

## An Audit of the Ministry of Forests, Lands and Natural Resource Operations’ Management of Timber

Released: [February 2012](#)

First Follow-up: [April 2013](#)

Discussed by the Public Accounts Committee: [June 11, 2012](#)

	Rec 1	Rec 2	Rec 3	Rec 4	Rec 5	Rec 6
OAG Assessment	●	●	●	●	●	●

● Fully/substantially implemented or alternative action taken   ● Partially implemented   ● No action taken

## BACKGROUND

**THE VAST MAJORITY** of British Columbia’s Crown land is forested. The province manages its forests to maintain the long-term health of forest ecosystems while providing environmental, economic and social opportunities for present and future generations. Timber is the primary revenue generator in the forest and success in managing it is integral to successfully managing the other social and environmental values.

Our 2012 audit assessed whether the Ministry of Forests, Lands and Natural Resource Operations is achieving its forest objectives for timber. That audit found that the ministry had not clearly defined its timber objectives, its existing management practices were insufficient to address the trend of lower timber supply and reduced species diversity, the forest inventory information was dated, and the ministry was not appropriately monitoring and reporting its timber results. Our report made six recommendations.

## SUMMARY

We are pleased to report that the ministry has made significant progress towards implementing the recommendations.

The ministry reported that it had substantially/fully implemented most of the recommendations, interpreting that its work to date to develop and implement plans and strategies since the 2012 audit met the intent of the recommendations. In contrast, we expected that most recommendations would not yet be fully implemented, as they would involve ongoing effort over several more years to implement the ministry’s plans. Consequently, we found that all of the recommendations are partially implemented. This difference in interpretation was discussed and the ministry agreed that, given our expectations regarding the long-term nature of the recommendations, partially implemented more accurately describes their progress to date. We found that progress at this time is generally consistent with our expectations and that the ministry is on track for fully implementing five out of six of the recommendations through its ongoing commitments to:

- ◆ Complete its framework of timber goals, objectives and performance measures;
- ◆ Complete local area plans to mitigate timber supply impacts and accelerate reforestation activities; and
- ◆ Implement its strategic plan for updating forest inventories.

In support of the above, government has committed ongoing funding for reforestation and the updating of timber inventories.

To date, the ministry has not completed an assessment of the sufficiency of the oversight framework for timber management, as per Recommendation 5. Consequently, questions remain as to whether the combination of legislation, shared stewardship and ministry oversight are effective in achieving the province’s timber objectives.

The ministry’s success in achieving its goal to promote species diversity will depend in part on its ability to gain the forest industry’s support to implement the ministry’s guidance where it is not explicitly required to do so by legislation.

## Key Findings

**Recommendation 1:** The Ministry of Forests, Lands and Natural Resource Operations develop a plan for directing forest stewardship that establishes clearly defined timber objectives and stewardship principles to guide decision-making, actions, timeframes and assessment of results.

**OAG Assessment:**

● Partially implemented

Our 2012 audit found that the ministry had not established clearly defined timber objectives to demonstrate achievement of its legislated mandate over the medium and long-term. Since our audit, the ministry has developed provincial objectives and targets, and is working to formalize these and communicate them to all stakeholders. To achieve the provincial targets, the ministry recognizes that local timber targets and strategies must be established.

**Recommendation 2:** The Ministry of Forests, Lands and Natural Resource Operations ensure that its investments in silviculture are sufficient to achieve long-term timber objectives, and that they align with stewardship principles and are cost-effective.

**OAG Assessment:**

● Partially implemented

The ministry self-assessed that they had fully or substantially completed this recommendation, whereas we found that the recommendation was partially implemented. In our 2012 audit, we noted a significant gap in the total area replanted by the ministry and the total area suitable for replanting. In the two years since the audit, the ministry has completed a provincial assessment of potentially treatable areas affected by mountain pine beetle and wildfire, allowing government to make informed investment decisions. Based on this assessment, FLNRO identified approximately 600,000 hectares with high potential for reforestation. Government has planned to plant 300,000 hectares of these high priority areas by 2025. The ministry has started to work towards this goal and expects to plant 25 million trees in 2014/15, exceeding its reforestation goal for this fiscal by 5 million trees. These actions are consistent with its target for timber volume gain from silviculture investments.

Fully implementing this recommendation will require continued delivery on government’s commitment.

**Recommendation 3:** The Ministry of Forests, Lands and Natural Resource Operations ensure that restocking activities result in the establishment of forests that are consistent with its long-term timber objectives

**OAG Assessment:**

● Partially implemented

The ministry self-assessed that they had fully or substantially completed this recommendation, whereas we found that the recommendation was partially implemented. In our 2012 audit, we noted that reforestation decisions made by industry based on the least-cost approach were contributing to reduced tree species diversity which may also impact future forest resilience to climate change. The ministry is responding through outreach initiatives and by setting local-level species distribution goals for priority areas, encouraging licensees to make reforestation decisions that promote long-term forest resilience and productivity. Fully implementing this recommendation will require completing local plans for other areas of the province (see Recommendation 1).

While we are encouraged by the progress to date, we note that the ministry may encounter challenges implementing its goals for species diversity. For instance, forest licensees may find that it is not cost-effective to diversify the species that they plant, and are not obligated to do so unless specified in their forest stewardship plans.

**Recommendation 4:** The Ministry of Forests, Lands and Natural Resource Operations ensure that its information systems reflect actual forest conditions in priority management areas.

**OAG Assessment:**  
 Partially implemented

The ministry self-assessed that they had fully or substantially completed this recommendation, whereas we found that the recommendation was partially implemented. In our 2012 audit, we noted concerns with the ministry’s forest inventory information, used to forecast timber supply and determine the allowable annual cut, particularly in areas affected by disturbance. Since our 2012 audit, the ministry has focused on initiatives to improve its forest inventory for mountain pine beetle areas where data is the most out-of-date and consequences for communities are the greatest. The ministry has developed a 10-year Forest Inventory Strategic Plan and is working towards its implementation, as well as developing a monitoring and reporting framework.

The ministry has also initiated a quality assurance program for data submitted by licensees that is achieving encouraging results, with the ministry reporting that the incidence of data quality issues for recently harvested areas has decreased from 11.3% to 1.4% over the last two years. These results are reflected in FLNRO’s new performance measure that assesses improvement in the quality of data used for resource stewardship decisions.

We are encouraged by government’s intent to fully implement this recommendation through its ongoing commitment to the 10-year plan.

**Recommendation 5:** The Ministry of Forests, Lands and Natural Resource Operations ensure that the collective and individual components of its oversight framework are sufficient to ensure the achievement of long-term timber objectives.

**OAG Assessment:**  
 Partially implemented

The ministry self-assessed that they had fully or substantially completed this recommendation, whereas we found that the recommendation was partially implemented. In our 2012 audit, we noted concerns with the effectiveness of individual components of the oversight framework such as compliance and enforcement, as well as the adequacy of sampling by the Forest and Range Evaluation Program. We also found no overall assessment of how the components of the framework contribute individually and collectively to the achievement of the ministry’s desired results.

In response to our 2012 audit, the ministry identified the key components of the oversight framework. It also implemented actions as described under the other recommendations, which the ministry believes will be sufficient to achieve its timber objectives. However, this recommendation called for an assessment of the sufficiency of its oversight activities as related to timber. This has not occurred.

**Recommendation 6:** The Ministry of Forests, Lands and Natural Resource Operations develop and implement appropriate performance measures to demonstrate progress towards achieving long-term timber objectives and report publicly on the results

**OAG Assessment:**  
 Partially implemented

The ministry self-assessed that they had fully or substantially completed this recommendation, whereas we found that the recommendation was partially implemented. In our 2012 audit, we assessed that the ministry’s performance measures were not comprehensive enough to demonstrate success at meeting its timber objectives. Relevant performance measures form the cornerstone of effective public sector performance reporting and are fundamental to public accountability. Since our audit, the ministry has modified its suite of performance measures to help demonstrate achievement of the province’s objectives for timber volume. These changes include updating its performance measure that monitors silviculture investments and adding a new measure that assesses improvement in data quality.

Goals and objectives have also been developed for other aspects of timber, such as species composition and timber quality, but have not been formally endorsed and communicated to stakeholders and do not yet have definitive performance measures (see Recommendation 1). To fully meet this recommendation, we would expect these objectives to be formalized, and for the ministry to report publicly on its progress.

1 Approximately 32% of the ALR lies within these two districts.

## An Audit of the Ministry of Forests, Lands and Natural Resource Operations’ Management of Timber

As at: February, 20 2014

Released: [February 16, 2012](#)

1st Follow-up: [April, 2013](#)

Discussed by the Public Accounts Committee: [June 11, 2012](#)

**Self-assessment conducted by Resource Stewardship Division, Ministry of Forests, Lands and Natural Resource Operations**

### Comments

The ‘initial ministry response to audit’ statement(s) is an excerpt from the ministry responses that are in the audit report. The ‘initial self-assessment’ is a short excerpt from the April 2013 ‘Follow-Up Report’.

### Recommendations

RECOMMENDATIONS ADDRESSED IN PREVIOUS FOLLOW-UP REPORT(S):	SELF-ASSESSED STATUS
<b>Recommendation 6:</b> Develop and implement appropriate performance measures to demonstrate progress towards achieving long-term timber objectives and report publicly on the results.	<b>Fully or substantially completed</b>

### Outstanding Recommendations

RECOMMENDATIONS AND SUMMARY OF PROGRESS	SELF-ASSESSED STATUS
<b>Recommendation 1:</b> Develop a plan for directing forest stewardship that establishes clearly defined timber objectives and stewardship principles to guide decision making, actions, time frames and assessment of results.	<b>Partially implemented</b>

### Actions taken, results and/or actions planned

“Initial ministry response to audit: The ministry agrees clear timber objectives and stewardship principles are important aspects of forest management.”

“Initial self-assessment: The ministry’s 2013/14-2015/16 service plan will more clearly define provincially desired outcomes for timber. The updated performance measure for ‘Timber volume gain from silviculture investments’ is now linked to baseline provincial timber harvest target levels of 57 million cubic metres per year during the mid-term, and 65 million cubic metres per year for the long-term. “

### Self-assessed progress :

The ministry is developing a “Provincial Timber Management Goals and Objectives” document that consolidates the goals, objectives, and targets found in numerous other documents including legislation, service plans, and previous reports.

We are currently discussing the document with stakeholders to ensure the effective and appropriate integration of the suite of forestry objectives and values.

All information has been provided by the organization and has not been audited.

## Outstanding Recommendations (Continued)

<p><b>Recommendation 2:</b> Ensure that its investments in silviculture are sufficient to achieve long-term timber objectives, and that they align with stewardship principles and are cost-effective.</p>	<p><b>Fully or substantially implemented</b></p>
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**Actions taken, results and/or actions planned**

“Initial ministry response to audit: Forests for Tomorrow (FFT) uses several criteria, including ‘return on investment’, to ensure investments are cost-effective and targeted at the highest priorities. The ministry aligns FFT silviculture investments with its service plan objectives and the other investment opportunities assessed in the annually updated three-year Land Based Investment Strategy. The appropriate level of government investment in silviculture in the future will continue to be determined in the context of available funding and relative priority to other government investments.”

“Initial self-assessment: The ministry has completed a broad based provincial assessment of the current status and forecasted potentially treatable area under four components:

1. Mountain pine beetle (MPB) impacted mature (>age 60) stands
2. MPB impacted immature (<age 60) stands
3. Wildfire impacted stands
4. Existing current and backlog not satisfactorily restocked (NSR) area”

**Self-assessed progress:**

“Performance measure 7: Timber volume gain from silviculture investments” in the ministry Service Plan are consistent with expected investment levels in silviculture over the next 3 years.

Investments in incremental silviculture through Forests for Tomorrow are cost-effective in that treatments must meet a 2% rate of return. A lower rate of return may be accepted if investments also benefit non-timber values.

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All information has been provided by the organization and has not been audited.

## Outstanding Recommendations (Continued)

**Recommendation 3:** Ensure that restocking activities result in the establishment of forests that are consistent with its long-term timber objectives.

**Fully or substantially implemented**

### Actions taken, results and/or actions planned

“Initial ministry response to audit: The ministry’s existing stocking standards and standards for seed use will be reviewed to determine if there are areas for improvement relative to emerging issues such as climate change adaptation.”

“Initial self-assessment: There are six key activities that the ministry is doing to address this recommendation:

- ◆ Type 4 Silviculture Strategies
- ◆ Species Monitoring Reports
- ◆ Climate-Based Seed Transfer
- ◆ Tree Species Selection Tool
- ◆ Climate Change Adaptation Training
- ◆ New Stocking Standards Guidelines”

### Self-assessed progress:

Considerable progress continues to be made on each of these six key activities that are, among other things, designed to assess or update restocking activities:

1. Type 4 Silviculture Strategies: Seven Type 4 Silviculture Strategies with new species goals for stocking will be completed by March 2014.
2. Species Monitoring Reports: prepared for each timber supply area (TSA) in 2012, the reports help assess how well the ministry is meeting its species diversity goals.
3. Climate-Based Seed Transfer: this climate change adaptation initiative intends to transition BC’s seed transfer system from a geographically-based science, policy and decision support framework to one that is climate-based.
4. Tree Species Selection Tool: The Tool, released in 2012, assists practitioners adapt their practices and develop strategies to maintain and enhance the resilience, adaptability, and productivity of BC’s forest ecosystems as our climate changes.
5. Climate Change Adaptation Training: Nine training sessions were delivered in 2013 in locations across the province; they were well attended and well received, with a demand for more training. On-line stocking standards/ climate change training is being developed and should be completed in February 2014.
6. New Stocking Standards Guidelines: A draft has been completed that provides new tree species selection guidance in key ecosystems subject to significant climate change in the near term.

**Recommendation 4:** Ensure that its information systems reflect actual forest conditions in priority management areas.

**Fully or substantially implemented**

### Actions taken, results and/or actions planned

See page 7-8 for response to Recommendation #4

All information has been provided by the organization and has not been audited.

## Outstanding Recommendations (Continued)

**Recommendation 5:** Ensure that the collective and individual components of its oversight framework are sufficient to ensure the achievement of long-term timber objectives.

**Fully or substantially implemented**

### Actions taken, results and/or actions planned

“Initial ministry response to audit: The ministry’s existing framework works within the context of public oversight in the annually reviewed ministry budget and Service Plan. The ministry will continue to ensure that the framework is sufficient to support the achievement of long-term timber objectives.”

“Initial self-assessment: As a means to ensure the oversight framework is sufficient, the ministry is undertaking an evaluation of the framework. The evaluation reviews professional reliance, compliance and enforcement reporting, effectiveness evaluations, and legislation (for example, as it relates to forest stewardship plans and the role of the Forest Practices Board).”

### Self-assessed progress:

The ministry’s oversight framework to specifically ensure achievement of long-term timber objectives includes achievement of performance measures in the ministry’s Service Plan e.g. ‘Performance Measure 4: Resource decision data quality index’ and ‘Performance Measure 7: Timber volume gain from silviculture investments’. In considering the concept of an “oversight framework”, the ministry also reviewed the oversight framework that relates to the entire *Forest and Range Practices Act* (FRPA), which includes objectives set by government including for timber (see below).

General considerations around the FRPA oversight framework.

The FRPA oversight framework includes the following components:

- ◆ entities with a legal mandate for FRPA oversight: the Minister’s Forest and Range Practices Advisory Council, the Forest Practices Board, the Forest Appeals Commission, and the ministry’s Compliance and Enforcement program;
- ◆ entities with a legal oversight mandate, but not specifically or solely for FRPA: the Office of the Auditor General, and the four professional associations most closely associated with FRPA;
- ◆ entities with a non-legislated mandate that is specific to FRPA: the ministry’s Forest and Range Evaluation Program, and RESULTS, the ministry’s silviculture obligation tracking and reporting system; and
- ◆ entities that provide ad-hoc commentary on FRPA on a voluntary basis.

The ministry’s evaluation of the FRPA oversight framework ensured that all components of the framework that have a specific mandate for FRPA oversight are aware of Government’s expectations for on-going use of their outputs and products. The evaluation also identified that establishing stronger linkages between each component will make the framework more effective. That work is underway as part of the ministry’s commitment to continuous improvement of the legal, non-legal, and oversight components of the FRPA structure.

All information has been provided by the organization and has not been audited.

## Full text of response to Recommendation #4

“Initial ministry response to audit: The ministry is committed to ensuring that the accuracy of forest inventory and yield projection is adequate for strategic decision-making.”

“Initial self-assessment: The ministry has continued a substantial, ongoing program of forest inventory, monitoring and stand growth modelling aimed at ensuring that resource information accurately reflects actual forest conditions in priority management areas. In 2013/14, the ministry will release a 10-year strategic forest inventory plan. In its response to the OAG report, the ministry committed to six specific actions.”

### Self-assessed progress:

The ministry did release the “Forest Inventory Strategic Plan” in February 2013. The Strategic Plan actions improvement recommendations from the audit, and also the Association of BC Forest Professionals and the Forest Practices Board. In the section below, Strategic Plan goals related to each of the inventory-related commitments are highlighted; refer to the Strategic Plan for further details such as 5- and 10-year targets

[www.newsroom.gov.bc.ca/2013/02/bc-releases-10-year-forest-inventory-plan.html](http://www.newsroom.gov.bc.ca/2013/02/bc-releases-10-year-forest-inventory-plan.html)

Government has committed the required resources to implement the strategic plan which includes hiring new staff and \$8 million annual operating funds (averaged over the 10-year plan period).

1. The ministry committed “to periodically re-inventory all forest lands to ensure that information on stands is up-to-date in the period between free-growing and harvest;”

Strategic Plan goals include:

- ◆ Goal #1: Update the inventory for all depletions and major disturbances
- ◆ Goal #2: Produce new Vegetation Resource Inventory (VRI) for mountain pine beetle (MPB) affected areas and other priority areas
- ◆ Goal #3: All forest cover inventory data is less than 30 years old
- ◆ Goal #4: Provide interim inventory information on demand for critical areas
- ◆ Goal #5: Use low cost, innovative methods to provide forest cover inventory information for appropriate areas
- ◆ Goal #9: Complete the forest inventory coverage province-wide

2. The ministry committed “to implement the ground sampling program that is used to validate forest cover estimates that have been derived from aerial photography;”

Strategic Plan goals include:

- ◆ Goal #7: Ensure that forest cover inventory is verified and supplemented with ground sample plots

3. The ministry committed “to reduce the backlog of submissions to the ministry’s information system (RESULTS) that have not been integrated into the inventory;”

In addition to audit findings regarding RESULTS, the Forest Practices Board published a special investigation that included RESULTS in December 2011. As a follow-up to that investigation, the Board’s Winter 2013-14 newsletter states:

... changes have been made to the reporting system that ensure the information [in RESULTS] can be seamlessly used in updates to forest cover mapping. The Ministry has also implemented an ongoing quality assurance program that has been identifying priority

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All information has been provided by the organization and has not been audited.

issues and implementing corrective actions to solve those issues. Users of the reporting system have responded very positively to the Board report and the proportion of reports with high priority issues has fallen from over ten percent in February 2012 to less than four percent currently.

Although current RESULTS submissions can be seamlessly used to update forest cover mapping, there are challenges with older submissions. Substantial progress has been achieved on older submissions, however, at this time there remain a large number of cut blocks that are not yet incorporated into the provincial inventory file. The ministry is continuing to reduce this backlog. Also, the ministry continues to maintain a province-wide GIS coverage of all depletions so that strategic analyses, such as Timber Supply Review (TSR), can account for all harvested areas.

4. The ministry committed “to test and refine the growth and yield projection models;”

Strategic Plan goals include:

- ◆ Goal #8: Reliable stand growth models for all significant conditions

5. The ministry committed “to implement programs to monitor young stand growth, yield, and condition;”

Strategic Plan goals include:

- ◆ Goal #6: Monitor stand growth and change throughout the province

6. The ministry committed “to provide publicly accessible information on the accuracy of forest inventories, to carefully set inventory priorities and focus investment on areas with the greatest need, and to report on the performance of the forest inventory program.”

The Strategic Plan states that the ministry will develop annual targets consistent with the Plan and report performance against these targets. The Plan sets inventory priorities for areas affected by the MPB so that investments focus on areas with the greatest need.