

Business Planning Process
for
Land Based Investment Categories
Appendix: Questionnaire Feedback

January 4th, 2011

Prepared for:

John McClarnon and Allan Powelson
Forest Practices and Investment Branch
Ministry of Forests, Mines and Lands

Prepared by:

Terje Vold
Terje Vold & Associates Consulting Ltd

Table of Contents

Current Reforestation.....	3
Ecosystem Based Management.....	6
Ecosystem Restoration.....	11
Fire Management	16
Fish Passage	20
Forest Health.....	26
Invasive Plants	34
Inventory	38
Timber Supply Mitigation.....	41
Tree Improvement.....	46
Visuals.....	49

Note: The questionnaire feedback occurred at a time of organizational transition, for example, with references to forest regions. These have been subsequently replaced with Ministry of Natural Resource Operations regions.

Business Planning Process for LBIS Category: Current Reforestation

Interviewees:

- Kelly Osbourne, LBIDB – Current Reforestation Team Leader
- John McClarnon, FPIB

There are four activities:

1. Planting, brushing, survey regarding land status, backlog planting assessments, and s. 108 liabilities (restoring licensee areas burned by fire)
2. Short rotation pilots
3. Assessments of community watersheds and fisheries sensitive watersheds impacted by the MPB and wildfire
4. Plant previously sown seedling for backlog reforestation and wildfire restoration on woodlots.

The focus on the questionnaire feedback is on activity #1 as it represents about 98% of the category budget in FY 2010/11; some of the responses also apply to #2

Note: John McClarnon kindly completed some of the questionnaire prior to the interview.

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- FFT Strategic Plan
- FFT Program Management Plan 2007 (latest on website)
- FFT Business Case
- FFT Business Rationale (fed by the Business Case and prepared by FPIB)
- Management Unit Business Plans
- Silviculture Strategies
- Throne speech (e.g. related to short rotation pilots)

Resources: Who Is Involved?

Who is Investment Category Team Leader?

Kelly Osbourne, Planning Officer, Land Based Investment Delivery Branch

Who is on the Investment Category Team?

Regional FFT staff (18 staff)

Note: the FFT program currently covers the Southern and Northern Interior Regions (but not the Coast)

Who reviews the draft Investment Category Appendix 2 submission?

Kelly Osbourne, LBIDB, and Al Powelson, FPIB

FFT Corporate Sponsor (tbd)

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

FFT Corporate Sponsor (tbd) and Kelly Osbourne, LBIDB

Who provides key information?

Regional FFT staff

Delivery agents: regional and district staff, consultants and TFL holders - those involved in delivering management unit budgets

Who is responsible for delivering the Investment Category outputs?

Land Based Investment Delivery Branch

FFT team who are project leads are also accountable

What is role of headquarters, regions and districts?

All delivery agent MU budgets are proposed by recipients/BCTS then reviewed by HQ LBIDB staff and desired areas / treatment profiles prioritized based on direction in LBIS and cost considerations. Draft Appendix 2 allocations are then built and forwarded to FPIB.

What is role of other agencies (provincial, local and federal)?

Very little involvement with other agencies

MOE is involved in the community watershed and fisheries sensitive watershed assessments.

What is role of licensees and BCTS?

FFT Recipient Agreement Holders (RAH) currently perform the majority of the work in the FFT MU and initiate the planning process based on their previous years work

TFL holders prepare and submit proposals. There are about 4-5 TFLs involved in FFT delivery.

BCTS is transitioning towards taking over the surveying of FFT innovative timber sale license (ITSLs) subsequent planting and management of those blocks, planning is coordinated with the TSO's and FFT Regional staff

What is role of any other delivery agent for this Category?

Recipient Agreement Holders (RAH) are competitively awarded consultants who have a three year contract to deliver the projects on the ground in specific management units.

BCTS is more involved in delivering FFT projects.

PwC's roles is with projects for about 4-5 TFLs. Kelly with LBIDB tries to review these projects.

Resources: Key Information Sources

Data system(s) used?

RESULTS

Note: PINES/FIRS are delivery related data systems (not for business planning)

Management unit documents used?

GIS net down products exist by MU that reflect RAH spatial analysis work (this is more often used than silviculture strategies)

Other information used?

NA

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Annual planning based on Regional MFR Staff led management unit budgets based on trees online, existing plantation maintenance, and surveying new areas for reforestation.

Other

Are there any other key points regarding the business process for this Investment Category?

A review of the FFT program has been completed by IAAS and a report with recommendations is expected soon. Note: focus on delivery so may not have implications on the strategic business planning process

A unique aspect of this category is that funding is commitment for a 2-year period. Each new fiscal year, therefore, there are substantial fixed costs set by the second year commitments. Also there are required costs under s. 108 liabilities which can be significant. For example, s. 108 requirements were about \$ 2 million but maybe closer to \$17 million in 2010. These fixed costs can represent about 60% of each year's budget.

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

FFT Regional Staff (Current Reforestation Team)

Business Planning Process for LBIS Category: Ecosystem Based Management

Interviewees

- Andy Hall, Coast Forest Region, EBM Team Leader
- Rory Annett, District Manager – Campbell River Forest District, and EBM Implementation Manager

Note: Andy Hall kindly completed the questionnaire before the call with Rory Annett; interview notes at the call augment Andy's feedback

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- Premier's Office – Throne Speech: very interested in EBM
- March 2009 EBM Implementation Carr / Konkin letters to First Nations and Joint Solutions Project (forest licensees and Rainforest Solutions Project) and ensuing process terms of reference

Note: focus is Central/North Coast Plan area and involves these activities (except for the multi-year projects noted below most are for 1 to 2 years then complete; they are all dependent on LBIS funding):

- Strategic Landscape Reserve Design (SLRD)
- Terrestrial Ecosystem Based Mapping (TEM)– multi-year
- Sub-Regional Timber Supply Impact Assessments and Conservation Gap Analysis
- Hard Reserve designation
- Land Use Order 2014 review
- Enabling Conditions – North Coast TSA forest licensee chart reconciliation and First Nations forest tenure allotment
- Experimental Watershed for Ecosystem Monitoring –multi-year (there may be other funding sources for this such through the Adaptive Mgt Steering Ctte)

Resources: Who Is Involved?

Who is Investment Category Team Leader?
Andrew Hall, Coast Forest Region

Who is on the Investment Category Team?
EBM Implementation Technical Liaison Committee with First Nations, Forest Licensees and provincial government representatives

Context:

The Land and Resource Forum (LRF) provide overall direction for EBM implementation. The LRF includes First Nations and agency representatives including MFML and NRO

EBM Implementation Manager (Rory Annett)

The LRF has two key committees to help deliver that direction:

- Adaptive Management Steering Committee
- Technical Liaison Committee (TLC)

Who reviews the draft Investment Category Appendix 2 submission?

EBM Implementation Manager – Rory Annett;

Coast Region Operations RSM - Denis Collins

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

EBM Implementation Manager – Rory Annett;

Coast Region Operations RSM - Denis Collins

Who provides key information?

EBM Implementation Office

EBM Implementation Agencies (MFR; MOE; ILMB) (Now NRO, MOE, and MFLM)

First Nations (Coastal First Nations; Nanwakolas FN)

Forest Licensees including BCTS

Coast Region Forest Tenures Team; Forest Research Team; Forest Inventory

TEM consulting community

Who is responsible for delivering the Investment Category outputs?

Delivery can come from 3 alternatives depending on project needs:

- TEM – currently being delivered by PWC & Forest Licensees with consultants under the “FIA” model; there is potential for MFLM inventory to oversee TEM delivery using qualified consultants;
- SLRD Completion - currently being delivered by PWC & Forest Licensees with consultants and licensee staff under the “FIA” model; there is potential for MNRO to oversee SLRD delivery;
- FN Forest Tenure & Licensee chart review – MNRO to deliver with assistance from consultants
- Sub-regional Assessments (2014) – MNRO to deliver
- Experimental Watershed – MNRO to deliver with assistance from NGOs

What is role of headquarters, regions and districts?

- EBM implementation oversight – MNRO Coast Region Executive director; RSM and MFR EBM Manager (Rory Annett)
- TEM -MFLM research forest ecologists and MOE – Corey Erwin, can provide assistance with project scoping and quality control
- SLRD – NRO (+ILMB) region to coordinate SLRD project; NRO (MFR) district to complete some of the SLRDs.
- Hard Reserves – NRO (region) and MOE to coordinate project delivery and provide experts ie: forest ecologists and wildlife biologists
- FN Tenures and chart review – MNRO Regional and district forest tenure staff to deliver and provide expert advice
- Sub-regional assessments – Regional MNRO to deliver with expert advice from

MFLM – FAIB – Timber Supply Analysts

What is role of other agencies (provincial, local and federal)?

MOE Forest Ecosystems Specialist and the Conservation Data Center – set TEM standards; house final TEM information, EBM Implementation Office (ILMB – Victoria); the ILMB Board ; and First Nations (Coastal FN and Nanwakolas) provide overall EBM implementation; mandate and guidance.

What is role of licensees and BCTS?

- The projects and cost estimate were based on information provided by forest licensees involved with EBM implementation and further consultation with ILMB, MOE, and key FN representatives.
- Assist with delivery of projects (TEM; SLRD's; Hard Reserves; & Subregional Assessments)
- Assist with Forest Tenure staff in reconciling forest licensee chart areas and identifying FN forest tenure opportunities

What is role of other organizations in administering or delivering the Category Strategy?

PWC – currently involved in administration of Forest licensee delivery of TEM and SLRD projects

PWC and forest licensees could be involved with administration and delivery as per above response.

Resources: Key Information Sources

Data system(s) used?

TEM – Conservation Data Center and the ILMB Land Resource Data Center – to house final products

RESULTS – to provide depletion updates prior to TEM / SLRD / Subregional assessments

ILMB LRDW and the EBM Data Center – forest based resource including most recent focal species habitat models

Management unit documents used? N/A

Other information used? (please specify)

March 2009 EBM Implementation Carr / Konkin Letters – outlining provinces commitments for EBM Implementation

South Central Coast (SCC) Order and Central and North Coast (CNC) Order under the *Land Use Objectives Regulation* (2009)

Coastal First Nations and Nanwakolas FN Reconciliation Agreements

SLRD Framework Agreement (SLRDs and Conservation Gap Analysis); SLRD

Template and Work-plan; LUOR 2014 Terms of Reference; Focal Species thresholds;

Adaptive Management Steering Committee terms of reference

TEM RIC Standards

Adaptive Management Steering Committee - TEM Strategy April 28, 2009

Experimental Watersheds EBM Working group report

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Draft Appendix 2 budget request is for \$1.3 million per year for next 3 years. About 50% of the funding would support TEM projects, and about 50% the remaining activities. Had originally asked \$3 per year to support full TEM work, but paired that down so current request is for full and partial TEM work. LBIS is essentially the sole source of provincial government operational funding for EBM implementation.

The TEM work is particularly critical as it is a required inventory needed to identify reserve areas and areas available for timber harvesting so that EBM objectives for ecological and human well-being can be attained. The human well-being side of EBM also deals with issues such as health care and education.

Some of the activities are leveraging in kind support from EBM project partners such as BCTS and forest licensees and potentially ENGO's who are partially paying for SLRD work

Below is detailed chronology provided by Andy Hall of LBIS EBM budget work for both FY 2010/11 and 2011/12 to date. Those in *italics* are areas of agreement or endorsement by the noted parties.

Initial Budget development:

May 2010 - Cross Agency 3 year EBM Implementation Budget Proposal - EBM Implementation Director Jennifer Tudhope requested MFR, MOE, and ILMB to prepare a 3 yr EBM Implementation budget request up 2014 (the end of the current EBM Implementation Phase)

May 21, 2010 – request **TEM** priorities and costs from MOE Corey Erwin and MFR Andy MacKinnon / Sari Saunders

June 2, 2010 – meeting / tel com with MFR Timber tenures staff (Greg Gage / David Flegel) re implementation budgets needs for **EBM Enabling Conditions** – specifically FN Tenure apportionments as per Reconciliation Agreements and Chart area reconciliation.

June 3, 2010 – conference call with Wally Eamer, **Nawakolas FN on EBM** funding proposal – *TEM is highest FN priority*

Proposal Review:

July 15, 2010 – reviewed **LBIS EBM funding proposal** with Rory Annett MFR EBM Implementation Manager – *raised concerns about initial TEM estimates, capacity to undertake and rational for doing given the market conditions for the C/N Coast.*

July 21, 2010 – shared **LBIS EBM funding proposal** with CFCI forest licensees for their review and comment (through Stacy Cuzzocrea) – this resulted in several informal conversations with CFCI reps on the proposal.

August 3, 2010 – worked with John McClaron to develop **LBIS EBM funding proposal**
Rational

May 2010 – MFR - **LBIS funding request** on behalf of CFCI for VRI; TEM; SLRD; and sub-regional assessments (approx. \$900K) – MFR and CFCI forest licensees requested LBIS assistance for these projects for 2010/ 2011 – *funding provided*

September 12, 2010 – EBM Provincial reps discussed **LBIS EBM funding proposal**

September 30, 2010 – TLC EBM Implementation meeting – introduced **LBIS EBM funding proposal** to the TLC – described process and requested further opportunities for their review and input on the proposal. *TLC endorsed the proposal and requested input into its refinement*

October 8, 2010 – Tel com with Al Powelsen and Kelly Osborne to discuss **LBIS EBM funding proposal** – projects, unit costs, priorities, provincial options, mandates.

October 8, 2010 – **TEM** conference call on mapping standards and priorities for 2010 allocation – *this call provided insight into TEM costs, standards and mapping priorities for future projects.*

October 18, 2010 – TLC reviewed **LBIS EBM funding proposal** – to provide review and comments on projects, priorities, units costs and delivery capacity - *TLC agreed TEM is the highest EBM Implementation priority.*

October 22, 2010 – Tel com Andy MacK – re **TEM** mapping standards and priorities – confirmed comments from October 8 conference call.

November 1, 2010 – TLC (included key consultant and prov. TEM reps) reviewed **TEM funding proposal** – to provide info on TEM costs, LU priorities, delivery capacity – *agreed on TEM mapping standards, costs and priorities over the next 3 years that would make the project implementable.*

November 4, 2010 – **Experimental Watershed design meeting** – MNRO (MFR) forest research team met to scope out this project – *it was agreed that there were opportunities for this project to access / link to funds from Non government organizations such as the Hakai foundation.*

Proposal Endorsement:

November 8, 2010 – Review **LBIS EBM funding proposal** with MFR EBM Implementation Manager Rory Annett - *Endorsed*

November 9, 2010 – Review **LBIS EBM funding proposal** with RCO RSM – *specifically reviewed delivery options - Endorsed*

Other

Are there any other key points regarding the business process for this Investment Category? N/A

Review

Besides those being interviewed now, who else should review a draft process description and diagram?
 Denis Collins – RCO RSM
 EBM Implementation provincial team
 John McClarnon and Al Powelson

Business Planning Process for LBIS Category: Ecosystem Restoration

Interviewees

- Greg Anderson, Manager, Ecosystem Restoration, Range Branch (Team Leader)
- Al Neal, Provincial Strategic Planning Leader, Ecosystem Restoration, Range Branch (Alternate)

Note: Al Neal kindly completed the Questionnaire – the feedback below is mainly from Al augmented with interview notes.

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- Draft Ecosystem Restoration Provincial Strategic Plan 2009
- Rocky Mountain Trench Blueprint for Action, 2006 (Example of District plan)
- District-based ER Strategic plans (at various stages)
- Premier's Office announcing the ER program using targeted FIA funding

Background

Ten districts currently have multi-sector Ecosystem Restoration (ER) Steering Committees. Typically 8-10 different organizations are represented on the district level ER Steering Committees. The membership varies, but typically includes provincial government agencies (including Forest District ER team leaders; habitat staff from MOE), First Nations, forest licensees, federal government (e.g. Dept of National Defense in cariboo; Parks Canada in Rocky Mtn Trench) and non-government organizations (e.g. BC Wildlife Federation, Grasslands Conservation Council). The Steering Committee is akin to a Board of Directors. There is high level involvement in most Steering Committees. For example former Minister of Forests David Zirnhelt chairs the ER Steering Committee in the Cariboo. The Rocky Mountain Trench Steering Committee has representation from Chief Forester of Tembec.

In order to keep the size of the ER Steering Committees manageable (e.g. to about 8-10), NGOs in some cases have been asked to form a Society. For example, the Rocky Mtn Trench Natural Resources Society was formed to represent 10 groups by providing one representative on the Steering Committee. In the Rocky Mtn Trench, Tembec represents several forest licensees on the Steering Committee. The Rocky Mtn Trench ER program has been around for about 15 years, whereas many of the other ER Steering Committees have been working for the last 4 years.

The ER Steering Committees support the development of a District ER Strategic Plan prepared by an operations group. The District ER Strategic Plans are at varying stages of development. The plans evaluate potential projects by assigning risk/consequences points; for example what are the First Nations concerns/values that might potentially be

destroyed by wildfire that an ER project could protect. An operations group supports the ER steering committees by getting the contracts out for the work that needs to be undertaken consistent with the Strategic Plan or priorities set by the Steering Committee while the plan is under development.

The Rocky Mountain Trench Blueprint for Action provides an example that can be used to set up the ER Steering Committees and develop a strategic plan.

It is left to the districts themselves to decide if they want to be involved in ER; However, if they choose to participate, one of the prerequisites is that they must form a district level multi-sector ER Steering Committee.

Another requirement of the ER program is that effectiveness monitoring must be done for projects so we 'learn by doing' via adaptive management. AI is working on provincial standards for ER monitoring. Previously, each Steering Committee had scientists who felt that monitoring should be done 'this way' – which meant the approach varied too much from district to district

The focus of ER program initially has been fire-maintained (NTD 4) ecosystems. The intent is to look at other ecosystems in need of restoration as the program develops including, for example, Garry Oak ecosystems, alpine ecosystems, and Aspen parklands. Currently, there is interest in the Coast to start a district-level ER program.

The Premier's announcement regarding the ER program including a commitment for \$2 million/year of funding for the first 3 years using FIA. With FIA funding no longer available, the ER program received about \$1 million last year from BC Gaming. That \$1 million helped leverage an additional \$4 million from other sources.

For the Rocky Mountain Trench, ER never had direct operational funding. It was all about collaborative involvement where finding suitable funding sources was in part the 'glue' that kept the committee working well together.

It is estimated that from every \$1 of seed funding from LBIS that can be provided to the ER program, it can attract an additional \$4-5 of partnership funding from other sources. For example, the Habitat Conservation Trust Fund helps on many projects. Another example is in the Rocky Mtn Trench area where Job Opportunity Program funds were used to support ER activities and which in turn provided over 100 individuals needed work. LBIS is the only source of 'seed funding' and is vital to keep the ER program going and to attract partners and funding from other sources.

In addition to providing seed funding to leverage other funding sources, LBIS ER funding also helps fill 'gaps' where high priority ER activities can not be funded from other sources.

The \$2 million LBIS budget request allows the ER to respond to interest from the Coast Region to initiate a program in one of their districts, and to respond to interest in northeast BC for an ER program that addresses aspen parkland ecosystems.

Resources: Who Is Involved?

Who is Investment Category Team Leader?

- Greg Anderson, Manager, Ecosystem Restoration, Range Branch (Team Leader)
- Al Neal, Provincial Strategic Planning Leader, Ecosystem Restoration, Range Branch (Alternate)

Who is on the Investment Category Team?

Forest District ER Team Leaders facilitating multi-sector Ecosystem Restoration (ER) Steering Committees – there are currently 8 across the province.

Who reviews the draft Investment Category Appendix 2 submission?

Al Neal

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

Greg Anderson

Who provides key information?

District-based ER Team Leaders supported by consultation with and input from their respective ER Steering Committees. Provincial ER (Headquarters) provides strategic program level information to the submission.

Who is responsible for delivering the Investment Category outputs?

The ER Program is delivered by district based operational staff (reflective of the Steering Committee membership) who obtain assistance to either do the work “in-house” or manage contracts to see the work completed. The non-in-house work has been completed by consultants, unemployed forest workers, First Nations bands, Licensees staff and NGO groups.

The ER funding from LBIS goes to the districts to support priorities set by the ER Steering Committees.

What is role of headquarters, regions and districts?

Headquarters – Provincial ER Program: Provides guidance and expertise to district programs, sources funding and evaluates priority distribution, develops provincial scope strategic planning. In LBIS submissions, Headquarters collates the requests, compares projects across districts to determine funding priorities and evaluates trends in costs. Headquarters also works jointly with other branches and ministries including; Wildfire Management, Forest Practices, Climate Change Secretariat, Min. of Environment, Min. of Healthy Living and Sport to improve operations and establish synergies. ER takes a significant role on provincially established multi-agency committees including the BC Prescribed Fire Council and Integrated Fire & Ecosystem Leadership Team.

Regions - Have been sourced for expertise in ecologically-based research, Stewardship (FFT) and Fire Management Planning.

Districts – Facilitates local multi-sector ER Steering Committee, sources funding (leverages direct dollars through other ER Steering Committee sources – i.e. in 2009/10, nine different funding sources contributed over \$5.0 mil for ER project work), develops

local strategic ER plans, and participates in contract management or operational delivery of projects. For LBIS submissions, Districts meet regularly with their ER Steering Committees to determine their priority projects, develop cost estimates and funding options.

What is role of other agencies (provincial, local and federal)?

Other agencies are often members of local Steering Committees; for example, Min. of Environment are represented on all ER Steering Committees, Regional Districts are represented on several committees, the Dept. of National Defense sits on the Cariboo-Chilcotin ER Steering Committee, and Parks Canada is represented on the Rocky Mountain Trench ER Steering Committee. They contribute sources of funding, and help decide on priorities for treatment within the District and on their adjacent federal and municipal lands. In addition, due to the structure of the program many NGO groups are involved (40+) including; BC Wildlife Federation, Grasslands Conservation Council, First Nations Tribal Councils and Bands, Livestock Associations, Columbia Basin Fish & Wildlife Compensation Program, among others.

What is role of licensees and BCTS?

Both BCTS and Licensees participate actively in field operations and delivery of ER treatments. Major Licensees are represented at the ER Steering Committee table, and BCTS has the opportunity to participate on the ER Steering Committees and does so in some cases. Importantly, some of the work completed under ER planning and treatment process has been used to support Industry Certification schemes. As well, the Licensees recognize the value of the public goodwill that is extended to them through the work of the ER Steering Committees. BCTS is engaged on the operational phase when ER projects are undertaken.

What is role of other organizations in administering or delivering the Category Strategy?

Various consultants have been contracted to produce results at Headquarters and District levels including; strategic planning (eg. Forsite, Blackwell and Assoc.), in managing as 3rd parties (eg. Cascades and Rocky Mtn Trench), prescription development, and operational activities. Many companies have been involved all over the province in on-the-ground operational delivery.

Resources: Key Information Sources

Data system(s) used?

All ER polygons are treated under the auspices of signed treatment prescriptions, as such, they are entered into RESULTS, though it should be noted that because of the complexity and overlapping units and combinations of treatments, RESULTS is not a complete database of all activities occurring. Currently, each district is managing their own more detailed databases.

Management unit documents used?

ER provincial and District-level ER Strategic plans provide overall guidance. These have been generated by analyzing those documents and mapping products in “other information used” (below) and from running ER specific algorithms assembled by the ER Steering Committees.

Other information used? (please specify)

Historic Natural Fire Regime mapping, local Silviculture strategies, Licensee Forest Management plans, District planning layers (OGMAs, Rare and Endangered Sp., etc.), TEM (e.g. to determine the rarest ecosystems), District Fire Management Plans. It is important to note, that in addition, “effectiveness monitoring” is an integral part of ER treatment work the results of which feedback into the ER program to ensure continual improvements are made based on previous results.

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

The following 4 steps were provided by Al Neal in his feedback:

- Step 1. Contact is made with all District ER Team Leaders requesting a submission for ER project funding for the next fiscal.
- Step 2. ER Team Leaders with guidance provided by the district ER strategic plans and local operations group (who support the on-the-ground logistical support to ER Steering Committee) identify planning requirements and priority areas for treatment for the next fiscal year.
- Step 3. District ER Team Leaders bring forward a proposed list of priority projects to their respective ER Steering Committees for comment, final priority ranking, and collective approval. The list of endorsed projects is then provided to Headquarters for roll-up.
- Step 4. Headquarters ER collates the submissions, includes provincial scale projects and then rationalizes (in consultation with the district Team Leaders) the entire set of proposals with provincial scope and determines which projects will go forward for LBI funding within the funding levels approved.

Other

Are there any other key points regarding the business process for this Investment Category?

Local (district) decisions for activities are made through the use of a multi-sector Steering Committees. Usually multiple funding sources are being accessed and leveraged, so the co-operation of the ER Steering Committees is critical.

There is an interface between ER and fuel mgt program. For example, for an Invermere subdivision, there was a 50/50 split using funds from fuel mgt program (via UBCM) and funds from Columbia Basin Trust targeted at improving big horn sheep habitat. Nearly all ER activities are beneficial from a fuel reduction perspective.

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

District ER leaders

Business Planning Process for LBIS Category: Fire Management

Interviewees

- Lyle Gawalko, Manager, Fire Management, Wildfire Management Branch (WMB) - Team Leader
- Brian McIntosh, Coastal Fuel Management Specialist, WMB (alternate: fuel mgt)
- Ed Korpela, Regional Fire Management Specialist, Coast Forest Region, (alternate: landscape fire mgt planning)

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- 2003 Firestorm Provincial Review headed by Gary Filmon whose recommendations were accepted by the Premier. Implementation of the Review's recommendations led (among other things) to development of a:
 - Strategic Wildfire Prevention Program including fuel reduction
 - Regional Wildfire Planning Program
- 2010 BC Wildland Fire Management Strategy approved by the Assistant Deputy Minister's committee on Integrated Land Management
- Huge costs associated with the 2009 and 2010 fire seasons including approximately \$30 million in Crown investments lost due to fire in 2010 alone
- MPB killed forests which will pose an increased wildfire risk for about 20 years.

Background Issue

An LBIS Business Rationale has been submitted for both fuel management and landscape fire management planning. Wildfire Management Branch (WMB) is awaiting direction whether the fuel mgt component will be funded under LBIS. The LBIS category name was changed from 'fuel mgt' to 'fire mgt'.

The landscape fire mgt planning would be new activity intended to protect natural resource values and capital investments such as silvicultural treatments that may be at risk with wildfire. The planning might identify a variety of ways to reduce fire risk and provide a more fire resilient landscape including use of prescribed burns, targeted timber harvesting and fuel mgt. LBIS funding would be used initially to develop the methodology for doing effective landscape fire mgt planning; this may involve pilot project(s). This activity is reliant on LBIS funding given decreases in WMB operational funds.

Fuel management activities include support for the development of Community Wildfire Protection Plans (CWPPs) and funding for operational treatment projects that wildfire risk. There has been significant federal/provincial funding for fuel reduction projects in past (e.g. Job Opportunities Program, Community Adjustment Fund, and Federal Mountain Pine Beetle funding) – but these funding sources are ending and no other

funding sources other than LBIS has been currently identified. If other funding can be secured, a commensurate lower budget request can be made using LBIS.

Resources: Who Is Involved?

Who is Investment Category Team Leader?

- Lyle Gawalko, Manager, Fire Management, Wildfire Management Branch (WMB) - Team Leader
- Brian McIntosh, Coastal Fuel Management Specialist, WMB (alternate: fuel mgt)
- Ed Korpela, Regional Fire Management Specialist, Coast Forest Region, (alternate: landscape fire mgt planning)

Who is on the Investment Category Team?

Fuel Mgt: Provincial Fuel Management Working Group (PFMWG) which includes:

- Union of BC Municipalities (UBCM)
- First Nations Emergency Services Society (FNESS)
- Ministry of Forests, Mines and Lands (MFLM)

Fire Mgt Planning:

- Regional Wildfire Specialists

Who reviews the draft Investment Category Appendix 2 submission?

In addition to the respective teams noted above:

- Brian Simpson, Director, WMB
- Regional Staff Managers (Regional Management Team) for fire mgt planning

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

- Brian Simpson, Director, WMB

Who provides key information?

Fuel Mgt:

- Fire Centre Fuel Mgt Specialists
- Landscape mapping products such as Provincial Strategic Threat Analysis

Fire Mgt Planning:

- Regional Wildfire Specialists (note: for the first year as noted earlier the focus of LBIS funding would be on the development of a methodology to do landscape fires management planning so that it can be effectively undertaken)
- Fire Centre staff: they have expertise to help develop an appropriate methodology including hazard/risk mapping. They have developed models in national parks with the federal government which may be adapted for use outside of parks.
- Business Area 2 – Stewardship

Who is responsible for delivering the Investment Category outputs?

Fuel Mgt:

- UBCM, First Nations (FNESS), and local government

Fire Mgt Planning:

- This will likely be addressed as the methodology for doing landscape fire mgt planning is developed; cooperation with other stakeholders may be how completed plans get delivered on the ground

What is role of headquarters, regions and districts?

Fuel Mgt:

- Regions and districts are involved, for example, districts play a key role in helping to deliver treatments by issuing tenures (licenses to cut)
- Regional fuel and fire specialists inform districts about fuel mgt activities

Fire Mgt Planning:

- BA 2 – Stewardship staff which includes regions and districts will assist on methodology development
- Regional Staff Managers/Regional Mgt Teams provide input on the methodology
- The methodology will need to comprehensively identify all the values that may be at risk to wildfire including species at risk, community watersheds, First Nations cultural sites, private land, etc

What is role of licensees and BCTS?

Fuel Mgt:

- Not a great deal; they are aware of the Community Wildfire Protection Plans
- Those preparing CWPP are encouraged to link up with licensees

Fire Mgt Planning:

- Likely more interior licensee/BCTS input on the methodology re: landscape fire mgt planning
- There have been discussions regarding a possible FRPA objective for fire; should that occur then licensees would need to address that objective in their Forest Stewardship Plans. A similar fire objective under FRPA could also apply for community forests and woodlots where those tenure holders would need to address that objective in their respective plans.

What is role of other organizations in administering or delivering the Category Strategy?

Fuel Mgt:

- As noted earlier, UBCM, FNESS and local government are the main organizations responsible for delivery.
- Several other organizations assist in the development of CWPPs and may assist in delivery. For example, on southern Vancouver Island, a Garry Oak group provided input into the CWPP. The Kootenay Interface Steering Committee which includes local fire halls, MFLM and regional districts cooperate in delivery. The Lake Cowichan Combined Fire Organization was founded in 1958 where government and forest companies have cooperated in delivery.

Fire Mgt Planning:

- As noted earlier, the initial focus on LBIS funding is to develop a methodology for undertaking landscape fire mgt planning; the implementation (delivery) of approved plans may be addressed in the methodology

Resources: Key Information Sources

Data system(s) used?

Fuel Mgt:

- FMIS – Fuel Mgt Information System – this is key as all applications for funding are routed through FMIS. WMB has a ranking process for evaluating project proposals.
- Approved Crew Projects database that documents treatments that have been done

Fire Mgt:

- RESULTS; forest inventory; WMB data, LRDW for other values
- District Fire Mgt Plans which are updated annually that include layer showing key resource values

Management unit documents used?

Fuel Mgt:

- Community Wildfire Protection Plans (CWPPs)

Fire Mgt:

- District fire mgt plans
- Other MU documents such as silviculture strategies

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Other

Are there any other key points regarding the business process for this Investment Category?

The Landscape Fire Management Plans are expected to have four sections:

1. introduction/legal framework
2. description of the fire environment
3. integrated land mgt – what are the values that can be impacted by fire (e.g. First Nations values, infrastructure values, old growth management areas, recreation infrastructure)
4. fire mgt activities to reduce risk – these activities would then be eligible for future LBIS funding. Activities can include reducing fuel, modifying practices, use of prescribed fire, etc that can be undertake to reduce risk to key values

WMB has applied for additional funding from Treasury Board and from the federal disaster program, but nothing new has been secured. If funding from other sources is made available, the amount of funding request for Fuel Mgt can be reduced.

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

Respective teams for fuel mgt and landscape fire mgt planning

Business Planning Process for LBIS Category: Fish Passage

Interviewees

- Ian Miller, Manager, Sustainable Forest Management, FPIB
- Richard Thompson, Unit Head, Monitoring & Reporting, MOE Ecosystems Protection & Sustainability Branch
- Shirley Turcotte, Forest Projects Coordinator, FPIB
- David Maloney, Forest Water Mgt Officer, Sustainable Forest Mgt, FPIB

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- MOE Service Plan 2010/11-2012/13
- Government's Great Goal: *Lead the world in sustainable environmental management, with the best air and water quality, and the best fisheries management, bar none*
- Federal *Fisheries Act* legal requirements to maintain fish passage and 2000 DFO report criticizing BC's efforts in that regard
- Provincial *Water Act* and *Forest and Range Practices Act (FRPA)* requirements
- Forest Practices Board's Special Investigation: *Fish Passage at Stream Crossings* in 2009, and its Special Report: *The Effect of Forest Road Crossings on Fish-bearing Streams*
- Assistant Deputy Minister FRPA Joint Steering Committee (JSC) direction to the Joint Management Committee (JMC) to better understand the scope of fish passage issue and take measures to address it
- *The Strategic Approach for Fish Passage in British Columbia: Protocol for Planning and Prioritizing Culverted Sites for Fish Passage Assessment and Remediation 2009*

Background

The intent of the program is to address fish passage problems at stream crossings, collaboratively with industry and the agencies, and focus on prioritizing works to obtain the greatest return with the limited funding available. The areas of primary focus have been the assessment of sites to obtain more accurate scope of the provincial problem and the subsequent remediation of identified priority problem crossings. Fish passage remediation works have been limited to historic forest road crossing structures not subject to FRPA or Forest Practices Code requirements (e.g. culverts installed before 1995). The program is currently solely dependent on LBIS funding. It is recognized that the issue is larger than just forestry and is anticipated to necessarily expand to include problem crossing structures managed by other sectors such as railways and public roads. There could be partnerships in future with, for example, BC Hydro who may be interested in

mitigating impacts on fish by contributing to fish passage restoration.

The Fish Passage Technical Working Group –TWG (i.e. the LBIS Category Team) developed the *Strategic Approach to Fish Passage in British Columbia* in 2008/2009. The strategic approach considers watersheds on a holistic scale and sets out the manner in which both watersheds and individual structures are prioritized for assessments and replacement. The intent is to understand which structures are causing the greatest impact, and to fix the ones that provide the greatest return from a fish perspective. Note: The FRBC watershed restoration program helped restore fish passage but did not always do so from a strategic perspective.

LBIS funding is used :

- To undertake assessments as per the *Strategic Approach to Fish Passage in BC*
- To replace priority structures identified in assessments
- By TWG to undertake quality assurance (QA) that the professional reliance approach to delivering the program is working (e.g. are licensees in fact using the *Strategic Approach?*), to provide training (e.g. on the Strategic Approach and field assessment methodology) and communications (e.g. via bulletins), and to allow the TWG necessary funds to build GIS-based tools and data management systems to facilitate project planning, priority setting and proposal evaluation.

Key outcomes from the investment include:

- We get knowledge back via assessments regarding scope of the issue
- We get km of fish habitat returned/restored
- We offset new problems being developed through extension

Further details of the benefits of the program include:

- Increase fish populations by returning habitat and associated economic benefits (don't have estimate of this but it may be considerable)
- Potential improved access to timber e.g. if conflicts are reduced with DFO then that might expedite operational approvals
- Potential contribution of the work undertaken by licensees towards forest certification (e.g. they recognize a problem exists in the area they are operating albeit from historic operations and they are dealing with it by submitting projects for consideration to receive LBIS fish passage funding)
- Is a more cost effective way of restoring habitat than in-channel restoration projects
- Improves connectivity of aquatic ecosystems for species other than just fish.
- Free movement of aquatic organisms is key for climate change adaptation.
- In areas of the province with aquatic species at risk, (fresh water mussels, westslope cutthroat trout) may contribute to recovery plan actions
- Mitigating additional problems through extension programs and training for practitioners related to fish habitat and fish passage.

The GIS-based tools that TWG uses include:

- Fish value ranking for all third order watershed (done by UBC/DFO/MOE) – information that is still used to help identify fisheries sensitive watersheds
- The rankings for about 19 000 third order watersheds is then aggregated to watershed groups using a normalized score (fish value from Watershed Evaluation Tool)
- The rankings are higher on the Coast given salmon populations
- Ecological drainage units were identified to better distribute LBIS funding where watershed groups are priorities within those units. Only the top two priority watershed groups within each unit were initially targeted for assessment and restoration work. This was expanded somewhat last year with assessments now being conducted in the top 5 ranked watershed groups.

The Fish Passage category is currently targeting over 5,000 crossing assessments and 200 km habitat restoration i.e. the habitat access restored to fish by replacing over 20 historic fish passage problem structures. The GIS tools used by TWG help assess proposals to determine if they are worthwhile. For example, how many km of habitat will be restored by a proposed project.

PwC worked with major forest licensees who were required to work together in management units (TSAs and TFL's) to propose priority assessment and restoration projects following the *Strategic Approach* within the priority watershed groups.

This is the third year of targeted funding for fish passage. Prior to that, licensees could use FIA funds for fish passage work at their discretion. Prior to FIA, FRBC funded the watershed restoration program that provided funding to replace historic structures that impeded fish passage.

Resources: Who Is Involved?

Who is Investment Category Team Leader?

- Ian Miller, Manager, Sustainable Forest Management, MFLM FPIB

Who is on the Investment Category Team?

The Fish Passage Technical Working Group (TWG) consists of:

- Ian Miller, Manager, Sustainable Forest Management, MFLM FPIB (lead)
- Richard Thompson, Unit Head, Monitoring & Reporting, MOE Ecosystems Protection & Sustainability Branch
- Shirley Turcotte, Forest Projects Coordinator, FPIB
- David Maloney, Forest Water Mgt Officer, Sustainable Forest Mgt, MFLM, FPIB
- Laurence Bowdige, Forest Mgt Strategy Officer, Ministry of Natural Resource Operations (MNRO), Land Based Investments Delivery Branch (LBIDB)
- Brian Chow, Chief Engineer, MNRO Engineering Branch
- Craig Mount, Aquatic Habitat Geomorphologist, MOE Knowledge Management Branch
- Peter Tschaplinski, Fish-Forestry Interactions and Watershed Research, Ecosystems Protection & Sustainability Branch. MOE

- Bradley Koroluk, Department of Fisheries and Oceans

Who reviews the draft Investment Category Appendix 2 submission?

In addition to TWG:

- Kelly Osbourne, LBIDB

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

- Ian Miller and Richard Thompson

Who provides key information?

Each year an understanding of the scope and distribution of the issue improves as assessments are completed using the *Strategic Approach*

Information is provided by licensees and BCTS in their Proposals, and TWG uses its GIS-mapping tools to evaluate proposals.

Who is responsible for delivering the Investment Category outputs?

Forest licensees and BCTS are responsible for delivering the program on the ground. They may hire a consulting firm to coordinate or conduct the work.

The TWG seeks funding from the LBIS and then works with the LBIDB on delivery. The TWG develops a Call for Proposals. PwC is under contract with the LBIDB to work with the forest licensees who are interested in responding to the Call for Proposals, and ensures proposals submitted are available for TWG evaluation. PwC is also responsible for financial administration of approved projects

Over the last 3 years since the program received targeted FIA or LBIS funding (in the \$3 to 5 million range), there has been over \$10 million in requests from Proposals. If we had \$10 million in funding, that might generate \$15 million or more in proposals in the future.

What is role of headquarters, regions and districts?

Brian Chow, the Chief Engineer with Engineering Branch establishes engineering standards for stream crossing remediation projects and also works with regional and district engineers to review proposed projects for conformance to program and ministry standards and requirements. Other regional and district staff are not normally involved but may provide advice and review of priorities.

What is role of other agencies (provincial, local and federal)?

DFO continues to have a significant contribution and interest in this program and participates on the TWG.

What is role of licensees and BCTS?

Forest licensees and BCTS prepare proposals in response to the Call for Proposals, and they deliver approved projects (assessments and restoration).

What is role of other organizations in administering or delivering the Category Strategy?
PWC – provides the financial administration of approved projects and assists in the Call for Proposals as noted earlier.

LBIDB provides overall coordination of delivery and reporting of the range of LBIS activities for which it is responsible.

TWG assesses and approves project proposals.
TWG conducts quality assurance projects and uses information to adapt and improve the strategic approach.

Resources: Key Information Sources

Data system(s) used?

Watershed Evaluation Tool... The fish value output has been used to set priority watershed groups and watersheds (third order)

A Fish Distribution stream crossing model has been developed by the TWG. The model utilizes numerous Corporate GIS layers including the new Corporate Watershed Base, FTEN and DRA roads layers, known fish observations, fish obstructions and the TRIM DEM. The model is a tool used by licensees and the TWG to plan, prioritize and review assessment and restoration activity.

A database of all assessment data is being developed (Provincial Stream Crossing Information System (PSCIS) currently held as a geodatabase). RFP for development has been placed on BC Bid with the goal to have a multi user corporate data system running by fiscal year end.

At the remediation stage, a spreadsheet with all of the sites proposed by the licencees for remediation is compiled as part of the selection process. This spreadsheet includes location, amount of habitat to be gained through repair / replacement, proposed cost, cost/benefit ratio, etc. This information is reviewed against provincial GIS data, modeled and known fish distribution, and the original assessment results for each site. The spatial context for each site (e.g. Do several structures need to be done to get the full benefit?) is also considered when deciding how to prioritize the sites for funding approval.

Management unit documents used?

Assessments watershed groupings using the *Strategic Approach* are akin to Mgt Unit silviculture strategies in that priority areas for work are identified.

Other information used? (please specify)

Licensee/BCTS responses to previous Call for Proposals indicate that there is interest to undertake about \$10 million in projects per year. Given the size and scope of the issue, even at that level it may take more than 20 years to fix key historic structures needing replacement. There is a need to go to Treasury Board at some point

There are approximately 1.9 million kilometres of stream in BC of which more than 1 million kilometres are estimated to be fish habitat. There are over 430,000 road stream crossings with more than 320,000 of those occurring on either confirmed or modeled fish habitat. Crossings on current Forest Service Roads and roads under permit account for almost 130,000 of these crossings. Conservative estimates of the total number of fish passage problems on FSR/RP roads (excludes non status roads) are over 30,000. With current funding, we are replacing about 20-30 structures per year.

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Also delivery information in LBIS fish passage documents:

- Call for Proposals letter that was developed and approved by the Fish Passage Technical Working Group (TWG) distributed by PwC to recipients involved in the fish passage program in previous years and to recipients that may be in a position to complete assessment projects in the current fiscal year – May 13
- Recipients assemble their list of potential projects to be completed including site plans and structure designs, structure replacements (remediation) and watershed assessments. In the Call for Proposals, recipients have been instructed to submit one coordinated response per MU – responses due May 25
- Proposed projects are assembled and collated by PwC into a single spread sheet. A high level review is completed to ensure that identified eligibility requirements are met in the submission, any ineligible projects are flagged for removal and incomplete or unclear information is clarified – May 28

Collated materials are forwarded to TWG and then staff from MOE (and others) apply criteria to the proposed projects to identify those that are the highest priority for completion. June 4

Other

Are there any other key points regarding the business process for this Investment Category?

Costs of getting equipment to a remote area is factored into proposals received e.g. the area may be a priority for structure replacement from a fisheries perspective, but to do so cost effectively may be difficult.

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

Technical Working Group

Business Planning Process for LBIS Category: Forest Health

Interviewees

- Tim Ebata, Forest Health Officer, FPIB (Team Leader)
- Lorraine Maclauchlan, Regional Entomologist

There are 6 sub-categories (in 5 programs):

-Douglas–fir and Spruce Beetle Infestation Detection* -Mountain Pine Beetle*	Bark Beetle program
-Aerial Overview Survey (AOS)	Annual Reporting of Forest Health Conditions
-TSA Forest Health Strategy Updates	TSA Forest Health Strategies
-Western Spruce Budworm Management* (WSBM) and Douglas-fir Tussock Moth treatments* (DFTM)	Defoliator program
-Gypsy Moth Eradication Program*	Trade protection

* includes detection and treatment activities

Note: Tim Ebata and Lorraine Maclauchlan kindly completed the questionnaire prior to the interview. Some additional notes or clarifications from the interview are also provided below.

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- Business Transformation (Feb 2010)
- MPB Action Plan

Resources: Who Is Involved?

Who is Investment Category Team Leader?

Tim Ebata, Forest Practices and Investment Branch (FPIB)

Who is on the Investment Category Team?

Province-wide planning team

- FPIB Forest Health Officer
- Regional Entomologists
- Regional Pathologists

Who reviews the draft Investment Category Appendix 2 submission?

Al Powelson, Lorne Bedford, John McClarnon, Regional / HQ Forest Health team in

FPIB

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

Lorne Bedford, Jim Sutherland (Manager and Director, FPIB)

Who provides key information?

Tim Ebata and delivery leads (e.g., Lorraine Maclauchlan for WSBM and DFTM, Jennifer Burleigh, gypsy moth, etc.)

In FY 2010/11, only \$0.5 million of the \$3 million request was funded for the mountain pine beetle activity but an additional \$1M was transferred from the fertilizer program, \$187K and \$300K of surplus from surplus Douglas-fir/spruce beetle and gypsy moth, respectively, were supplied to the MPB work in southeast BC. It is expected that the same areas identified in 2010/11 will require continued work to maintain their suppression BMU status, thus this prior request was re-submitted for FY 2011/12.

An important distinction between planning for bark beetle management activities and planning for other LBIS activities is that during the period between the finalization of Appendix 2 and the beginning of the beetle management activities, significant changes in beetle populations and licensee capacity to contribute to treatment efforts may alter the treatment priorities. Thus, it is not possible to confirm the specific units for treatment when Appendix 2 is finalized or the specific targets – only general units and targets can be identified at this time. If funding shortfalls occur for priority units, the consequences will have to be described to the CF to quantify the funding pressure in case surplus funds become available later in the fiscal year. Fortunately, treatments occur primarily in the last two quarters of the fiscal year. There is an analogy with the fire management program as it is impossible to predict with certainty exactly where and how many fires will occur and similarly where new beetle infestations will be discovered.

Who is responsible for delivering the Investment Category outputs?

Bark beetles are delivered by districts with regional support

Defoliator program is delivered by regions

TSA forest health strategy updates are delivered by region and districts

AOS is delivered by region with FPIB preparing the AOS report

Gypsy moth is delivered by FPIB

What is role of headquarters, regions and districts?

Bark Beetles - Districts submit requests to regions, regions rank and forward to HQ for provincial ranking based on specified criteria

Defoliators – all carried out in Southern Interior Region (SIR) by regional entomologists (minimal district involvement)

Gypsy Moth – all planning and operations carried out by HQ staff except for deployment of traps in provincial parks by regional staff (trap distribution coordinated by Canadian Forestry Service - CFS)

TSA Forest Health strategies – depending on complexity, regions coordinate efforts by district staff to update strategies.

What is role of other agencies (provincial, local and federal)?

Provincial – mainly MOE acting as the regulator of the IPM Act for aerial pesticide application; Min of Agriculture involved in the BC gypsy moth committee and in providing authority under the Plant Protection Act.

Local – Forest Service defoliator spraying is coordinated with regional districts and municipalities (e.g. City of Kelowna who have supported defoliator program up to \$50K in some years) to provide efficiencies

Federal – CFS provides some science, primarily in entomology with declining support in pathology; their focus has been to support CFIA efforts on invasive pest management; Canadian Food Inspection Agency (CFIA) – provides gypsy moth monitoring as part of their national mandate.

What is role of licensees and BCTS?

Licensees no longer play a large role in delivery of FH activities as they did under FIA during the now defunct DFAM transition. The Bark Beetle program is delivered under LBIS by districts (not licensees). Outside of LBIS and in the past, for bark beetle management, licensees were vital to management efforts to provide sanitation harvesting of critical infestations. BCTS as well. Small Scale Salvage Program was used to deal with harvesting small patches of infested timber not dealt with by licensees or BCTS. LBIS funding is used to treat the remaining infestations primarily using fall and burn.

Licensees have never had a primary role in defoliator management and few are very interested in it. The defoliator program under LBIS is delivered by regions by contracting the work out. In past years, some TFL holders have coordinated with the Forest Service to have impacted portions of TFL's sprayed and licensees highlight areas within their operating areas that are being heavily impacted by defoliators. Community Forests and Woodlots have been treated in the past and woodlots continue to be high priorities for treatment in the budworm program. Licensees may have a consulting role in the preparation of the TSA Forest Health strategy and the inclusion of recommended stocking standard advice provides guidance to both prescribing licensee foresters and approving district managers.

What is role of other organizations in administering or delivering the Category Strategy? (e.g. PwC?)

None (see above)

Resources: Key Information Sources

Data system(s) used?

LRDW for housing AOS data (up to 2008)

RESULTS for Stand Development Monitoring (SDM) and young pine mortality data (input and output)

Management unit documents used?

TSA forest health strategies

Latest TSR determinations

Other information used? (please specify)

Data from Forest Health surveys drives decisions on defoliator, bark beetle, and gypsy moth treatments. Forest health surveys include such things as permanent trapping sites for defoliators, population sampling (e.g. egg mass sampling to predict populations), ground and air surveys. Also, hazard and risk ratings used to support stocking standard recommendations are derived from FH surveys (potentially supported by RESULTS).

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Other

Are there any other key points regarding the business process for this Investment Category?

- Prior to LBIS, the bark beetle and defoliator strategic planning and funding ranking process has been ongoing for at least 20 years (e.g. first defoliator spraying began in 1987) and has become more formalized in its evolution
- Gypsy moth program planning processes have evolved since 1999 when the ministry inherited the eradication program from the CFIA
- The current process does not recognize the ongoing, long term work gathering information on impacts and improving management practices for forest pathology that the ministry has become world leaders in supporting. A forest pathology business plan is being developed now.
- The AOS has been the responsibility of the MF since 1999 following the disbanding of CFS's FIDS unit in 1995.

Also: Early budget approval is sorely needed for the defoliator program in particular so that key work can begin in April as spring is the critical time to undertake treatments.

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

all regional FH specialists; HQ specialists – Harry Kope and Jennifer Burleigh

Attachment: Chronology of the Planning Process for Forest Health

Note: Most of this relates to the operational planning process used for program delivery. The overview as it relates to strategic business planning are provided on pp. 1-3

Aerial Overview Survey

April – contract renewals and/or competitions for regional and HQ contracts. Early funding approval is required to secure these contracts which must begin preparations in May (base map creation, staff training, etc.).

June – Pre-work meeting with all contractors and regional AOS coordinators to provide feedback on previous year’s project, new procedures, confirmation of boundaries, and networking; training

July – non-bark beetle disturbance mapping (mainly defoliators and Dothistroma) begins in early July; all other mapping begins mid-July; monitoring contractor does mentoring flights and onsite inspections for quality and providing feedback to surveyors; weekly reporting to HQ AOS coordinator

August – mid-season checks for quality, funding situation; first scanned sketch maps distributed for first looks and district/regional specialists’ review; monitoring continues

September – last surveys completed; ground checks completed; data; submissions to provincial roll-up contractor (HQ contract); first draft of LBIS funding request provided based on historic costs (11 years)

October – final data submissions from regional contractors submitted; performance measure reporting (% of province flown); GIS analysis ongoing to produce first draft of provincial summary by end of October

November – data review and error checking; final spatial summary available by end of November; Provincial Forest Health (FH) conditions report preparation begins

December – report writing

January – February – finalization of report text

March – printing and distribution of annual report; limited printing distributed mainly to library collections and other agencies. Program evaluation conducted.

Bark Beetles

MPB

April – July – contract preparation (when funding is known); Phase 1 funding allocation in place for detailed aerial surveys at regional level; specific BMUs to be surveyed to be determined

August – September – AOS data received and treatment options re-evaluated based on new information; detailed aerial surveys conducted only on BMUs confirmed for suppression;

October - Phase 2 funding requests prepared based on detailed aerial survey data and strategic meetings with licensees and BCTS regarding the deployment of harvest capacity. Ground survey work begins.

November – Ground surveys continue and fall and burn treatments begin. Budget planning cycle for the next fiscal begins with initial funding proposal to the new LBIS. Fine tuning of actual performance targets not done until later in the next fiscal. [Planning Issue – the actual amount of work is never really known until the late summer following the finalization of the LBIS. All funding requests are based on estimates.]

December – March – fall and burn treatments continue. Mop up pheromone baiting also carried out during this period. March 31st districts report on accomplishments. Performance measure is the proportion of high priority BMUs identified in late September that were adequately treated to achieve suppression of incipient MPB populations. An update to the Emergency Bark Beetle Management Area map is requested at this time.

Douglas-fir and Spruce Beetles

April – May – Deployment of baited Lindgren trap clusters to trap DFB and use MCH (repellent) to disperse DFB.

June – early July – Attack period for both beetle species.

August – AOS detects new infestations but SB is often difficult to detect due to inconsistent foliage colour changes; Phase 1 funding for detailed aerial surveys should be in place at the regional level for fine tuning once AOS data is received.

September – detailed aerial surveys conducted in high priority BMUs

October – Phase 2 funding allocated once detailed aerial survey results are discussed with licensees and BCTS to determine course of action. LBIS funding requests prepared for next fiscal year based on estimates of expected beetle activity which cannot be confirmed until mid-summer]

November – March – ground surveys with data forwarded to licensees, BCTS and SSS program staff in districts. Harvesting and trap tree installation planned for spring. In some cases, critical infestations that are impossible to harvest, are treated using fall and burn. During this period, the call for an update to the Emergency Bark Beetle Management Area map is issued and districts provide their input based on current status of the beetle populations and licensee capacity. Funding proposals are also drawn up at this time to correspond the with the BMU strategy assignments. Performance measures are the proportion of infestation sites in high priority BMUs were adequately surveyed for later action. Note that the MF has no control over the actions of licensees while we have full control over the detection phase.

Defoliators – Western Spruce Budworm and Douglas-fir Tussock Moth

April – preliminary allocation given by LBIDB to allow spending prior to full release of budget; spray block boundaries are finalized, spray contracts signed, contracts for ground monitoring of larval development (WSB) awarded, public consultation continues

May – final preparation for spray, block adjustments made based on spring larval survival surveys and dispersal (DFTM and budworm), move insecticide to staging areas, media advisories given

June – early July – Aerial treatments for DFTM (first) then WSB. Performance Measure reporting will be possible at end of treatment period.

Mid-July – August – AOS mapping of defoliator outbreak areas

August – egg mass sampling contracts are started for both DFTM and WSB based on draft AOS results and ground recommendations by entomologists.

September – December – Fall egg mass sampling for DFTM and WSB completed by **end October** - Preliminary identification of treatment blocks for following spring and determine hectares needing treatment. Finalize Btk order and placement by end of December by FPIB. *Note: DFTM populations are expected to collapse by the end of the 2011 feeding cycle in most areas due to build-up of naturally occurring virus. Some critical areas will still need spraying in 2011 to prevent tree mortality. WSB will continue to infest vast areas of uneven aged Douglas-fir but the outbreak shifts annually within its historic range. In most cases, there are more high priority treatment blocks within the outbreak area than can be treated by the SIR's maximum capacity of 70,000 ha/ year.*

January – March – continued spray block planning and prioritization and consultation as required by Pest Management Plan; negotiations with regional districts on cooperative programs.

Gypsy Moth

April – early approval to enter into contracts for spray operations, communication, advertisement and security required.

May – early June – Btk treatments carried out.

July – August – gypsy moth trapping – CFIA is the lead agency responsible for monitoring and delimiting trapping. However, in some years, mass trapping (high density trapping) is used as a treatment for small, isolated infestations. BCFS regional staff hang traps in provincial campgrounds to supplement the CFIA's monitoring efforts.

Sept – October – trap results are summarized by CFIA; BC gypsy moth committee convenes to review trap data to formulate treatment plans for each infested areas deemed treatable [major decision point] – can be aerial treatment, ground treatment, mass trapping, monitor trapping, or a combination of these options at different locations. Cost implications going forward from this point are highly variable depending on the options selected.

November – if an aerial spray is required, the proposal is sent to Executive for approval. If approved, a Pesticide Use Permit application is submitted and advertising is required. If a ground spray is recommended, no permit is required but some advertising is done. Travel may also be required to do site visits, public meetings or other activities. Order for Btk purchase is submitted. Funding estimates for expenditures in the current and early in the next fiscal years are made and submitted to executive for approval. Under the LBIS, because the size and type of any treatment program is unknown until this time, a set amount is earmarked at this time to accommodate the costs of an average aerial program. If no treatments or lower cost treatments are planned, surpluses are identified for redistribution to other FH priorities or LBIS priorities.

December – March – Pesticide Use Permit granted under conditions set by the MOE Pesticide Administrator. There is potential for an appeal to be made by the public through the Environmental Appeal Board.

TSA Forest Health Strategy Updates

April – Updated strategies signed off by the district manager and posted on the TSA FH strategy web site.

May – October – no action

November thru March– new AOS data and, if available, other pest survey data is used to update the Non-recoverable loss estimate for major pests in the TSA. The bark beetle and defoliator data is also used to update the tactical plan portion of the strategy which forms the basis for the funding request for the following season.

ADDITIONAL ACTIVITIES PROPOSED IN 2011/12 LBIS:

Septoria Risk Assessment

(no timelines noted)

Young Pine Mortality Assessment:

January – March – plan areas/polygons to be surveyed and prepare maps (e.g. all polygons outlined with color coded lines as to age and species mix).

April-June –continue finalizing survey area and train district staff/contractors in survey techniques

July-September – polygon specific aerial assessments begin. Ground quantifications and assessments.

October-December – collate and analyze data. Prepare draft report by end December.

January-March – finish and submit final report with recommendations.

Business Planning Process for LBIS Category: Invasive Plants

Interviewees

- Val Miller, Provincial Invasive Plant Officer, Range Branch, Nelson (Team Leader)
- Perry Grilz, Manager, Range Operations, Range Branch, Prince George (Alternate)

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- Provincial Government Invasive Plant Strategy (2008), Inter-Ministry Invasive Species Working Group
Invasive Alien Species Strategy for Canada

International:

- Pacific Coast Collaborative (Alaska, BC, California, Oregon and Washington)
- Columbia River Treaty and agreements

Provincial - Local:

- Political engagement (provincial and local government) in recognition of the resources at risk due to invasive plants
- Desire for partnerships to implement local solutions and address cross-jurisdictional issues through engagement with regional Weed Committees
- Annual work plans that identify key tasks and activities
- Range Program Strategy
- Fraser Basin Council's Invasive Plant Strategy for BC which led to creation of the Invasive Plant Council of BC
- Analysis of Invasive Alien Plant Program (IAPP) application (inventory, treatment and monitoring results) Invasive Plant Program Strategy Brochure

The Invasive Plant program's logic model provides the following 5 drivers:

1. Adverse impacts from introductions and expansion of invasive plants on ecological, economic and social values
2. Rare and endangered species threatened by encroachment of invasive plants
3. The need for acceptable, long-term management of established invasive plants
4. A new legislative framework encompassing results-based forest and range management and professional reliance that requires measures to deal with invasive plant threats
5. Pressure from stakeholders to address invasive plants

Background

The Invasive Plant Program has developed a logic model that addresses the purpose of the program, provides 5 key program drivers, and list key functions and activities under

three program themes. It also has a program strategy brochure that details the program goals and objectives.

Operational funding for the invasive plant program was transferred to the LBIS; consequently LBIS is the key source of funding for the program. The Range Branch Invasive Plant Program delivers operational invasive plant management through staff, contracted services, and through partnership delivery mechanisms with regional weed committees and regional districts (the latter two through STOB 77 transfers). For \$1 BC spends via the LBIS, up to \$5 is leverage from program partners which can include the oil and gas sector in Northeast BC, foundations and other organizations.

The funding that supports the development of new biological control agents was not transferred to LBIS.

The Ministry of Agriculture has provided funding for the Weed Committees through STOB 77 grants for twenty years. The partnerships with the Weed Committees provide an opportunity to use STOB 77 grants. The Ministry of Agriculture has provided \$800,000/year in the past but with the recent ministry structural changes, there is uncertainty regarding funding levels for next fiscal year.

Resources: Who Is Involved?

Who is Investment Category Team Leader?

Val Miller, Provincial Invasive Plant Officer, Range Branch, Nelson (Team Leader)
Perry Grilz, Manager, Range Operations, Range Branch, Prince George (Alternate)

Who is on the Investment Category Team?

The Invasive Plant Program Team (IPPT) who consists of operations staff (IP Specialists & IP Officer) within the Range Branch located across the province. They in turn are connected with the various regional Weed Committees and Regional District weed programs, and communicate with MNRO district staff

In future, the team may be the Invasive Plant Advisory Committee with district level participation. The Inter-Ministry Invasive Species Working Group will also have a stronger role in input during the budget development phase.

Who reviews the draft Investment Category Appendix 2 submission?

Management Team within Range Branch

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

David Borth, Director, Range Branch
Perry Grilz, Manager, Range Operations, Range Branch

Who provides key information?

Local level Work Plans
IAPP Application
Knowledge of IP specialists (around 6 in province not including biocontrol staff)

Who is responsible for delivering the Investment Category outputs?

The Invasive Plant Program within Range Branch is responsible for delivery of outputs.

The program works in collaboration with regional weed committees and regional districts and in some areas, through pooled resource, partnership delivery model approaches. These partnerships can include local government, provincial government, industry, First Nations, and other organizations. First Nations IP Partnership Programs have been successfully developed through this partnership approach. In areas where partnership delivery is not an option, Range Branch delivers activities through staff and/or contractors. Some committees have identified herbicide use as too high a risk for them to engage in that treatment option, and in these cases Range Branch will retain treatment responsibility.

What is role of headquarters, regions and districts?

The Invasive Plant Program is lead at the branch level. There is no current regional role. The districts play a vital part in providing local knowledge and being the conduit to forest and range agreement holders. Generally, the northern districts participate on regional weed committees and the IP specialists ask for their input on needed projects. Engagement at the weed committee level is inconsistent with southern and coastal districts. IP specialists are expected to directly contact district staff to provide updates and to request input on program direction and projects, however this is not consistently done.

What is role of other agencies (provincial, local and federal)?

The Inter-Ministry Invasive Species Working Group has representation from the ministries of Agriculture; Transportation and Infrastructure; Environment; Forests, Mines and Lands; Natural Resource Operations; Energy; Health; Community, Sport and Cultural Development; Aboriginal Relations and Reconciliation. Part of the working group's purpose is to ensure invasive species activities are coordinated, collaborative, and cost-effective across agencies.

Some of the provincial agencies listed above are also involved to varying degrees on Regional Weed Committees. As an example, Energy and the Oil and Gas Commission participate in northeast BC given oil and gas activities, whereas they are absent from southern committees.

Federal involvement is variable at the regional weed committee level, with Federal Parks, and DFO participating most often. Invasive plant issues on Indian Reserves continues to be a challenge.

Many regional districts are actively involved in invasive plant programs, some have appointed weed advisory committees under their weed control function, and most participate in regional Weed Committees.

What is role of licensees and BCTS?

Forest licensees and BCTS are encouraged to be involved in regional Weed Committees and participate in reporting new sightings of invasive plants. The trend in engagement is improving as more licensees and BCTS offices are participating in local invasive plant planning and training initiatives.. Involvement can assist them in meeting their FRPA obligations.

What is role of other organizations in administering or delivering the Category Strategy?

The other delivery organizations as noted earlier include:

- First Nations via regional weed committees
- Regional Districts
- Regional Weed Committees (non-profit groups/societies).

Range Branch is ultimately responsible for administering and ensuring delivery of outputs.

Utilities such as BC Hydro, Terasen Gas, FortisBC, are often involved in regional Weed Committees, or collaborate with MNRO for on-ground delivery of projects if weed committee is not present or available.

Local cattlemen associations are involved in most cases.

Although the Invasive Plant Council (IPC) of BC is not represented on regional weed committees, regional weed committees are members of IPC. IPC is a provincial, non-profit charitable organization that provides over-arching invasive species management support, facilitates sharing of information with all agencies and interest groups, and can assist in leveraging federal and provincial funding such as from the Western Diversification Program and Job Opportunity Program.

PwC has administered 4 projects that were funded through the Job Opportunity Program (JOP)

Resources: Key Information Sources

Data system(s) used?

IAPP Application – this is central repository that most stakeholders involved in invasive plant management are using. The inventory, treatment and monitoring spatial layers are maintained in the LRDW.

The IAPP Map Display module uses defined layers in the LRDW

Management unit documents used?

Work plans developed by the regional weed committees (of which MNRO is a participant)

Other information used? (please specify)

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Other

Are there any other key points regarding the business process for this Investment Category? N/A

Review

Besides those being interviewed now, who else should review a draft process description and diagram? IPPT

Business Planning Process for LBIS Category: Inventory

Interviewees:

- Gary Johansen, FAIB, Team Leader
- Chris Mulvihill, FAIB Inventory Forester, Nelson

Note: Gary Johansen kindly completed the questionnaire before the interview. Chris went over the responses prior to the call and agreed with Gary's feedback. The focus of the interview therefore was on the business planning process

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
 - Goal 2 specifically identifies 'monitoring...impacts on forest and range resources from pests, disease, and wildfire, and attaining forest certification' – both require current and ongoing forest inventory activities
- ILMB Service Plan 2010/11-2012/13
 - Goal 4, Objective 1: 'Excellence in the provincial land and information services through GeoBC
- Forest and Range LBIS 2010/11 to 2012/13
 - Key outcome: 'Inventories on key impacted units are not older than 10 years'.
 - Key outcome: 'Forecasts of the productivity on existing and future second growth stands are improved' – requires improved site productivity estimates
- 2011 LBIS guide for development

Resources: Who Is Involved?

Who is Investment Category Team Leader?

- Gary Johansen, Forest Analysis and Inventory Branch

Who is on the Investment Category Team?

- Chris Mulvihill, FAIB Inventory Forester, Nelson
- Matt Makar, FAIB Inventory Forester, Kamloops
- Derek Challenger, FAIB Inventory Forester, Nanaimo
- Cathy Taylor, FAIB Inventory Forester, Nanaimo
- Will Smith, FAIB Volume and Decay Sampling Officer
- Ron Planden, FAIB Growth Data Sampling Forester
- Graham Hawkins, FAIB Team Lead, Forest Inventory
- John Wakelin, FAIB Team Lead, Productivity & Sample Data

Who reviews the draft Investment Category Appendix 2 submission?

- The projects and priorities are identified via several meetings throughout the year in consultation with the Investment Category Team. The Appendix 2 submission reflects the Teams priorities as well as possible. Albert Nussbaum and Al Powelson have reviewed the Appendix 2 documents to date.

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

- Albert Nussbaum

Who provides key information?

- Investment Category Team members
- Timber Supply analysts in the FAIB Analysis Section
- Research Branch staff have provided advice preparing the Site Productivity project priorities
- EBM, VLI, and other inventory activity advice is solicited from business area experts

Who is responsible for delivering the Investment Category outputs?

- Albert Nussbaum. Investment Category Team members run projects primarily via the contracting community

What is role of headquarters, regions and districts?

- HQ – coordination of all strategic planning and budgeting
- Regions – providing input into the development of all strategic plans considering LBIS and individual MU priorities and needs, implementation of projects through the use of contract staff
- Districts – involved in implementation planning (assisting delivery of inventory projects) but not in strategic business planning

What is role of other agencies (provincial, local and federal)?

- To date, MOE staff, Research Branch staff, District staff, and FAIB Analysis staff have been consulted in the development of project planning
- VRI project planning is a formalized process where Regional staff lead discussions with District and licensee staff to gain understanding of local needs

What is role of licensees and BCTS?

- VRI planning has in the past, and will continue to include licensees in all levels of planning.
- The VRI Advisory Committee has met annually with representatives of Ministry of Forests and Environment, and licensees to review project priorities and inventory concerns.
- Licensees are invited to participate in all VRI implementation planning.
- BCTS, as a key stakeholder, is also invited to participate in these discussions.
- VRI program staff are currently coordinating an inventory project in the new Pacific TSA in partnership with BCTS

What is role of other organizations in administering or delivering the Category Strategy?

- Some planning, most data collection and Quality Assurance, and most data analysis delivered via the contracting community. Activities currently approximately 30 - 40% administered by PWC. Anticipate only very minor component may be administered by a licensee (to maintain existing multi-year contracts)

Resources: Key Information Sources

Data system(s) used? (e.g. RESULTS, PINES, FIRS)

- PWC uses FIRS to track and report PWC administered VRI activities
- Inventory does not have a 'canned' system for this purpose

Management unit documents used?

- Timber Supply Reviews and Rationales

Other information used? (please specify) N/A

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

This also includes:

- Describing chronology of the business process from when project started both in terms of what has happened and what is expecting to happen when the Investment Category Appendix 2 submission is completed by March 2011
 - Investment Category Team members have met a two or three times to date to develop DRAFT
 - Working DRAFT completed November, 2010
 - Expect DRAFT to evolve as budget and identified needs change, but the current DRAFT Appendix 2 is not expected to change significantly
- Noting when key decisions have or will be made
 - Ad-hoc – as needs arise
- Noting key intervals where waiting for information, review, or a decision to be made occurred
 - Ad-hoc – as needs arise
- Identifying any key meetings or conference calls undertaken or expected to develop the Category strategy
 - Ad-hoc – as needs arise

Other

Are there any other key points regarding the business process for this Investment Category? N/A

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

- Albert Nussbaum
- Pat Martin
- Derek Challenger

Business Planning Process for LBIS Category: Timber Supply Mitigation

Interviewee:

- Ralph Winter, FPIB, Team Leader

Note: Ralph Winter kindly completed the questionnaire prior to the interview; the feedback below is primarily that response augmented by interview notes and review by Monty Locke (LBIDB)

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- Provincial Silviculture Strategy
- Forest Fertilization Strategy
- Management unit (MU) specific Silviculture Strategies (SS)
- Resource Management Plan (RMP) summaries for all mgmt units and regions
- Regional split of funding based on strategic issues
- Feedback on delivery from previous year with regard to unit costs and potential delivery options

Note: the strategic process that provides context for funding recommendations has not significantly changed since FRBC. MU Silviculture Strategies are the building blocks

The RMP summaries are on spreadsheets that shows hectares that can be treated, costs of treatments, and outputs (benefits of treatment). These are also used by the Current Reforestation category. The RMP spreadsheets were prepared initially in 2002 and were updated in 2008. We hope to update them again in 2011.

There are far more areas that can be treated than there is funding for; available funding helps treat the best areas but only addresses the 'tip of the iceberg' relative to all the treatment opportunities identified in silviculture strategies.

Note: although the focus of the responses below is regarding forest fertilization as this was primary program in 2010/11, the process in general applies to other category activities such as spacing, backlog brushing and pruning. One exception is funding that was targeted for woodlots and community forests.

Resources: Who Is Involved?

Who is Investment Category Team Leader?

- Ralph Winter, Incremental Silviculture Officer and Data Custodian, Forest Practices and Investment Branch

Who is on the Investment Category Team?

'Forest Fertilization Team' consists of:

- HQ reps from Forest Practices and Investment Branch,
- Land Base Investment and Delivery Branch (Monty Locke and Kelly Osbourne)
- PWC rep (Steve Quinn)
- Regional and district reps
- Licensee cooperators
- A contract technical and strategic coordinator (Mel Scott)

Role of BCFS Fertilization Working Group in strategy development? (vs implementation)

- The working group *uses* silviculture strategies that are in place already to identify the key priority management units as they relate to areas with mid-term timber supply issues and to help balance budget allocation based on priority, delivery capabilities and capacity, and cost for treatments. The silviculture strategies are augmented with current delivery costs and specific local knowledge on any operational constraints or current forest health considerations.

Examples of investment team considerations include:

- (more an implementation issue) rail is needed to transport fertilizers cost-effectively and only some licensees have access to rail; consequently licensees with rail access are in a better position to deliver than others who would need to negotiate with other companies to utilize a siding. Within the program we have seen some cooperation between licensees for the sharing of rail siding. Also in the Burns Lake area where sulfur needs be added to the fertilizer thereby making treatments less cost effective relative to other areas
- access costs on the Coast where some areas will require barging of material add significant extra cost to the program
- at the licensee or delivery agent level there are considerations given to the impact of not harvesting fertilize treated areas for three to five years which increases the cost of finding eligible stands. Avoiding areas where there the forest health risk is too high such as in the Cranbrook TSA where there is MPB sanitation work – not spending funds there until the health hazard is subsided

There are monthly calls with team partners in the Interior and monthly calls with partners in the Coast to discuss both strategic business planning issues (like funding requests) and implementation (delivery) issues. From the monthly calls, opportunities to move funds to other licensee(s) are discussed if a licensee can't deliver the treatments it had funds for due to an unexpected issue (e.g. early snow).

Licensees are encouraged to have 2-3 more areas considered for treatment than there are expected funds to treat so they have alternative areas should an issue arise in a proposed treatment area or if more funds become available. Forest fertilization has traditionally been able to utilize unspent funds within the ministry towards fiscal year end so it is

important that the program be prepared for unexpected funding opportunities.

There is also an annual continuous improvement meeting on the Coast and an annual meeting for the Interior attended by team members and program participants along with researchers, forest health specialists and others that can contribute ideas and knowledge.

Who reviews the draft Investment Category Appendix 2 submission?

- Regions – no set position; staff picked with interest to participate
- LBIDB

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

- Category lead works with John McClarnon, Al Powelson and Lorne Bedford to refine and approve submission.

Who provides key information?

- Districts
- Regions
- Industry
- PWC
- LBIDB
- FPIB

Who is responsible for delivering the Investment Category outputs?

- LBIDB – working thru PWC and licensee delivery agents

What is role of headquarters, regions and districts?

- HQ – provides strategic leadership and plan. Coordinates and develops technical standards and procedures working with all parties. Identifies strategic emphasis areas. LBIDB is involved in ensuring the strategy is delivered within the target and budget set for the fiscal. This includes working with FPIB technical contacts in balancing the program and guiding shifts in funds at the beginning and during year.
- Regions – provide input to tactical strategies and deployment priorities. Help refine strategic and technical standards and procedures
- Districts help with mgmt unit strategic plans, tactical priorities. Help identify areas for improvement in strategic and technical standards and procedures.

What is role of other agencies (provincial, local and federal)?

- UBC – provides research info to refine technical standards and strategies
- Research Branch – provides research info to refine technical standards and strategies
- Forest Health regional staff – identify forest health risk zones
- Water quality – regional staff provide input when necessary

What is role of licensees and BCTS?

- Major licensees are the primary delivery agent; there has been some delivery by community forests tenure holders and woodlot licensees
- Licensees previously involved in fertilization in priority MUs contacted by PwC and asked to identify potential areas within priority MUs that could be fertilized
- BCTS has not done a lot of work in this area in the past, but is delivering on some parts of the Coast in 2010/11. Capacity and experience has been an issue, however, there is the potential to increase from the 2010/11 level.

What is role of other organizations in administering or delivering the Category Strategy?

- PWC – provides contract delivery support. Manages budget for recipients. Works on adjustments to costs and program during the year, ensures project completions and audits a given level of projects.
- Currently use contractor to help with technical standards development and refinement. Contractor helps with coordinating annual provincial purchase of fertilizer and allocation of fertilizer. Contractor also deals with communication of program and smoothing out technical problems as they arise during tactical operations. Contractor does work for FBIB and LBIDB under a shared contract.
- Gordon Weetman, Professor Emeritus at UBC has kindly provided free advice that assists the program

Resources: Key Information Sources

Data system(s) used?

- RESULTS
- FIRS

Management unit documents used?

- MU silviculture strategies
- Forest health strategies or guidance is used to guide location of activities

Other information used? (please specify)

- We have an annual face to face meeting of key fertilizer coordinators and participants to go over what worked in the past year, what were the key successes, what needs improving, to share new research and forest health information and to indicate program direction and priorities for the next year.
- Licensees previously involved in fertilization in priority MUs contacted by PwC and asked to identify potential areas within priority MUs that could be fertilized

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

This also includes:

- In May 2010 budget was allocated for tactical planning for 2011 (so plans in the ground now already)
- Strategies at a Glance process developed in July- August 2010
- Strategies at a Glance developed by contract in Sept 2010
- Strategies at a Glance errors noted and sent back to contractors in Sept -Oct 2010
- Reviewed strategies at glance and program with LBIDB Oct 5, Oct 7
- Reviewed provincial priorities Oct 13 and 29th at HQ
- Reviewed priorities with LBIS with LBIDB Nov 3rd
- Reviewed regional priorities and direction with regions Nov 10th
- Will refine provincial priorities over next 2 months with regional and LBIDB input

Other

Are there any other key points regarding the business process for this Investment Category?

N/A

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

- Monty Locke
- Kevin Astridge
- Mel Scott
- Ralph Winter

Business Planning Process for LBIS Category: Tree Improvement

Interviewees:

- Darrell Wood, TIB, LBIS Tree Improvement Team Leader
- Lee Charleson, TIB Seed Policy Officer (Alternate Team Leader)
- Barrie Phillips, TIB, Manager, Forest Genetics Section

Note: Essentially all of the operational dollars in the TIB budget stem from LBIS. About 2/3rds of LBIS funding supports TIB whereas some funds are also directed at licensees (who manage orchards) and academia (such as UBC related to pest mgt).

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- Forest Genetics Council (FGC) Strategic Plan 2009-2014
- Tree Improvement Branch (TIB) Business Plan
- Chief Forester (CF) priorities for the Forest Resource Stewardship Division within the Ministry of Forests, Mines and Lands (MFML) as they relate to tree improvement

Note:

-FGC's Business Plans prepared for each fiscal year are implementation (delivery) plans with the funding that the tree improvement program receives

-Some of CF's annual priorities are not reflected in FGC 5-year Strategic Plan in part because the Strategic Plan is usually updated in 5 years; as a consequence the LBIS submission does not always cover tasks that need to get delivered by TIB to address CF priorities

Resources: Who Is Involved?

Who is Investment Category Team Leader?

Darrell Wood (alternate Lee Charleson, Seed Policy Officer), Tree Improvement Branch

Who is on the Investment Category Team?

Collaborative business planning through the Forest Genetics Council of BC
This includes FGC's Technical Advisory Committees (TACs)

FGC includes co-chairs from BC Forest Service and industry and additional ministry and industry representatives as well as representatives from academia and Canadian Forestry Service

Who reviews the draft Investment Category Appendix 2 submission?

Appendix 2 is prepared by Darrell with input from Lee, and Barrie Phillips (Forest Genetics Section), and Jack Woods (FGC)

The Appendix is reviewed by Barrie and Brian Barber (Director, TIB)

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

Director, TIB approves the submission (Brian Barber)

Who provides key information?

FGC in general provides key information including the 7 TACs

Who is responsible for delivering the Investment Category outputs?

Orchards make select seed available for reforestation

Licensees, seed orchard coops and the BCFS own select seed that can be sold for use

SelectSeed fills gaps in seed demand

Planting of select seed done by licensees, BCTS, FFT reforestation Recipient Agreement Holders, etc

What is role of headquarters, regions and districts?

TIB Cone and Seed Services located in Surrey and the 6 ministry orchards in various locations in BC are part of the TIB and are represented directly or indirectly via TIB on FGC and the various TACs. Genetics and policy are also TIB's role.

BCFS regional stewardship staff (such as forest health) are also represented on some TACs

What is role of other agencies (provincial, local and federal)?

Canadian Forest Service has a representative on the FGC

What is role of licensees and BCTS?

Licensees have representatives on FGC and on TACs

Some licensees have seed orchards

Licensees and BCTS purchase select seed for planting

What is role of other organizations in administering or delivering the Category Strategy?

As noted above), SelectSeed Company Ltd is mandated by FGC to develop and operate seed orchards needed to fill supply gaps.

Resources: Key Information Sources

Data system(s) used?

SPAR and SeedMap are key as they identify seed availability and seed transferability

SPAR used for planning purposes (re: likely future select seed demand) as it shows trends in previous seed demand

FGC (Jack Woods) tracks seed demand and seed needs

Note: RESULTS not used for strategic business planning but it tracks select seed use e.g. seedlot # per unit

Management unit documents used?

Not done at this level.

Note: MU silvicultural strategies may indicate that it would be better to plant more of species X than Y – but these documents reflect intent rather than what necessarily actually happens. Actual sowing requests are reflected in SPAR.

Other information used? (please specify)

TIB may fund work, provided funds are available, on MPB opportunity mapping by adding a seed planning layer; this may assist seed planning in MPB impacted areas.

FGC's Seed Planning Priority Table drives the tree breeding program and budget

Tree improvement-related breeding and genealogy information of various kinds help inform the program where measurements have been made that is reflected in seed transfer policy. These key data records need to be kept and maintained.

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Other

Are there any other key points regarding the business process for this Investment Category?

N/A

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

Brian Barber, TIB Director

Business Planning Process for LBIS Category: Visuals

Interviewee

- Jacques Marc, Visual Resource Management Officer, Forest Practices and Investment Branch (FPIB), Team Lead

Note: Jacques and Visual Resource Team kindly reviewed initial draft and made revisions.

Drivers

What are the key drivers (e.g. strategic context documents) that are being used to shape your team's work on Appendix 2 for your category?

- MFR Service Plan 2010/11-2012/13 (the visual program fits well in the five priority areas identified in the service plan)
- Forest and Range LBIS 2010/11 to 2012/13
- 2011 LBIS guide for development
- FREP work identified a lot of inaccurate mapping e.g. some non-visible areas got included in the visual landscape inventory. Refined inventories may reduce the amount of visually constrained area in LBIS priority units for mid-term timber supply and/or EBM areas (note: LBIS has an EBM category)

Background

The Forest Investment Account (FIA) historically funded visual resources to around \$250 000 to \$300 000 per year. The LBIS has put parameters on the use of the funds and have identified priority management units impacted by MPB for investment. FREP work as noted above identified inaccuracies in visual resource inventories that may constrain timber supply. With this context, specific priority projects have been identified by the Visual Resource Team for LBIS funding.

Resources: Who Is Involved?

Who is Investment Category Team Leader?

- Jacques Marc, Visual Resource Management Officer, FPIB

Who is on the Investment Category Team?

The Visual Resource Team consists of:

- Jacques Marc, Visual Resource Management Officer, FPIB (team leader)
- Peter Rennie, Visual Landscape Forester, Southern Interior Region
- Luc Roberge, Visual Resource Specialist, Northern Interior Region
- Lloyd Davies, Visual Landscape Forester, Coast Region

Who reviews the draft Investment Category Appendix 2 submission?

In addition to Visual Resource Team:

- All LBIS Category Team Leaders are provided a copy and have opportunity to comment
- Al Powelson, FPIB

Who approves the Investment Category Appendix 2 submission? (i.e. before it goes to Chief Forester)

- Al Powelson, FPIB
- Jim Sutherland, Director, FPIB

Who provides key information?

Regional visual resource staff provided a list of projects in cooperation with district staff considering the findings of FREP work and their local knowledge about the state of visual landscape inventories.

The list of projects were reviewed by the team with focus on LBIS priorities tempered by the capacity of regional staff to deliver the projects and the need to spread some funds to all regions.

FREP sampling work noted that some visual landscape inventories included non-visible areas; some inventories consistently had problems (in part due to age) whereas others did not. The inventories where problems are known to exist were targeted for funding.

What is role of headquarters, regions and districts?

FPIB will contract out the re-inventory projects that are approved with regional visual resource staff providing contract management.

Regional visual resource staff were key to identifying priority projects for LBIS funding based on their operational experience knowing which inventories are in most needed for re-inventory.

Regional visual resource staff canvassed district staff about their needs for re-inventory and will let district staff know what projects get funded.

Regional visual resource staff carries out quality assurance tasks of the inventory projects.

What is role of other agencies (provincial, local and federal)?

Other agencies are not involved

What is role of licensees and BCTS?

TSA licensees and BCTS will be informed about re-inventory work and will be provided an opportunity for input through advertisements but will not be directly engaged delivering the projects. Note: TFL holders are responsible for maintaining inventories, including visual landscape inventories, and are not included in LBIS proposals for next fiscal.

Note: Volume-based forest licensees and BCTS were key drivers for visual resource funding under FIA. The reason a government delivery model (via contractors) was chosen at this time under LBIS for visuals is that the program is very focused on re-inventory work for priority units. Licensees and BCTS could be contacted more in future fiscal years.

What is role of other organizations in administering or delivering the Category Strategy?

No other organizations are involved per se; work will be conducted by contractors.

Resources: Key Information Sources

Data system(s) used?

Visual Information Management System (VIMS) which includes the visual landscape inventory as well as warehouse for management decisions (i.e. regarding scenic areas and established visual quality objectives - VQOs)

Management unit documents used?

No 'strategy' exists. The proposal for LBIS funding for next FY is based on what is needed tempered by past FIA funding levels and the capacity of staff to support delivery.

Other information used?

N/A

Tasks

What and when were the key tasks undertaken to develop the Investment Category Appendix 2 submission?

See Business Planning Process and Flow Diagram for high level description.

Other

Are there any other key points regarding the business process for this Investment Category?

N/A

Review

Besides those being interviewed now, who else should review a draft process description and diagram?

Visual Resource Team