under the same contracts for efficiency of having less contracts? How would funding work if this was possible?

The costs for the coast and interior - how do they fare?

What is FFT cost per ha for reforestation in the interior? On the coast? Is it reasonable and on target?

Are the client's section 108 costs reasonable? Is FFT paying too much of a premium for this on the coast, the interior, etc.?

Budget for Sec 108? We are expecting high claims in Sea to Sky. Will eligibility and approval requirements be the same as previous years?

Timing for assessing areas burned in 2015 fires on coast- is it too soon to be trying to do that this fall? It is very tight timelines to get good assessments done for fall sowing, and some areas are so heavily burned that there is little soil left at all. We don't want to sow a lot of trees that we won't be able to plant.

How can program get more involved in wood salvage or support of the salvage in fire burned areas?

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Session 4: Provincial ITSL program

Mike Madill, John Hopper and Matt LeRoy will describe and lead discussions on the provincial Innovative Timber Sale Licence (ITSL) program including how to enhance the use of residual fiber and increase BC Timber Sales' (BCTS) effectiveness.

What questions or concerns do you have about the above topic that you would like addressed?

How can we get major licensees more involved in an ITSL type program.

Is marketing the fibre part of the strategy?

What legal mechanisms do we have to enable access to fibre – is gov't interested in legislative changes to make that happen?

Will this be expanded to other species that mountain pine beetle killed stands? i.e. balsam bark beetle and hemlock looper killed stands

Is BCTS planning to target burned wood for ITSL's? Are there other avenues for FFT to salvage or provide incentive for salvage of some of that wood?

ITSL process – how do we account for development costs within the new process where you are looking averages over the year to determine FFT eligibility? In Williams Lake, ITSLs are generally low value and development costs could start adding up.

What is the purpose of the Provincial ITSL program? What is the rationale behind extensive use of the ITSL program on Haida Gwaii? Is it achieving desired objectives?

Possibility of BCTS expanding proactivity outside of BCTS tracts so that more FFT eligible stands can be addressed. When operation outside of a BCTS tract, if timber is FFT eligible but is sold under the BCTS FSP must the volume contribute to BCTS apportionment? Can the volume be attributed to the Major Licensee that harvests it? What if the volume is below the level set to calculate the AAC (less than 80m3/ha)?

Session 5: 2016/17 Annual Operating Plan

Matt LeRoy and Nigel Fletcher will discuss the draft 2016/17 Annual Operating Plan (AOP) activity, priority filtering and budget review – numbers compiled to date.

What questions do you have about the AOP and priority filtering process? Does the process make sense? Are there areas of the process that are unclear to you?

I'm new to the process. Would appreciate a high level overview and a good explanation of the priority filtering process.

Scheduling several hundred Caribou GAR blocks for surveys and activities is going to be a challenge or not? How is Caribou GAR activities working out in other Districts as it relates to the AOP and funding?

Difficult to forecast activities and costs in the AOP for Districts with 100's of blocks not relieved at this point in time. Should they be left out of the 2016/17 AOP if they have not been relieved of obligations by FLNRO?

What is the process?

It appears that the process for filling in the AOP is convoluted and too many hands touching the same spreadsheet. My suggestion is that a share point site be developed and a master spreadsheet is put on the share point and staffs update it there rather than what is currently happening. District to region, region to branch, and in the case of woodlots and Community forests it is even more confusing. This needs a lean project and a more streamlined process developed.

Process looks good.

Considering the "all in ITSLs", it is very difficult to look to the future for these opportunities as we are currently seeking areas from the Major Licensees where it would be likely that FFT funding would be required to harvest some of these areas. Far from the mill, not able to sell, small volume per hectare. If we give an estimate, how tight will it be if there is a requirement for an adjustment to that estimate?

Session 6: GAR update, budgets, RESULTS track

Al Powelson and Matt LeRoy will lead discussions on GAR update, budgets, RESULTS track, etc. This session was added after the pre-workshop survey was sent out.

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Session 7: Assessing large operational fires

Ljiljana Knezevic, Caitlin Harrison and Nigel Fletcher will describe the process for assessing large operational fires/various times of aerial photography: conventional (plane), satellite and UAVs (drones).

What questions or observations do you have about this topic as it relates to FFT? This is good to cover this as a general awareness topic. Please have examples of the various imagery for the presentation.

What is the best up-to date and cost effective way to obtain this data?

How quickly can we access fire mapping information post fire?

I would love to do this for the Cheslatta Fire. Definitely willing to pilot.

Costs vs quality of product.

Will drones produce a geo-referenced ortho product that can be easily used in Arc and other applications?

Satellite images were supposed to be taken of the 2010 fires, where did the info go? Where will the data be stored?

This presentation should not be limited to fires only; it should include MPB affected areas.

How handling in data system (RESULTS)?

I am in support of province wide contract to gather imagery needed and have no personal preference between low level digital photography, drones and satellite imagery as long as selected ones are provided timely (without delays) and are detailed enough to support the planning.

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Day One wrap-up

Jennifer Davis, Director, Resource Practices Branch will summarize key action points (that will be tracked on a flip chart) arising from Day One discussions, and any other key items of note.

Day Two – Strategic Objectives

Housekeeping Items from Day One

The main purpose of this timeslot, which will be led by Nigel Fletcher, is to address any outstanding items raised in Day One.

If time permits, it may be worthwhile to quickly review the status of the actions that stemmed from the LBIS FFT Fall 2014 meeting (see Appendix D).

As part of the pre-workshop input request, we asked if there were other topics not on agenda that need to be discussed (see Appendix E). If we are not able to address these other topics at workshop, we will endeavor to do so in another manner such as in the Workshop Synopsis.

A session on Safety was intended when the pre-workshop survey was sent, but is not now on the agenda. The input on Safety in Appendix E can be addressed as a follow-up to this Workshop.

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Session 8: Forest Health – spruce beetle, Douglas-fir beetle, what's coming

Tim Ebata will discuss forest health issues of concern to FFT today and what may be a concern in the future.

What questions do you have on forest health as it relates to your FFT work?

Can we get LBIS funding for Forest Health (especially pro-active bark beetle treatments) activities on area based tenures (Woodlots/ CFA's)

Will Sx Beetle areas be FFT eligible? BCTS does not have the capacity to immediately bring affected wood to market. Delay due to layout, advertising, etc.

Can we receive guidance docs and support from our entomologists that help us place traps in the best locations and how best to manage these beetles and where to concentrate our efforts? I'd like to hear stories where districts have enthusiastic involvement from licensees to manage beetle.

Will FFT funding be made available to assist in sanitation?

Elytroderma: at what point do you write off a young stand and start fresh (rehab)?

Are there intentions to review and update funding eligibility for FH related work?

How do nurseries sample for kethia? What affect does Armillaria have on Cw/Yc growth?

Session 9: Targeting investments in forest growth

Neil Hughes and Matt LeRoy will lead this session on targeting investments in forest growth (silviculture) – potentially treatable areas, provincial overview, flexibilities and FLTCs, ramping up Current Reforestation.

What questions or concerns do you have about the above topics that you would like addressed?

I wonder if some sort of zoning process is required to manage more intensive silviculture activities. If you're targeting areas for investment, how will you decide on the target?

The costs for the coast and interior how do they fare?

What is FFT cost per ha for reforestation in the interior? On the coast? Is it reasonable and on target?

Are the client's section 108 costs reasonable? Is FFT paying too much of a premium for this on the coast, the interior, etc.?

I'd like to see OGMA's and WTPs eligible for reforestation funding.

The ROI treatment thresholds for Douglas-fir seem very low, compared to the pine. Fir is much more valuable, even if slower growing, why can I spend so little to rehab a fir stand?

We need to get a volume unlimited FLTC for MPB killed stands older than 60 years. Any idea how fast this can happen?

What are opportunities to include areas damaged by wind or catastrophes other than fire? Seeing much more of such events.... We should be treating/capturing these.

Sitka blacktailed deer have had a devastating effect on the regeneration of cedar on Haida Gwaii. Licensees have an MSSc and must bring cedar back to free-growing but at significant cost. Can "current reforestation" funding ever be used to mitigate the cost of seedling protection?

Session 10: Integrated Silviculture Strategies

Paul Rehsler and Al Powelson will discuss optimizing the timber land base through integrated management for multiple values / implanting a strategy for species at risk and wildlife management initiatives / wildfires and burnt OGMAs – how can <u>Integrated Silviculture</u> <u>Strategies</u> (landscape level planning) help achieve these goals? Please review the 2-pager that follows on Integrated Silviculture Strategies.

What questions do you have about Integrated Silviculture Strategies that you want answered at the FFT Workshop?

Is this estate planning? Maybe it should be?

Any information would be welcomed what opportunities exist.

Maintain and reforest or seek new OGMA's?

I'd like to know if there is an appetite for gov't to re-open land use plans or are we interested in approving amendments to legislation that encourage these strategies?

I agree with landscape level planning especially after a fire as the slate is clean and we can start over again d do it right by considering all of the values before we rush in and reforest everything. Even post fire such as the McLure fire 12 year later we should look at it at the landscape level taking into consideration all of the values and create plans with those values in mind. Example is to look at ensuring there are deciduous bands across the landscape for future fire prevention, not just brush everything with the timber value in mind. Ensure there are wildlife connectivity and forage areas, not just the timber value.

Very interested in burnt and dead OGMAs and getting the most out of them as we can.

Cool topic. We are working on a similar strategic plan for each of our large fires. It's still just a concept about where to rehab, where to accept lower densities or different species (Sb/At/Lt) to get habitat or visual green up sooner.

Seems bizarre that different LBIS pots (SAR and FFT) have conflicting priorities for incremental silviculture. Is there a higher level discussion happening to address this? Are areas that have been previously altered eligible for restoration to increase habitat value?



Integrated Silviculture Strategies – an evolution

What is in the name? The name implies the evolution of the process described below.

- Integrated, allows for incorporation of the varied objectives and inherent site and landscape attributes within the planning unit.
- Silviculture is the art and science of controlling the harvest, establishment, growth, composition, and quality of forest vegetation for the full range of forest resource objectives. Successful silviculture depends on clearly defined management objectives. However, silviculture is often confused with managing stands and forests purely for timber. Remember that silviculture is also used to manage forests for wildlife, water, recreation, aesthetics, or any combination of these or other forest uses.
- Strategies provide the opportunity to look into the future with various scenarios to create options or strategies from which to guide management.

Overview - Integrated Silviculture Strategies

Silviculture strategies provide context for management decisions necessary to achieve forest level (TSA or TFL) objectives. Since their inception, silviculture strategies are always improving, and creating solutions for an increasing number of forest management issues.

Type 1 – Fibre Production. The first iteration, the Type 1 used expert opinion to identify timber supply objectives and potential silviculture actions to address those timber objectives (e.g., spacing, fertilization). Treatments were identified to fill midterm timber supply short falls and to create conditions for higher value products (e.g., pruning). The amount and location of the treatments and their impact on timber flow and supply were estimated.

Type 2 – Link to Modelling. The next version of the Silviculture Strategy used simulation modeling based on the forest inventory to test various funding and treatment scenarios on their impact to timber supply. These Type 2 and Type 1 strategies were used as the basis for silviculture funding and implementation provincially and locally.

Type 3 – Some habitat needs included. The Type 3 strategies elevated habitat as a key objective and part of the funding priority for assessing scenarios. These were limited by data and analytical tools.

Type 4 – Second growth and Mountain Pine Beetle. With the move towards harvest of second growth and the serious reduction in living volume due to the mountain pine beetle, a more robust strategy was identified as being needed; one that takes into account what is being harvested, existing retention strategies, and the impact of climate change. This became the Type 4 Silviculture Strategy.

Next – Integrated Silviculture Strategies (ISS). Today, resource professionals are looking at enhancing strategies to take into account all local values. The process is collaborative and iterative. The process may also put a value other than fibre supply as a priority for management consideration. The process

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brings together practitioners to assess the situation within an administrative unit and decide upon key questions, risks to values, and solutions.

The newly formed Provincial Timber Objectives document provides relevant guidance to test scenarios. For example, co-location for habitat retention can be used as a key objective to assess retention strategies impact on timber supply within a unit. As we shift towards the harvest of second growth we have a clearer understanding of the implications of our actions in creating future stands and products, thus objectives for volume and piece size can be used to assess options. Species deployment to achieve long term resilience from climate change is another objective that can be explored. To reduce long term risk, both ecologically and financially, fire and its potential impacts are brought into the decision process. The issues and solutions can drive funding priorities as well as management actions.

The Integrated Silviculture Strategy process is flexible as it uses local plans, timber supply and stewardship issues to derive opportunities through scenario analysis. In some cases, the shift to second growth may suggest an acceleration of late rotation fertilization, while in other areas it may be the need for greater understanding of the population of a species considered threatened or of special concern.

In 2014/15, the Arrowsmith TSA began the process in concert with its TSR, and is exploring added direction on co-location of reserves as directed by the Acting Chief Forester. In 2015/2016, new ISS processes have been initiated in the Mackenzie TSA and in the Fort St. James timber supply blocks of the Prince George TSA where the new process will promote First Nations input, input from guide outfitters and address other local conditions (e.g. spruce beetle.) A fourth ISS strategy has been initiated in the Merritt TSA, where in addition to the key purposes described above, it will continue and expand upon many of the planning elements of the Innovative Forest Practices Agreement.

The Integrated Silviculture Strategy provides an active venue for local First Nations to provide their objectives and key values into the planning process.

This approach promotes identification of issues now and into the future and explores opportunities which benefit all those who rely on the landbase including local hunters, guides, trappers, tourism, and others. The process builds upon the previous backwards looking Timber Supply Review with additional actions to achieve desired objectives.

The Integrated Silviculture Strategy process is meant to provide guidance for the range of management options, not simply incremental silviculture treatments that were the main focus for previous strategies.

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Session 11: Chief Forester's direction for FFT

Diane Nicholls will discuss Chief Forester's direction for FFT. At the time the pre-workshop survey was sent out, this session was not on the agenda; consequently there was no pre-workshop input is available.

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Session 12: Timber pricing and climate change considerations

Kevin Astridge will address a number of topics including timber pricing that represents fair market value / Managing risk regarding future climate uncertainty / Innovative approach for the forest sector – FFT as the flagship for climate change (stocking standards) and innovation (direct seeding, spacing).

FFT as the flagship for climate change (stocking standards) and adapting research. What questions or concerns do you have about the above topics that you would like addressed?

Not clear on the timber pricing connection with climate change, however, I think we need to set up tools to manage communication, information exchange and learnings so that "we" learn about what works and what doesn't as "we" try new things. Is this being coordinated?

This will also be good information to hear.

Change the pine stocking standards to a much higher density, incorporate more broadleaf's into the stocking standards in relation to forest health issues and high fire hazard areas.

Licencees are reluctant to do anything innovative unless they get a break on their stumpage. How are we going to address this?

This is a huge topic. I do not understand what will be focus of this presentation.

Adapting research – juvenile spacing (including results of mulching strips etc) if such information is available

Session 13: FFT A Class seed use and related topics

Susan Zedel, Tree Improvement Branch, will discuss FFT A Class seed use, seed inventories, orchard production forecast and seed purchase.

What questions do you have about the above topics that you want answered at the FFT workshop?

What about B+ seed for high rust potential areas.

Do we need to be producing genetically resistant pine or should we be changing the stocking standards and planting pine to a much higher density so the rusts cannot spread through it so easily?

When ready for implementation {B+ seed??}. Will it be mandatory to use?

I'd love to hear any/all info on this.

What geographical location do we have PLi seed resistant to commandra and gall rusts. Do we have any results?

Session 14: Conversation with Executive

Dave Peterson, ADM, Tenures, Competitiveness and Innovation Division, will discuss forest sector competitiveness and key initiatives – the mid-term timber supply and FFT's role / developing bio-economic strategies (post-MPB interior transition response).

What questions do you have about the above topics that you want the ADMs to answer at the FFT workshop?

Are there are other key issues as they relate to FFT planning and delivery that you feel the ADMs need to be aware of and address?

Do you think that older plantations hit by the MPB that meet stocking standard minimums are good contributors to mid term timber supply or should we be knocking them down and starting over?

- 1. What is the vision and what can we implement to provide sustainability for resource based communities?
- 2. Are there any concepts being developed for more intensive management? Examples?

Will there be increased funding to address identified mid-term timber supply issues.

i) What has been the uptake for residual forestry licenses to cut and fibre supply license to cut? Has this proven to be an economic success story for rural forest communities and small operators especially those affected by mountain pine beetle?

ii) Do you think that the operational activities being carried out under the FFT program are having a positive effect on timber supply? Or is the effect more of a social benefit?

Will FFT be able to 'change gears' quickly enough to help those districts that now are seeing a huge increase in spruce beetle numbers? Will there be funding offered up to help districts with sanitation and/or salvage opportunities?

In the Lakes TSA especially nearly half of the TSA will be Community Forests and FN woodland tenures. Can we blend the two pots for the Nadina District to get the most AAC for the district?

- Are there plans regarding legislative or policy changes to encourage bio-economic strategies and initiatives? Volume left in waste piles is significant.
- Any thoughts around increasing stumpage to generate more revenue for FFT. Might help on the SLA front as well. Companies are making lumber out of \$0.25/m3 off-grade and selling for a profit. Legislate an increase in the minimum rate. Tough sell to industry but I believe they can absorb that cost for the benefit of future forests and potentially improved trade relations with the US.

This is key for the Cariboo and maintaining investment in timber supply mitigation treatments such as fertilization and Fdi spacing that could potentially have an impact on the mid-term. How can we prioritize investments over current reforestation investments?

One of the major stumbling blocks in effective biomass utilization is timely waste assessment – postharvest. Has the Executive ever contemplated a change to current policy and/or regs to facilitate waste assessment or billing?

Identification and treatment of dry belt fir stands. Is this seen as a mid-term opportunity and if so will money be slotted to these projects? Example spacing and selective harvesting on previously logged stands (1970's).

Session 15: First Nation perspectives

Keith Atkinson, <u>BC First Nations Forestry Council</u>, will provide First Nation perspective and discuss enhancing First Nation's role in the forest sector.

What questions do you have about First Nations interest and involvement in FFT planning and delivery?

How can we get more First Nations participation in contracts?

BCTS has been trying to use FN Direct Award contracts to involve FN, mostly in brushing. Biggest challenge is FN capacity to meet our contract requirements.

Which particular First Nations have come forward with interest?

First Nations should have more involvement; there should be clear guidance on how we involve them and when we involve them. There is a big hole in the Lean process that was completed last year in regards to First Nations. It needs to be laid out clearer in the process.

How will this work for FNWLT? Will FN be ready for the safety movement?

What are some good ways to involve FNs in FFT-funded projects, particularly projects that they have expressed interest in? Direct award contracts? Select invitation contracts?

Comment: FN involvement in FFT is a beneficial relationship and should be encouraged. Helps build capacity within the respective bands, creates employment and fosters positive relationships with them. Not to mention the benefit to the landbase.

What sort of training \$\$ are available to develop capacity with FN silviculture crews?

Workshop Wrap-Up and Evaluation

The purpose of this timeslot, which will be led by Jennifer Davis and Matt LeRoy, is to wrap-up discussions at the two-day workshop by recapping meeting action items, to thank all who attended for their contributions, and to encourage everyone to complete the Workshop Evaluation Form.

Workshop Synopsis

As noted on Day One, a Workshop Synopsis that captures the highlights and action items stemming from the Workshop will be prepared and shared with all participants. Workshop presenters should send powerpoints and any other resource material (that is not already in this Workbook) to Nigel Fletcher at <u>Nigel.Fletcher@gov.bc.ca</u> so that it can either be included in the Synopsis or posted on the LBIS FFT website.

Workshop Evaluation

A short one-page form will be distributed (see Appendix B) where we ask that you provide us feedback on how well each of the sessions went from your perspective, as well as any other comments you wish to share about the workshop and how it was managed.

Thanks to all Workshop Participants!

Notes

Appendix A: List of Workshop Invitees (FFT contacts) and Presenters

Name	Organization		
Delee Anderson	Vanderhoof District		
Tracy Andrews	South Island District		
Tanja Armstrong-Whitworth	BCTS Cariboo-Chilcotin		
Kevin Astridge	Resource Practices Branch		
Keith Atkinson	BC First Nations Forestry Council		
Ralph Barkhouse	BCTS Peace-Liard		
Paul Barolet	North Island – Central Coast District		
Aaron Benterud	Kalum District		
Romona Blackwell	Campbell River District		
Kerri Brownie	BC Timber Sales Branch		
Glen Buhr	Skeena Stikine District		
Scott Byron	BCTS Stuart-Nechako		
Julie Castonguay	Selkirk District		
Dave Cornwell	Resource Practices Branch		
Nola Daintith	Cariboo Region		
Mike D'Aloia	Fort Nelson District		
Jennifer Davis	Resource Practices Branch		
Sam Davis	BCTS Cariboo-Chilcotin		
John DeGagne	Vanderhoof District		
Tim Ebata	Resource Practices Branch		
Larry Fielding	BCTS Prince George		
Nigel Fletcher	Resource Practices Branch		
Blake Fougere	Sunshine Coast District		
Richard Garner	BCTS Okanagan-Columbia		
Jim Goudie	Forest Analysis and Inventory Branch		
Jeremy Greenfield	BCTS Prince George		
Mark Hamm	Cariboo-Chilcotin District		
Jevan Hanchard	Skeena Stikine District		
Caitlin Harrison	BCTS Stuart-Nechako		
Kristin Hendry	BCTS Prince George		
Scott Hicks	Kalum District		
Steve Hind	BCTS - Skeena		
John Hopper	BCTS Kamloops		
Kerri Howse	Central Cariboo/Chilcotin		
Neil Hughes	Resource Practices Branch		
Elizabeth Hunt	Peace District		
John Illes	Nadina District		
Raymond Jacob	BCTS – Prince George (Mackenzie)		
Paul Kennedy	BC Timber Sales Branch		
Ljiljana Knezevic	Prince George District		
Lyn Konowalyk	Rocky Mountain District		
Katherine Ladyman	Okanagan Shuswap District		
Matthew LeRoy	Resource Practices Branch		

Darcy Lillico	BCTS Cariboo-Chilcotin
Monty Locke	Resource Practices Branch
Phil MacDonald	BCTS Kootenay
Gerry MacDougall	Regional Executive Director – Cariboo Region
Heather MacLennan	Thomson Rivers District
Mike Madill	Thompson/Okanagan Region
David McArthur	100 Mile House District
Leith McKenzie	Thompson/Okanagan Region
Ted McRae	Okanagan Shuswap District
Bruce Middleton	BCTS Stuart-Nechako
Janet Mitchell	FPInnovations
Sean Muise	Haida Gwaii District
Lee Naeth	Quesnel District
Bill Olsen	100 Mile House District
Mark Palmer	South Island District
Bernie Peschke	Thompson/Okanagan Region
Dave Peterson	ADM, Tenures, Competitiveness and Innovation Division
Jennifer Plummer	Skeena Stikine District
Rachael Pollard	Thompson Rivers District
Allan Powelson	Resource Practices Branch
Lee-Ann Puhallo	Quesnel District
Jennifer Reid	BCTS Kamloops
Paul Rehsler	Resource Practices Branch
Katherine Rogers	BCTS Babine
Tara Salmon	Kalum District
Kimberly Scott	Quesnel District
Katrina Sigloch	Thompson Rivers District
Stephanie Smith	BCTS Peace-Liard
Andrew Snetsinger	Cascades District
Carolyn Stevens	Nadina District
Len Stratton	BCTS Prince George
Jack Sweeten	Chilliwack District
Andrew Tait	Fort St James District
Kevin Telfer	Coast Region
Geoff Tindale	BC Timber Sales Branch
Miodrag Tkalec	Mackenzie District
Ron Van der Zalm	Thompson Rivers District
Lindsay Vandesteeg	Thompson Rivers District
Mary Viszlai-Beale	Fort Nelson District
Terje Vold	LBIS project consulting support
Barb Wadey	Selkirk District
Chris Walder	Cascades District
Mike Watson	BCTS Babine
Dave Weaver	Resource Practices Branch
Craig Wickland	Coast Region
George Williamson	100 Mile House
Susan Zedel	Tree Improvement Branch

Appendix B: Workshop Evaluation Form

How useful do you feel the sessions of the Workshop were for you? Were you satisfied with Workshop logistics? Please put an **X** in the column that best reflects your views

Workshop Sessions		Partially useful	Useful	Very useful
Introduction to the FFT Fall Workshop – perspectives	useful	useiui		useiui
1. UAVs – and potential for use by FFT				
2. GRIM modeling				
3. 2014 and 2015 fires and section 108				
4. Provincial ITSL program				
5. 2016/17 AOP				
6. GAR update, budgets, RESULTS track				
7. Assessing large operational fires				
8. Forest health: spruce & Doug-fir beetles, what's coming				
9. Targeting investments in forest growth				
10. Integrated Silviculture Strategies				
11. Chief Forester's direction for FFT				
12. Timber pricing and climate change considerations				
13. FFT A Class seed use and related topics				
14. Conversation with Executive				
15. First Nations perspectives				
Any Comments on Particular Sessions? (please identify v Use the back of this page if you need more room	with Sessio	n #1, 2, etc)		

Workshop Logistics If not satisfied, your comments to improve most appreciated	Satisfied	Not Satisfied	Comment
Workshop organization			
Workshop venue (meeting room, refreshments/lunch)			
Workshop agenda			
Other (please specify)			

Appendix C: Key Dates for LBIS FFT

	Key Dates
01-Jun	Canvass FLNR executive on goals, objectives and strategic priorities (including scope)
01-Jun	Conduct on-line query of stakeholders about this fiscal LBIS and suggestions for change or alteration next fiscal LBIS
Mid-May to late June	Manual brushing completed
Mid June	Spring planting completed
Week July 1	Meet with Regional Resource Managers to begin regional and district engagement process where applicable
July 1-Aug 31	Investment category leads begin development of draft outputs and targets for the next three years
31-Jul	Submit a completed survey package to the Regional FFT staff for interim field audit
Mid-Aug to late Sept	Chemical brushing treatments completed
Sept 18-19	Current Reforestation/LBI Fall workshop - location TBD
15-Sep	Submit sowiing request to Nursery Services for summer planting program
26-Sep	Provide draft activity outputs and targets for next fiscal to RPB
30-Sep	(i) call for quarterly report; (ii) summer planting completed
Oct 1-31	Seek Regional, District, First Nations, and stakeholder input into draft next fiscal LBIS
15-Oct	Submit sowing request to Nursery Services for spring planting program
01-Nov	Submit draft next fiscal LBIS to FLNR executive for consideration in next fiscal service plan and budget discussions
30-Nov	All completed planting activities are reported into RESULTS by Nov 30th
06-Dec	Submit first draft of the next fiscal year's management unit budget to the Regional FFT staff
15-Dec	Run reports on planned activities for current and next fiscal and ensure alignment with completed activities; AOP and five year plan; make changes as required
Dec-Jan	Provide Districts and Regions with a summary of planned outputs and targets for the next fiscal year
Jan	Update Regions and stakeholders on focus and draft budget of the next fiscal LBIS

Appendix D: Actions from Fall 2014 FFT Workshop

Action #1: Discussions need to be held with District Managers and major licensees about the need for FFT reforestation activities outside BCTS operating areas in a variety of forums including:

- District Manager Community of Practice discussions
- Joint industry/ministry Resource Stewardship and Tenures Committee
- Provincial Forestry Forum
- Regional Operational Issues Forums

Action #2: Dave Cornwell to send draft Lean Control Points to FFT contacts for review and comment. When Resource Practices Branch talks with the District Manager COP, they will raise the draft control points with them.

Action #3: Resource Practices Branch will update the FFT Roles and Responsibilities document so that it is consistent with the FFT Lean process.

Action #4: Matt LeRoy will send out the latest version of 'Caribou GAR Areas Processing in RESULTS' to appropriate FFT delivery staff.

Action #5: Matt LeRoy will provide link to certified tools in RESULTS website to FFT contacts.

Action #6: Al Powelson will determine how FAIB handles older cutblocks with respect to openings, growth, etc. – and what districts should do. **Done:** Al reported on this action item at the Workshop. FAIB uses the latest label in RESULTS; so if the information is inaccurate, then this should be updated by district staff.

Action #7: All FFT delivery staff involved in FFT Current Reforestation should think about effective ways to ramp up CR in their AOP given the extra \$10 MM starting in 2015/16.

Action #8: FFT delivery staff should let Matt LeRoy know what their mapping needs are so those needs can be addressed on the RPB Gallery, and let Matt know if they have any issues using the Gallery. Also:

- Matt will send link to RPB Gallery to all FFT delivery contacts
- Matt will set up a mapping tutorial for interested staff regarding use of the Gallery
- FFT staff using the Gallery should ensure that they download the geodatabase as it is a much more effective way of using the mapping
- Matt will organize Avenza tutorial for handheld devices
- Matt will ask Duncan Richard to develop app for iPads given the number of people using iPads in the field
- For GAR mitigation openings, will provide link to whether some harvesting is possible or not in UWR and WHAs.

Action #9: Nigel to provide further links on the LBIS <u>FFT Guidance website</u> to related guidance documents like the <u>Tree Species Selection Tool</u>.

Action #10: Nigel Fletcher will send the draft FFT First Nations consultation and information sharing guidelines to FFT contacts for review.

Action #11: Neil Edwards with First Nations Relations Branch is looking for FFT feedback on the "30-60-90 day" changes to First Nations consultation and information sharing based on the recent Williams court decision. FFT contacts should send any comments they have to Neil with cc to Nigel.

Action #12: FFT contacts to provide Matt LeRoy feedback on forming an FFT Seed Planning Working Group with staff from regions, districts, RPB and TIB. Also if FFT delivery staff have any issues with seedling requests, please contact Susan Zedel at Tree Improvement Branch.

Appendix E: Other Topics and Safety Comments/Questions

Feedback from the pre-workshop survey on 'other topics'. It may be possible to address this either in the Workshop Synopsis or in another manner.

Other topics

Are there other topics that need to be discussed at the Workshop that do not appear to be covered by the Sessions?

Are there other questions you need answered to help you plan and/or deliver FFT?

Wondering about the inclusion of fuel management into harvesting and silviculture. Proactive wildfire management is becoming more important. And, there's been a lot of discussion around the need to bring back broadcast burning, but there's been no action on it as far as I can tell. Does FFT have an opinion on the subject?

Does Branch want to recognize a District for any operational success stories from their perspective worth sharing?

I think that the lean mapping process that was done a year ago was not rolled out adequately and really needs to be revisited and improved. It is part of the process to monitor and evaluate the mapping process for continuous improvement.

Would appreciate a summary of the key learnings associated with the FFT field trips – specifically, a summary of the discussions re: juvenile spacing, PITA plots, and resultant changes/modifications to FFT JS criteria

AND re: wildfire, the how-to organize a big fire including the RESULTS component.

Summary of current status of Caribou mitigation with Canfor – final dollars allocated and to which Districts?

If BCTS has a TSL that is eligible to have the layout cost covered along with the silviculture cost, why do we have to wait until the sale sells to recover the layout costs. It would be more beneficial to have the layout costs covered prior to selling to allow for a more reasonable upset rate. In very low economic stands of dead pine, the layout costs are still impeding the sale of these types of stands, especially when the markets are on a down turn. With the mandate for BCTS to sell the advertise volume in the sale schedule on a quarterly basis, getting the approval on the layout costs prior to auction would lead to more success, without having to get ADM approval to auction a TSL below VCU costs?

Is there any interest in having FFT funding apply to major licensee silviculture costs if the CP meets the requirements for funding?

A session on Safety was intended when the pre-workshop survey was sent, but is not now on the agenda. The following input on Safety can be addressed as a follow-up to this Workshop.

Safety Tracking/Planning, update on Ministry/FFT Safe Certification What questions do you have on safety tracking/planning and Safe Certification? What are the main safety challenges you are facing related to FFT delivery? Are you getting the guidance you need on these challenges?

Is Tom Jackson been invited back to FFT as this was mentioned at the last workshop? Questions or challenges could be vetted through him for answers?

Solving operational issues or safety concerns by District staff? What are the issues and going concerns, where they solved?

BCTS is already SAFE Certified. No issues for us in delivering this.

Main safety challenges are access and under planting fire killed trees. Guidance has been good.

Our district office is currently scheduled for a detailed audit in October, with my main concern being that Safe Certification will require a great deal of work (BCTS has one FTE designated to ensure that all of the paperwork is complete and up to date) and no real idea as to how the district will deliver, even beyond FFT.

We need to pick a date and stick with it. Template letters for clients?

Challenge- planting (and even surveying) under dead standing timber continues to be a challenge. It is very costly to fall all snags, and still costly and less effective (and needs to be re-assessed with every project) to assess and then fall only the dangerous trees. When every tree is a potential danger tree, it is easy to miss some! And no, the guidance I've gotten has not really helped to solve this problem. We will also have issues even with safe access to some of the 2015 burned areas (unstable roads and slopes, for example).

Is using SAFE certified contractors really safer, or just passing the responsibility/liability onto someone else?

A safety challenge is the instability of extremely scorched trees and not being able to hand-fall danger trees. We need to use bulldozers to clear sites, or will just leave for natural succession.

Main safety challenge is roads frequency changes, not consistent especially between districts.

Reconnaissance of dead pine stands that are rehab candidates will pose a safety concern due to large amounts of blowdown and trees falling at random. Do we leave this to aerial recce? Heli, UAV?

How will Quality Assurance or internal auditing be approached?