



Cutblock Integration Team

Phase II Final Report

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Acknowledgements

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Executive Summary

Process

A Streamlining Cutblock Integration Team was established to develop integrated, standardized policies and procedures for the management of planned and actual cutblock related information, based on the Phase I recommendations of the Streamlining Project.

The team developed, from an operational perspective, business proposals to address the recommendations from Phase I. These business needs are packaged as draft proposals in this report.

Business Proposals

The following business proposals were recommended by the Cutblock Integration Team:

1. Submit FSPs in an electronic format to expedite approval, enable status tracking, and provide C&E and Stewardship with access to FSP information.
2. Bundle the appraisal and cutting permit application in an electronic submission.
3. Bundle RESULTS reporting for more efficient electronic submission.
4. Integrated mapping standards are being developed for all business areas.

Benefits

A number of benefits to both licensees and operational staff will result from the implementation of these business proposals.

Benefits to licensees

- Clear business rules and goalposts
- Rationalized information requirements - no duplication
 - One map submission for harvest authority, not two
 - One harvest completion submission, not three
- Less confusion about map versions
- Feedback on plan/permit/appraisal status
- Faster approvals

Benefits to district staff

- Electronic submissions will populate several applications simultaneously with appropriate data
- Reduced confusion across business areas – e.g. terminology, information requirements, digital mapping standards
- Integration of business processes e.g. plan to actual map comparison



- Information provided to C&E for risk assessment and inspection, and to Stewardship for monitoring/evaluation



1. Introduction

1.1 Purpose of this report

This document describes in detail the business proposals made by the Cutblock Integration Team of the Streamlining Project to streamline forest information management at the operational level. These concepts were developed by operational staff from across the province, in many cases with some degree of verification by licensee staff.

The business proposals in this report were made available for province-wide review. The comments received suggested that minor changes to the proposals were needed; those comments are reflected in this final report.

A Business Integration Group will work with responsibility centres to implement these and other Streamlining business proposals. In some cases implementation will require further work to understand business needs; in others business proposals can be implemented immediately with the development of an integrated set of tools such as systems, policies, procedures, guidelines, and training.

The Information Access proposals are now in the first stages of implementation. Requirements gathering has begun in order to implement Proposal #1 (Forest Stewardship Plan electronic submission).

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1.2 The Streamlining Project

The Streamlining Project is a collaborative effort between the Ministry of Forests (MoF), the Ministry of Sustainable Resource Management (MSRM, now the Ministry of Agriculture and Lands), and the forest industry to streamline forest information requirements and processes, in order to reduce the effort necessary to carry out operational planning work. The project will also improve the tools used to collect, transfer, or report on forest information. The Streamlining Project involves the entire core forest information cycle, from up-front information access for operational plan and appraisal submissions through to free-growing declarations.

This report reflects the completion of the second of three phases of the Streamlining Project. Phase I consisted of information collection and analysis resulting in a suite of recommendations. Phase II involved the further development of these recommendations through improved policies, standards, and business processes. Phase III will shift the focus to developing the tools needed to support the recommended improvements from Phase II. These tools include procedures, guidelines, training, and systems.

1.3 Cutblock Integration Phase I

1.3.1 Challenges Identified

Phase I of the Streamlining project identified a number of challenges related to the cutting permit process, and its lack of integration with other business processes.

There is inconsistency across the province in both process methodology and permit application information requirements. Many elements of the cutting permit application overlap with the operational plan and revenue processes. In some cases this creates misalignment between the processes, and in other cases results in duplicated information requests of industry. A number of business areas rely on a cutblock definition and related mapping standards such as summaries of area harvested, comparisons of actual versus planned activities, clearance processes, C&E assessment of unauthorised harvest, timber supply forecasting and wildlife tree patch assessment and tracking. However, many business processes interpret the cutting boundary differently, leading to confusing and conflicting reporting.

1.3.2 Phase I Recommendations

Phase I of the Streamlining project made over 50 recommendations to improve the forest information cycle. Of these recommendations, four applied to cutblock integration:

1. Create a provincially consistent approach for developing and issuing cutting permits.
2. Develop a consolidated definition of cutblock for use in all planned and actual processes associated with harvesting. Business area rationalization is needed between TRIM, vegetation inventory, appraisal, cruise, tenure, permit, plan, C&E, and silviculture. The new cutblock definition must work for salvage and partial cut situations.



3. Develop clear and comprehensive standards for all spatial and attribute information submissions during the forest management cycle. Develop field guidance (e.g. manuals, guidelines, policies) to support this requirement.
4. Provide clear business rules for reserved timber associated with cutblocks, including riparian reserves, wildlife tree patches, and coarse woody debris.

1.4 Phase II Process

A Streamlining Cutblock Integration Team was established in collaboration with an existing Cutblock Administration Team to develop integrated, standardized policies and procedures for the management of planned and actual cutblock-related information, based on the Phase I recommendations of the Streamlining Project.

The team developed, from an operational perspective, business proposals to address the recommendations from Phase I. The purpose of the business proposals is to clarify what changes to forestry information management operational staff need to do their jobs better. For the most part, this report does not suggest how to achieve these proposals in terms of what responsibility centre or what system needs to change; those discussions will occur during Phase III of the Streamlining Project.

1.5 Working Principles

The business proposals recommended by all of the Streamlining teams are based on the following working principles:

- Information will be shared within government where possible
- The focus is on the business - not the systems
- Solutions will meet licensee and district operational needs for all licensees - big and small
- Clarity and integration of the business will enable future systems improvements (transition to full e-business)
- Major business processes will be provincially consistent
- The comparison of planned, permitted, and actual activity will be possible (C&E, Revenue, Monitoring)

1.6 Relationship with other initiatives

1.6.1 FSP Tracking Project

The FSP Tracking Project is working collaboratively with branch, district, and regional staff as well as a number of FSP-related initiatives to develop a simple tool to track FSP results and strategies by FDU. One of the key linkages between the FSP Tracking Project and the Streamlining Project will be how FSP results and strategies are linked to the roads and cutblocks databases in an efficient



manner, in the context of re-aligned business processes. See www.for.gov.bc.ca/hfp/FSP/index.htm.

1.6.2 FSP Information Support Project

The *Forest and Range Practices Act* (FRPA) requires forest licensees to submit Forest Stewardship Plans (FSPs) beginning January 1, 2006. These plans replace the current Forest Development Plans (FDPs). Development of these plans requires that a large amount of information be accessible for review and analysis by those preparing plans.

The Ministry of Forests (MoF), Ministry of Sustainable Resource Management (MSRM) and forest industry are working cooperatively through the Provincial FRPA Implementation Team (PFIT) to develop a process to identify key information that must be made available for forest stewardship plan preparation. This initiative is known as the FSP Information Support project. See: www.for.gov.bc.ca/hts/fspdev

The project has developed a plan with short-term and long-term goals and objectives to improve information access. The short-term objective is to get all information required to prepare FSPs available in one form or another through whatever distribution means possible by the end of April 2005. Short-term goals are to identify critical information requirements; provide a website of district FSP information contacts and information resources; assist districts to obtain corporate data and make their local data available; and review, verify, and document data provided. The long-term objective is to simplify access to all information by identifying solutions to resolve corporate business, data, and infrastructure issues. This long-term objective will be achieved by reducing the use of local data sources; improving corporate data distribution systems; providing more information via electronic means; and using the FSP development process as a business driver to raise issues and propose solutions to various internal and external agencies.

The Streamlining project shares many objectives with the FSP information Support project, and works in collaboration with it.

1.7 Report organization

This report is organized in 6 sections. Section 2-5 provide information on the four recommended proposals. Section 6 describes the benefits of adopting the proposed changes.

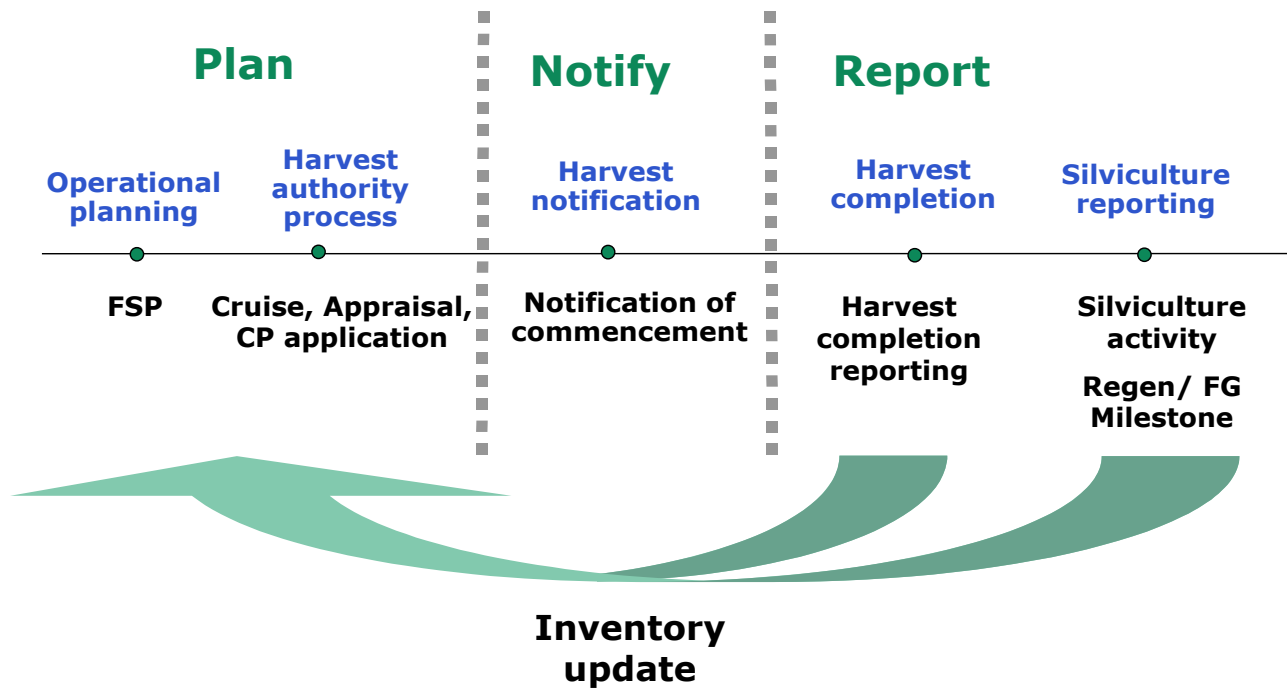
Although these discussions and business proposals were based on the Phase I streamlining recommendations, there is not a one-to-one correspondence between the Phase I recommendations and the Phase II business proposals.

1.8 The cutblock information cycle

The cutblock information cycle consists of three stages: planning, notification, and reporting (Figure 1.1). The planning stage includes both operational planning and the process by which harvest authority is granted (which currently involves cruise, appraisal, and CP application submissions). The notification stage acknowledges the activity notification that is now required under FRPA. The reporting stage begins with harvest completion reporting, and may continue for several years until silviculture activity and silviculture milestone reporting are complete.

Currently, information submissions at different stages of this cycle have different formats and requirements such as paper submissions, .PDF files, .DGN files, and GML files. Existing systems do not allow for the direct comparison of spatial information from these submissions.

Figure 1.1: The three stages in the operational cutblock information cycle— planning, notification, and reporting, and the information submissions associated with each stage.





2. Cutblock Integration Proposal #1: Electronic FSP submission

The Cutblock Integration Team recommends that Forest Stewardship Plans (FSPs) be submitted in an electronic format in order to expedite FSP approval, improve tracking of FSPs, and facilitate future amendments to FSPs. This electronic submission would consist of:

- Spatially-enabled objectives, results, and strategies
- A map of Forest Development Unit (FDU) boundaries, in the form of digital GIS files.

Compliance & Enforcement staff require access to these submissions, particularly to the FSP results and strategies, in order to enforce statutory requirements.

There is also a need to link the FDUs and FSP results and strategies to the roads and cutblocks databases. Cutting permit applications under FRPA must outline a harvest authority area that falls within an approved FDU.

2.1 FSP information requirements and tracking

A few related projects are addressing information needs for FSP development, FSP business processes, and FSP tracking. Implementation of this electronic operational plan submission business proposal will need to involve all of these initiatives.

The Streamlining Information Access Team has recommended that access to core information be simplified, and that the core information required for FSP development be made available via a single access point (see the Information Access Team's Business Proposals #1 and #2). Toward this end, FSP information support project is identifying key information that must be made available to forest licensees for forest stewardship planning. See: www.for.gov.bc.ca/hts/fspdev.

An FSP Tracking Project has been initiated in order to determine the business requirements for an FSP tracking system that will

- facilitate FSP submission, review, approval, and amendment, through an electronic submission process using the Electronic Submission Framework (ESF);
- track results and strategies by forest development unit (FDU) for Compliance & Enforcement and Forest Stewardship processes;
- develop straightforward electronic access to FSPs (maps and text, including results and strategies) for Ministry staff; and
- integrate with existing business applications where appropriate (e.g. CIMS, RESULTS, Mapview)

An Administrative Guide for Forest Stewardship Plans (www.for.gov.bc.ca/hth/timten/AGFSP/) has been developed to bring together advice on developing and administering FSPs for agreement-holders who need an FSP, and for B.C. Ministry of Forests and other government staff who review and approve FSPs.



3. Cutblock Integration Proposal #2: Permit bundle submission

The Cutblock Integration team recommends that appraisal and cutting permit information submissions be bundled together and submitted electronically in GIS files (a “permit bundle submission”). The appraisal and CP application information could be included in a single map in the submission, with the relevant information then automatically separated out for MoF business purposes (Figure 3.1). Additional information such as planned external or contiguous wildlife tree patches could be optionally submitted with the permit bundle as a separate layer of information (section 3.2). New information about the landbase submitted with the bundle would be sent to MSRM to update the spatial record.

C&E would receive the permit bundle once a cutting permit is issued, for risk assessment and inspection planning. This spatial information therefore needs to be available to C&E staff in a form that is printable and readable for the field. The Streamlining Information Access Team made recommendations regarding C&E mapping needs (Information Access Team Proposal #2).

With electronic submission, the permit bundle map layers can be overlaid on the existing FSP map to ensure that they fall within FDU boundaries outlined in the relevant FSP. A permit bundle submission also ensures consistency between the appraisal and cutting permit application submissions.

3.1 Information requirements

Landbase spatial information can be separated into three broad categories (see Streamlining Information Access Proposal #3 for more detail):

1. Biophysical base (e.g. roads, contours, water features)
2. Common features (e.g. land status and ownership, VRI, orthophotos)
3. Task-specific information (e.g. seedlot allocation, volume/grade/ha)

Table 3.1 outlines the information *currently* required for each permit bundle map in the forest information cycle according to these three categories (although voluntary submission of planned external WTPs is a new proposal).

For maximum efficiency and consistency, we recommend that licensees submit only the task-specific information wherever possible. The exception is when the licensee submits updated feature or base information, for example, BEC zones for appraisal.

The biophysical base and common features are core spatial information held by government, and can be automatically attached to a licensee’s submission for processing by MoF business areas (this prevents precision-drift as data moves from government to licensees and back again, and eliminates version confusion).



Table 3.1: Permit bundle information requirements

Item	Appraisal Layer	Exhibit A Layer
Task-specific information	<ul style="list-style-type: none"> - Status clearance boundaries and cutting boundaries - Harvest areas delineated by harvest method and partial cut percent - Areas subject to specified operation costs estimates (e.g., skidder swing, root disease control) - Geographic midpoint of each block and common junction of the permit - Roads to be built by type (operational, block, winter) including sections to be graveled and or sections that are “wet” (as defined in the appraisal manuals) - Location of roads/structures that are the subject of detailed engineered estimates - Location and type of other developments (e.g., remedial fencing, cattleguards and pipeline crossings) - The map may include other information considered relevant to the appraisal. - For reappraisal data submissions, reference may be made to the original map submitted. - Any change to the harvest plan or area of harvest due to a “changed circumstance” (see Appraisal Manual 2.3.2.1) during the term of the cutting authority must be mapped and promptly submitted to the district. 	<ul style="list-style-type: none"> - Status clearance boundaries and cutting boundaries/boundaries of Forest Act tenures - Base information: Block boundaries and road centre lines - Point of commencement (e.g., a nearby surveyed parcel corner or a control survey monument. Wherever possible, PoC or one corner on tenure boundaries should be tied by GPS methods, and approximate UTM coordinates provided. If no survey corner is available, PoC should be defined by UTM coordinates derived by suitable GPS methods.) - Boundaries (bearings and distances for straight line segments—field misclosure should be balanced prior to preparation of the tenure sketch—or UTM coordinates for every bend or corner). (For curved boundaries, radials can be defined by bearings and distances or curve centre defined by UTM coordinates. Length of radius and arc should be shown.) Ideally, angular and linear dimensions or UTM coordinates would be shown in the body of the plan along each segment or by each bend or corner. For small scales these can be shown in a traverse table or table of coordinates with point numbers in table shown on the map. - Where a water boundary, road, riparian zone, or no-harvest area along a highway is the boundary of the forest tenure, they can be based on existing surveys, aerial photos, or detailed topographic mapping (prepared at a suitable scale). If the boundary is defined as an offset from these features, the offset distance should be shown. - The boundaries of riparian zones should be determined from actual measurement from the water body itself
Common Features	<ul style="list-style-type: none"> - Biogeoclimatic zone, subzone, and variant (interior only, update) - Planned internal reserve timber is must be shown, with internal retention patches mapped and descriptors of planned dispersed wildlife tree retention 	<ul style="list-style-type: none"> - District lot or section boundaries, subdivisions, highways, other rights of way, mineral claims, and any other survey information - Provincial Forests, Parks, and other pertinent administrative boundaries - Adjacent <i>Forest Act</i> and <i>Land Act</i> tenures.
Biophysical Base	<ul style="list-style-type: none"> - Existing roads 	<ul style="list-style-type: none"> - Roads - Water features
Other	<ul style="list-style-type: none"> - Planned external reserves may be voluntarily submitted. 	

(Sources: Appraisal manuals, Pat Ringwood report)

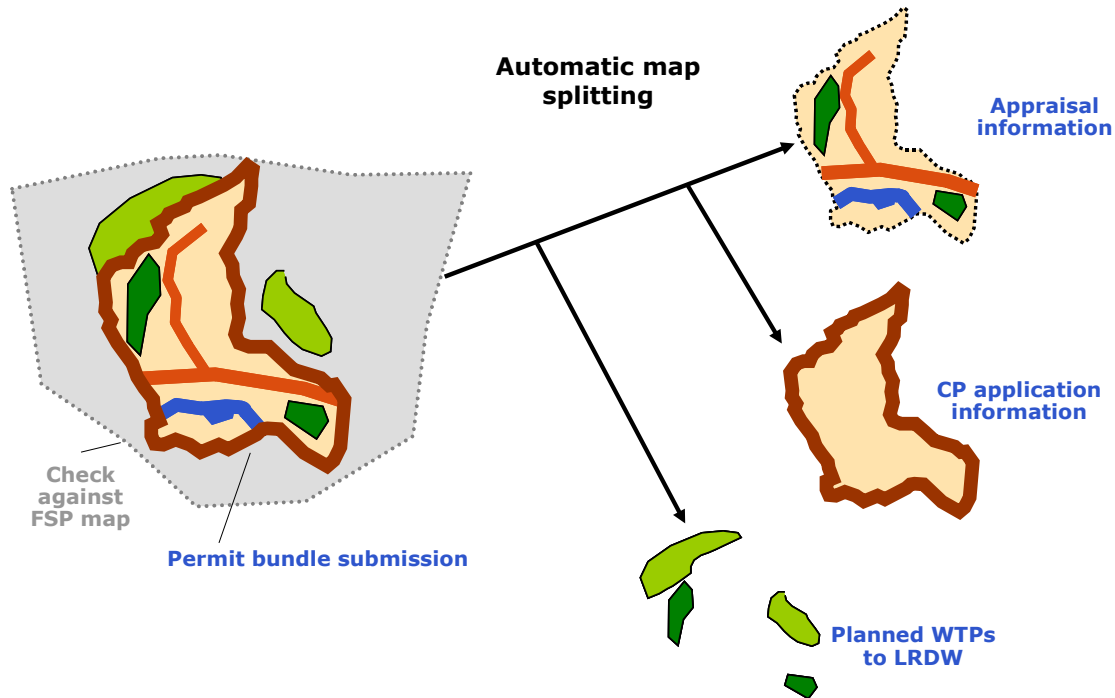


Figure 3.1: Permit bundle submission

3.2 Optional Layers

3.2.1 Planned external reserve timber

Retained timber may be located in, adjacent or external to the harvest boundary. It may be a wildlife tree patch/ wildlife tree retention area (WTP/WTRA), riparian reserve zone (RRZ), riparian management zone (RMZ), or simply an area of retained trees.

The Streamlining Cutblock Integration Team recommends that planned retention patches associated with the cutblock but adjacent or outside the harvest boundary may be submitted with the bundled submission (licensee's option). Planned wildlife tree patches (WTPs/WTRAs) will be stored in a new reserve timber layer in the LRDW. Internal reserve timber submitted as part of the cruise and appraisal layers will also be stored in the reserve timber layer in the LRDW.

The submitted planned retention areas will be flagged in the LRDW to indicate a potential conflict with any subsequent proposed harvest on the planned retention area. This reduces the chance that retention patches will be authorized for harvest prior to establishment at the harvest completion reporting stage when the actual WTP locations are submitted.

An important distinction is that these patches are designated planned and may change at harvest completion reporting. As such, they are not exempt from harvest, but will show as an encumbrance that must be addressed during an overlapping CP application.



4. Cutblock Integration Proposal #3: Bundled Harvest Completion reporting

Similar to Proposal #3, the Cutblock Integration Team recommends that RESULTS reporting be bundled for more efficient electronic submission. This bundled submission is already enabled by legislation.

Licensees would submit task-specific information wherever possible; however, updates to landbase information such as forest cover and built roads would be included in licensee harvest completion submissions. This information would be used to update inventories.

The RESULTS reporting map submission could be directly overlaid on the planning maps (FSP and Permit Bundle) to compare what was harvested with what was planned and issued in a CP. The system could automatically detect differences between the planned and actual harvests and notify the appropriate business area (e.g. C&E, Revenue, Tenures). (See Section 6)

Table 4.1 Bundled harvest completion reporting information requirements

Item	Harvest Completion Report
Task-specific information	<ul style="list-style-type: none"> - Actual area harvested (actual cutblock) by silvicultural system - Standards units boundaries (linked to a standards identification number) - Resource/wildlife habitat features
Common Features	<ul style="list-style-type: none"> - Forest cover polygons (update) (includes stocking status) - Actual wildlife tree patches and other retention patches (internal and external. Strata containing dispersed wildlife tree retention will be identified, but not necessarily mapped.)
Biophysical Base	<ul style="list-style-type: none"> - Roads attribute information (roads submitted through ABR) (update)

5. Cutblock Integration Team Proposal #4: Integrated Mapping Standards

The Cutblock Integration has developed mapping requirements and standards for the entire cutblock life cycle (Figure 5.1), from forest stewardship planning through to silviculture activity reporting.

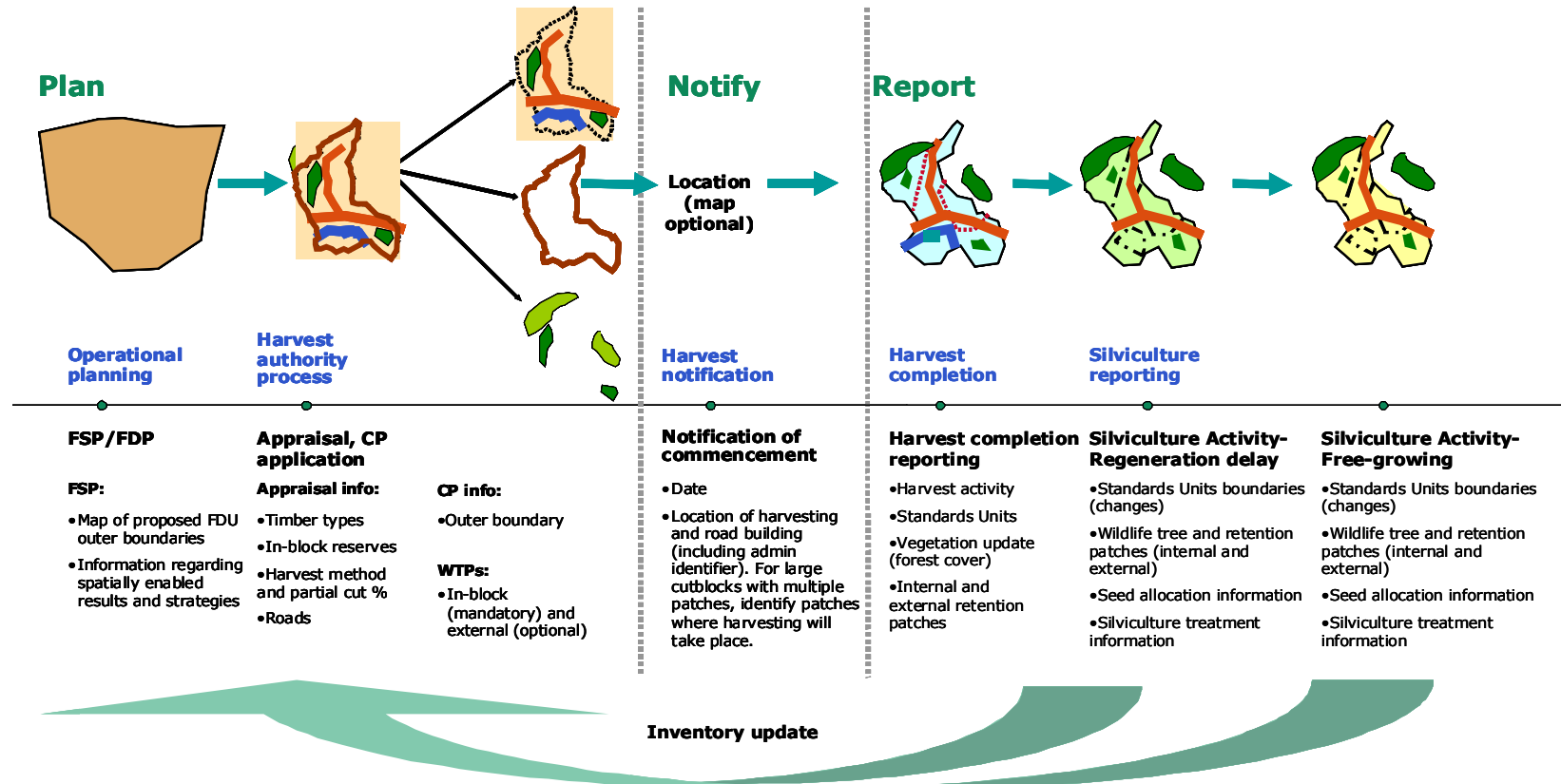


Figure 5.1: Proposed cutblock life cycle

The mapping requirements and standards include:

- Definitions of mapped units (e.g. cutblock, patch, cutting authority area, opening; Figure 5.2)
- Submission format
- Information requirements
- Operational map representation requirements
- Digital mapping standards.

The Guide to Integrate Mapping Requirements and Standards is available from the Streamlining website at www.for.gov.bc.ca/hfp/streamlining/.

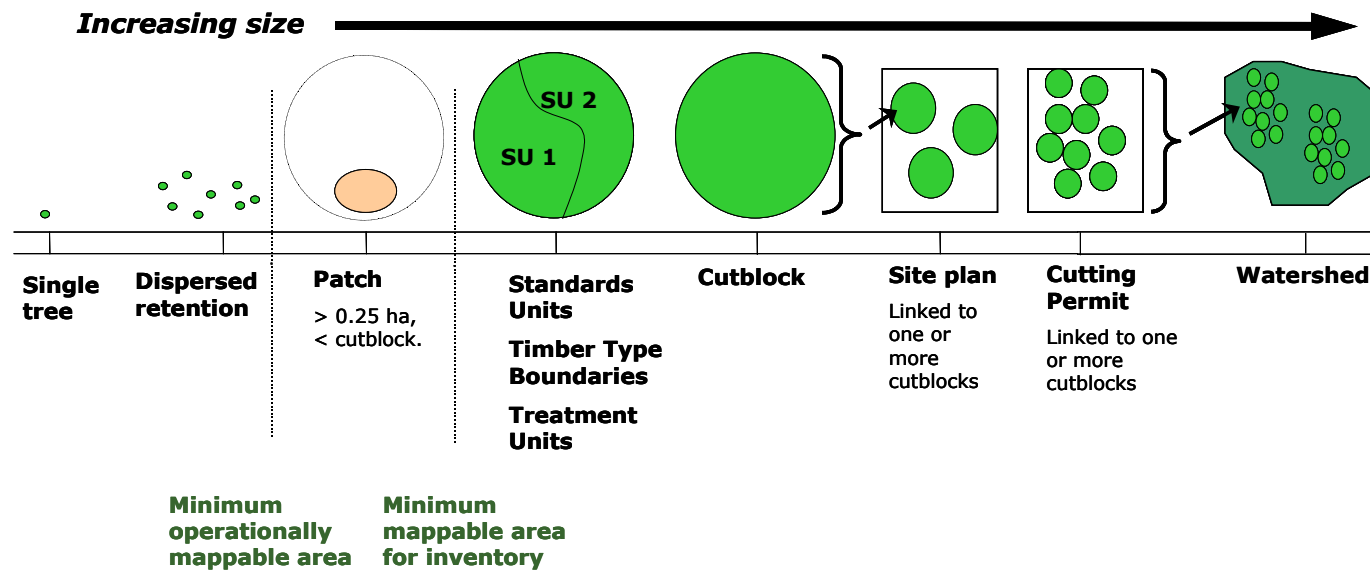


Figure 5.2: Scale continuum of mapped units



6. Business Process – proposed process flow to support Permit Bundle proposal

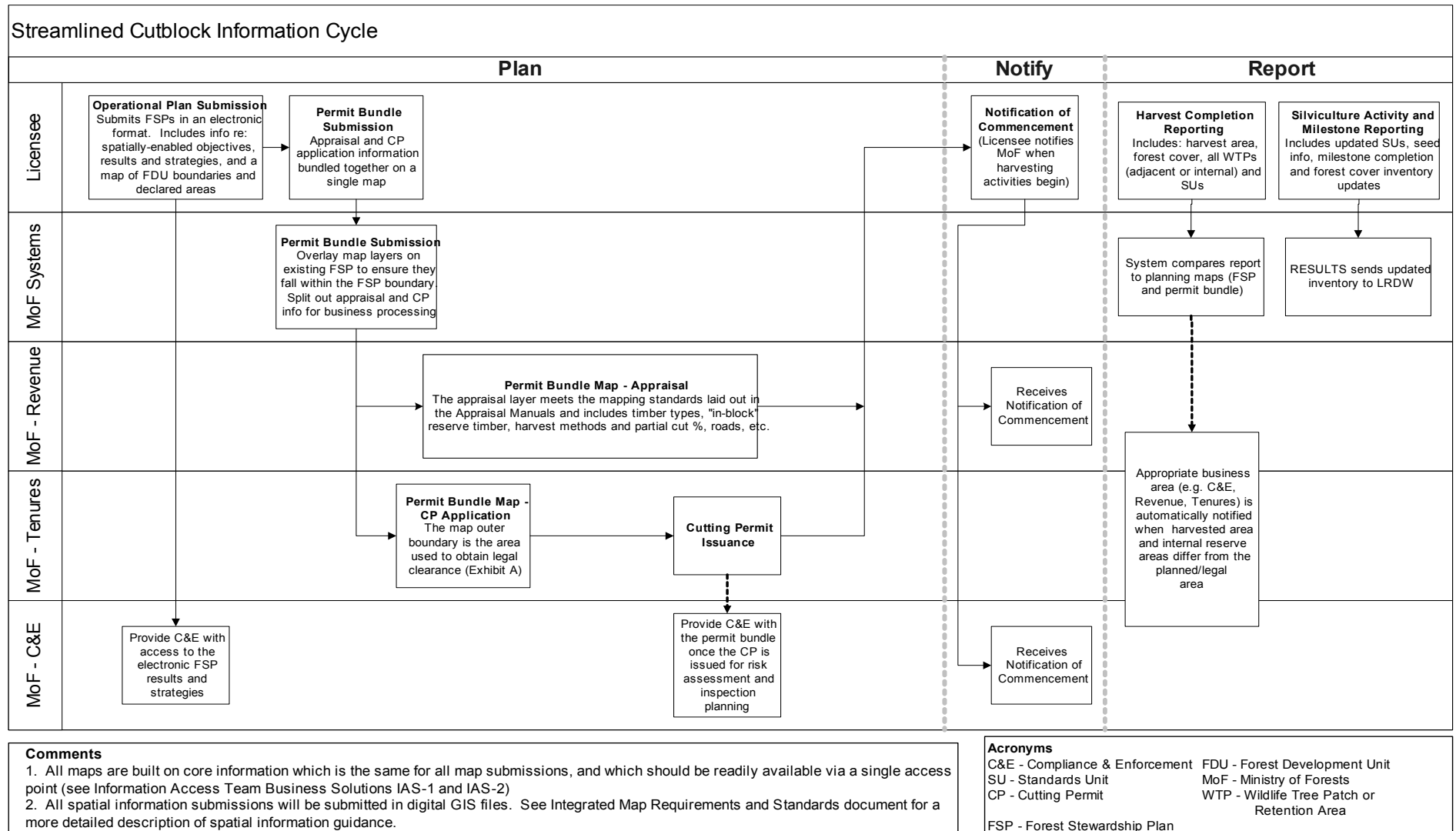


Figure 6.1: Streamlined cutblock business process



7. Conclusion

7.1 Remaining Questions

The proposals outlined in this document provide a conceptual framework for an integrated approach to cutblock-related forest information. Further work is needed to develop these proposals in more detail, and to integrate them further with the reporting end of the forest information cycle.

7.2 Benefits

Once outstanding questions are resolved, a number of benefits to both licensees and operational staff will result from the implementation of these business proposals.

7.2.1 Benefits to licensees

- Clear business rules and goalposts
- Rationalized information requirements - no duplication
 - One map submission for harvest authority, not three
 - One harvest completion submission, not three
- Less confusion about map versions
- Feedback on plan/permit/appraisal status
- Faster approvals

7.2.2 Benefits to district staff

- Electronic submissions will populate several applications simultaneously with appropriate data
- Reduced confusion across business areas – e.g. terminology, information requirements, mapping standards
- Integration of business processes e.g. plan to actual map comparison
- Information provided to C&E for risk assessment and inspection, and to Stewardship for monitoring/evaluation