

**ALGONQUIN FORESTRY AUTHORITY
2011-2012 ANNUAL
SUSTAINABLE FOREST MANAGEMENT
REPORT**



May 14, 2013

***CAN/CSA-Z809-02 CERTIFICATION
FOR SUSTAINABLE FOREST MANAGEMENT***

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Executive Summary

The 2011-2012 Annual Sustainable Forest Management (SFM) report is the fifth SFM report to be produced by the Algonquin Forestry Authority (AFA) under CSA certification. The SFM system was officially registered to the CSA Z809-02 standard on February 4, 2008. This report is based on the AFA fiscal year **April 1, 2011 to March 31, 2012**.

The 2009-10 Annual Report (three years ago), was the final report for the 2005-2010 five year term. Please refer to that report for details on the “5-year VOITs”.

The prime objective of the report is to report on progress that has been made to fulfill commitments identified in the CSA SFM plan. Secondary objectives of the report are to demonstrate that the AFA and their partners are living up to the SFM requirements and commitments outlined in the SFM Plan, and to demonstrate a commitment to continual improvement. Included in the report are inserted segments from the original SFM plan that are intended to help refresh the reader on components of the SFM Plan.

The report provides updates on targets for individual Values, Objectives, Indicators and Targets (VOIT) and from the results of these updates; progress, successes, and shortcomings may be measured.

There are 51 indicators within the SFM plan that have associated targets, not all of which are reported on an annual basis. There are 17 long term indicators that are not updated on an annual basis; these are generally being reported on a 5 year basis (see 2009-10 Annual Report). There is one indicator to be determined by the Algonquin Treaty Chief negotiator. There is one indicator that cannot be evaluated by Ontario Parks until 2012-13. The remaining 32 indicators have an annual target.

Of these 32 annual indicators, 25 have had their targets achieved (78%). There are 7 of the 32 annual indicators reported where the target has not been achieved. Declining market conditions since the SFM Plan was written have contributed most significantly to the underachievement of targets (socio-economic targets). Aggressive target setting with no allowable variance has also contributed to the underachievement of targets. It is recommended that future targets recognize those indicators that are beyond the control of the forest manager. A greater level of acceptable variance may also be appropriate to quantify success.

The 7 indicators where targets have not been achieved are:

- 1.2.1.2.1 100% compliance with Area of Concern prescriptions for the protection of fisheries habitat around designated brook trout lakes.
- 1.4.1.1.1 100% compliance with zone boundary locations.
- 2.1.1.1.1 100% regeneration success as forecast in table FMP-28 in 2005 FMP.
- 5.2.1.2.1 Number of local production facilities (wood supply commitment holders) that utilize wood fibre from the DFA.
- 5.3.1.1.1 Crown timber stumpage paid to government consolidated revenues.
- 5.3.2.1.2 Percentage of tree marking conducted by Algonquin Aboriginal organizations/people.
- 5.3.3.1.1 Maintaining the number of Park interior visitor days.

Refer to the individual VOIT discussion in section 5 for complete details on target achievement. At the time of production of this annual report, a new SFM Plan has been completed in consultation with the Algonquin Park Forest Certification Advisory Group, and uploaded to the AFA internet site (October 2012). A new certificate has also been issued for registration to the CSA Z809-08 standard. This new

SFM plan has resulted in changes to VOITs, primarily to address changes in the new 2010-2020 Algonquin Park Forest Management Plan, and changes to the requirements of the new CSA Z809-08 standard which was officially released by the Canadian Standards Association in April 2010. All of the targets identified above have been either revised or removed from the new SFM Plan, to enable more current and realistic targets.

This is the last Annual Report against the old 2007 SFM Plan. Next year's report for 2012-13 will be against the new SFM Plan. Details have been included in this Annual Report to clarify changes made to the new SFM Plan, and to identify preliminary progress against the new VOITs.

For those indicators that are assessed in this Annual Report it is concluded that, on balance, the majority of targets are being met and progress has been made to fulfill the commitments identified in the CSA SFM Plan. AFA and their partners are living up to the SFM requirements and commitments outlined in the SFM Plan and a commitment to continual improvement is being demonstrated.

A summary of the results from the surveillance audit in 2011 complete the monitoring and measurement component of this report.

The final component of the report describes future plans and initiatives directed at the achievement of continual improvement on the Algonquin Park Forest.

1.0 INTRODUCTION

1.1 Purpose of AFA SFM Plan

The Algonquin Forestry Authority Sustainable Forest Management Plan (SFM Plan) is required as part of the definition and implementation of a Sustainable Forest Management System under the CAN/CSA-Z809-02 standard. The SFM Plan describes the SFM System and includes specific Values, Objectives, Indicators and Targets (VOITs) for Algonquin Park which constitutes the defined forest area (DFA). The SFM plan is a framework document that summarizes the key components of the management system used by AFA to manage the DFA.

Sustainable Forest Management certification is a voluntary tool available to forestry organizations that wish to demonstrate corporate responsibility by having their forest management planning and practices independently certified to a sustainable forest management standard. Sustainable Forest Management refers to maintaining and enhancing the long-term health of forest ecosystems for current and future generations. Certification goes beyond regulatory requirements and takes environmental, economic and social values into consideration.

Algonquin Forestry Authority chose to seek registration to the CAN/CSA-Z809-02 sustainable forest management standard to demonstrate to the public and its customers that the Algonquin Park Forest is being managed on a sustainable basis. The SFM standard gives AFA the opportunity to continually improve forest management performance while engaging interested parties in a focused public participation process.

As the Crown Agency responsible for sustainable forest management in Algonquin Provincial Park, AFA assumed lead responsibility for developing and implementing the SFM system for the DFA. Algonquin Forestry Authority has an Environmental Management System (EMS) registered to the ISO14001:2004 standard, which provides a framework for planning, implementing and monitoring sustainable forestry operations in the forest. Algonquin Forestry Authority has appointed an SFM/EMS Coordinator who, irrespective of other responsibilities, has defined roles, authority and responsibilities for:

- Ensuring that SFM requirements are established and maintained in accordance with this standard
- Reporting on SFM requirements to top management for review and as a basis for continual improvement

In developing the SFM Plan, AFA has endeavored to ensure that all parties necessary to address the CSA SFM elements for the DFA were involved in the process. This was accomplished by conducting broad public consultation, consulting with Algonquin aboriginal communities and forming a forest certification advisory group.

To ensure that all necessary stakeholders were involved, AFA selected 19 representatives from a comprehensive list of potential stakeholders to serve as the Forest Certification Advisory Group (herein referred to as the Advisory Group) and liaise on a continuing basis with AFA. The list of potential stakeholders was developed through a review of values, issues and interest groups and a stakeholder analysis.

The Advisory Group consultation process included introductory training and facilitated workshops dealing with the identification and selection of VOITs for the SFM plan. Subsequent meetings involved the identification of values of specific importance to environmental, social and economic concerns and needs of members and stakeholder groups including the development of suitable objectives, indicators and targets for each.

At the time of production of this annual report, a new SFM Plan has been prepared in consultation with the Algonquin Park Forest Certification Advisory Group, and uploaded to the AFA internet site (October 2012). This new plan has resulted in changes to VOITs, primarily to address changes in the new 2010-

2020 Algonquin Park Forest Management Plan, and changes to the requirements of the CSA Z809-08 standard, which was officially released by the Canadian Standards Association in April 2010. This is the last Annual Report for the old 2007 SFM Plan. Next year's report for 2012-13 will be the first report on the new SFM Plan.

2.0 GUIDING PRINCIPLES

2.1 AFA's Sustainable Forest Management Principles

As noted previously, the AFA is the Ontario Crown Agency responsible for sustainable forest management in Algonquin Provincial Park. Algonquin Forestry Authority's responsibilities also include the harvesting and distribution of wood products to mills in communities within the region. The AFA's vision is to achieve the highest standards of sustainable forest management practices, in order to maintain Park values for future generations, with the mission to ensure the long-term health of Algonquin's forests while producing a sustainable supply of forest products for the forest industry of the region.

The AFA is also guided by 6 commitments and strategies:

1. Sustainable Forest Management:

The AFA is committed to conform with the requirements of the international standards for environmental management (ISO 14001:2004), for sustainable forest management (CAN/CSA-Z809-02), and to managing Algonquin's forests in a sustainable manner consistent with requirements of the SFM plan.

This includes:

- Conserving biological diversity
- Conserving forest ecosystem condition and productivity by maintaining the health, vitality and rates of biological production
- Conserving soil and water resources
- Maintaining forest conditions and management activities that contribute to the health of global ecological cycles
- Providing multiple benefits to society
- Accepting society's responsibility for sustainable development

2. Compliance with Laws:

The AFA will meet or exceed all applicable laws, regulations, policies, standards and other requirements to which AFA subscribes. In addition, the AFA will prevent pollution using processes, practices, materials or products that avoid, reduce, or control pollution and will continuously evaluate compliance with current laws and regulations and the prevention of pollution. Periodic independent audits shall ensure that operations are consistent with established policies and objectives.

3. Public Participation:

The AFA will provide opportunities for public consultation on sustainable forest management practices in Algonquin Park, including a public advisory committee to provide input on the Sustainable Forest Management plan. The AFA will also facilitate public review and input on the FMP and work schedules and will respond to comments in a timely fashion. These strategies and others will help to effectively communicate forest management practices in the Park to the public. Finally, the AFA will make public the results of independent audits and ongoing assessments in Annual Reports.

4. Aboriginal Rights and Participation:

The AFA will respect Aboriginal and Treaty rights, provide participation opportunities for Aboriginal peoples with respect to their rights and interests in sustainable forest management and will work cooperatively with local Aboriginal communities to identify and implement ways of achieving a more equal participation by Aboriginal communities in the benefits provided through forest management planning in Algonquin Park.

5. Health and Safety:

The AFA will provide conditions and safeguards for the health and safety of workers and the public. In order to achieve this, the AFA will establish and communicate safe working habits to employees of the AFA and its contractors; organize training programs for AFA employees and assist contractors in their training programs; and maintain and communicate emergency response plans and procedures.

6. Continual Improvement:

The AFA will work towards improving knowledge about the forest and about sustainable forest management; monitor advances in sustainable forest management science and technology; and incorporate these advances where applicable. In addition, the AFA will participate in research projects that contribute to the health of the forest ecosystem and productivity of the forest.

3.0 PLAN AREA AND OWNERSHIP RIGHTS AND RESPONSIBILITIES

3.1 *Defined Forest Area*

Algonquin Park constitutes the Defined Forest Area (DFA). Forest management activities occur only within the Recreation/Utilization zone (RU zone) of the Park.

The Algonquin Provincial Park Management Plan (1998) establishes the framework for all activities within the Park. This SFM plan is written in accordance with said plan and other relevant provincial guidelines and manuals.

Algonquin is designated a natural environment park under the Ontario Provincial Park System. As such, it will be planned, zoned, and managed in accordance with policies for this classification. A major mechanism to control land use is the zoning of the Park into land use categories: categories are Access, Development, Historic, Nature Reserve, Natural Environment, Wilderness, and Recreation/Utilization. A description of the purpose for each zone is found in the Algonquin Park Management Plan.

While the RU zone is the only zone of the Park where forest management operations are permitted, the other zones of the Park fall within the management unit boundary and contribute to non-timber objectives identified in this SFM plan (i.e. wildlife, forest diversity and old growth). As a result, these other zones are included in the DFA. This approach to planning is consistent with the approved 2005-2025 FMP (CFSA) for the Algonquin Park Forest.

At the time of production of this annual report, the 2010-2020 FMP has been approved and implemented, as required under the CFSA. Based on this new approved FMP, VOITs will be reviewed with the advisory group and the changes to some of the FMP-related VOITs is anticipated due to policy changes and advances in science and computer modeling approaches.

3.2 *Rights and Obligations*

3.2.1 *Legislation and Regulatory Requirements*

A list of all relevant legislation and regulatory requirements that relate to the DFA is maintained within section 4.3.2 of the AFA's EMS.

AFA's SFM policy lists 4 commitments or strategies for compliance with laws:

1. Meet or exceed all applicable laws, regulations, policies, standards and other requirements to which AFA subscribes
2. Prevent pollution using processes, practices, materials or products that avoid, reduce or control pollution

3. Continuously evaluate compliance with current laws and regulations, and the prevention of pollution
4. Periodic independent audits shall ensure that operations are consistent with established policies and objectives

3.2.2 *Aboriginal and Treaty Rights*

As stated in the SFM policy, AFA is committed to:

- Respecting Aboriginal and Treaty rights
- Providing participation opportunities for Aboriginal people with respect to their rights and interests in sustainable forest management
- Working cooperatively with local Aboriginal communities to identify and implement ways of achieving a more equal participation by Aboriginal communities in the benefits provided through forest management planning in Algonquin Park

Negotiations are ongoing with respect to an Aboriginal land claim that affects a portion of the DFA. AFA is committed to monitoring the progress of the land claim and recognizing associated Treaty rights once finalized. It is understood by AFA and Aboriginal community members that participation in the CSA consultation process will not prejudice those rights.

3.2.3 *DFA Workers*

Algonquin Forestry Authority promotes the legal, constitutional rights, and health and safety within the DFA of AFA employees and contractors to AFA. The Ministry of Natural Resources (Ontario Parks) has this responsibility for their employees and contractors within the DFA.

AFA's commitment to health and safety includes:

- Providing conditions and safeguards for the health and safety of workers and the public
- Establishing and communicating safe working habits to employees of the AFA and its contractors
- Organizing training programs for AFA employees and assist contractors in their training programs
- Maintaining and communicating emergency response plans and procedures

DFA workers contributions to SFM are encouraged through training and SFM awareness programs.

3.3 *Legal Requirements*

The Management System Procedure (MSP) 4.3.2 (Legal and Other Requirements) of the Authority's EMS includes methodologies and responsibilities for identifying, accessing, reviewing, monitoring and maintaining documentation on legal and other requirements.

4.0 PLANNING AND PUBLIC PARTICIPATION PROCESSES

4.1 *Continuing Role of Advisory Group*

Public participation through the Advisory Committee is an ongoing process of providing input into the continual improvement of the AFA's SFM system and performance. Advisory Group input will continue during the monitoring and follow-up phases of implementation of the CSA SFM system.

The Advisory Group will continue to meet annually and members will be asked to:

- Identify opportunities for improvement
- Discuss and provide input into issues relevant to SFM on the DFA
- Provide input during reviews of VOITs

- Provide input on monitoring programs
- Review Annual Reports
- Provide input on new components of the SFM Plan
- Participate in an external certification audit, if required.

5.0 Values, Objectives and Performance Indicators

5.1 Development of the Values, Objectives and Performance Indicators

The CSA Standard provides the following definitions for VOITs which form the basis of the SFM plan:

Value: A DFA characteristic, component, or quality considered by an interested party to be important in relation to a CSA SFM element or other locally identified element.

Objective: A broad statement describing a desired future state or condition of a value.

Indicator: A variable that measures or describes the state or condition of a value.

Target: A specific statement describing a desired future state or condition of an indicator. Targets should be clearly defined, time-limited, and quantified, if possible.

Values, objectives and performance indicators included in this SFM plan were developed through the public consultation process associated with the 2005-2025 Algonquin Park FMP and the consultation process for the SFM plan. At least one DFA specific VOIT has been created for each CCFM SFM criterion and CSA SFM element associated with the CAN/CSA-Z809-02 Standard.

5.2 Detailed Values, Objectives, Indicators and Targets

CRITERION 1: CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.1 Ecosystem Diversity

Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur on the Defined Forest Area.

VALUE: 1.1.1 Forested Ecosystems

OBJECTIVE: 1.1.1.1 To maintain a mosaic of constantly changing yet ever-present forest types within the Bounds of Natural Variation.

Indicator 1.1.1.1.1	Target	Variance
Ecosite area (hectares) over time	Maintain ecosites within acceptable levels* of the BNV for the next 100 years.	+/- 20 % of the 2005 FMP natural benchmark scenario

* Acceptable levels as defined by the "Landscape Analysis and Assessment Paper for Southcentral Region Management Units" - MNR Planning Direction 2003.

What is this indicator and why is it important?

There is a diverse population of tree species within the Algonquin Park Forest. These species tend to be associated in stands with similar physical and ecological features. Ecosites are developed to allow managers and planners to describe the Algonquin Park Forest types in detail. Based on the classification used in the 2005 FMP, there are 25 ecosites in Algonquin Park. These are described in Chambers *et. al.*

1997¹ and McCarthy *et. al.*1994². The proportion will vary from time to time due to ecological factors and SFM activities. The Bounds of Natural Variation (BNV) define the threshold levels for each ecosite. Conceptually, the BNV represent the range of ecosystem behavior that might exist in the absence of further human interference. It is important to maintain acceptable levels of each ecosite in order to support other values such as wildlife or plant habitat types.

Status at SFM Plan Development

All 25 ecosites are currently within the target range. See Table FMP-13 (2005 FMP).

Forecast

All ecosites are forecast to remain within the BNV for the next 100 years with the exception of ecosite 15. Current analysis shows that the lack of ability to manage stand conditions in the unmanaged portion of the Forest (nature reserve and wilderness) will result in a loss of jack pine area over time (ecosite 15). An effort is being made to counter the loss of jack pine in the unmanaged areas by ensuring the maintenance of jack pine area in the managed portion of the Forest. At five to ten year intervals, the planned forest management activities and projected natural disturbance and succession events will be forecast for subsequent years and reported in Table FMP-13.

2009-2010 Status

Target not met. Refer to the 2009-10 Annual Report for details on this 5-year VOIT.

2011-2012 Status Update

No annual update.

This indicator continues to be used in the new 2012 SFM Plan although the target has been re-worded to conform to the modeling methodology used in the 2010-20 FMP. The target has also been revised to allow for a 5% greater acceptable deviation from the natural benchmark value for ecosite 15. All 25 ecosites were maintained within the target range over the 100 year modeling term.

Management Strategies and Implementation

Harvest areas will be allocated carefully and appropriate silviculture systems will be utilized in order to maintain ecosite representation within the BNV. Harvest constraints will maintain minimum ecosite area thresholds and areas will be regenerated to their planned forest unit according to the preferred or alternative Silviculture Ground Rule (Table FMP-10, 2005), as specified in the Forest Operations Prescription.

Research and Monitoring Plan

It is the responsibility of the AFA to monitor the status of appropriate ecosites. A current Forest Resources Inventory (FRI) is critical to this plan. Annual monitoring of depletion and renewal activities will allow the inventory to be updated at regular intervals. Based upon new inventory data and updates from depletion and renewal activities, a new status report and future projection of ecosites will be produced for the 2010 FMP (*2005 FMP direction*). Subsequent forest management plans are scheduled to be produced every ten years afterward.

Comparative Assessment of Planned versus Actual Levels

The assessments are scheduled for 2010 and 2020. At these times, an assessment of the previous term's performance will be conducted.

¹ Chambers, B.A., B. J. Naylor, J. Nieppola, B. Merchant and P. Uhlig. 1997. Field guide to forest ecosystems of central Ontario. Ontario Ministry of Natural Resources, Southcentral Sciences Section, North Bay. SCSS Field Guide FG-01.

² McCarthy, T.G., R.W. Arnup, J. Nieppola, B.G. Merchant, K.C. Taylor and W.J. Parton. 1994. Field guide to forest ecosystems of northeastern Ontario. Ontario Ministry of Natural Resources, North East Science and Technology, Timmins. Field Guide FG-001.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY**ELEMENT: 1.1 Ecosystem Diversity**

Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur on the Defined Forest Area.

VALUE: 1.1.1 Forested Ecosystems

OBJECTIVE: 1.1.1.1 To maintain a mosaic of constantly changing, yet ever-present, forest types within the Bounds of Natural Variation.

Indicator 1.1.1.2	Target	Variance
Old age classes red and white pine	Achieve 25% of the area of red and white pine forest units in old age classes (>120 years) on the DFA landscape by 2025. Planning direction as required under the FMP process in Ontario will be followed.	0

What is this indicator and why is it important?

Red and white pine has long been desired as species that can achieve old growth. This popular notion was further acknowledged in Ontario by the *Conservation Strategy for Old Growth Red and White Pine Forest Ecosystems for Ontario* (1995). The goal of this strategy was "to ensure that red and white pine ecosystems, including old growth stands, are present on the landscape of Ontario now and into the future, while permitting a sustainable harvest of red and white pine". This indicator is important to maintain the diversity of flora and fauna that old growth red and white pine ecosystems support.

Status at SFM Plan Development

Table FMP-12 (2005) shows a baseline of 17% in 2005. Levels are forecast to increase to 43% by 2025.

2009-2010 Status

Target met. Refer to the 2009-10 Annual Report for details on this 5-year VOIT.

2011-2012 Status Update

No annual update.

This indicator has been broadened in the new 2012 SFM Plan to include old growth for all even-aged forest units, not just white and red pine. All seral stages (including old growth) are now evaluated against the natural benchmark trend over time, consistent with the 2010-2020 FMP. Old growth area for all 10 even-aged forest units was maintained within the target range over the 100 year modeling term.

Forecast

At five to ten year intervals, the planned forest management activities and projected natural disturbance and succession events will be forecast for subsequent years and reported in Table FMP-13.

Management Strategies and Implementation

The balance between old growth retention and recruitment from younger age classes will be optimized. Harvest areas will be allocated carefully to avoid unnecessary loss of old growth red and white pine and appropriate silviculture systems will be utilized in order to maintain old growth representation. Areas will be regenerated to their planned forest unit according to the preferred or alternative Silviculture Ground Rule (Table FMP-10, 2005), as specified in the Forest Operations Prescription. This will allow new stands of old growth to replace those lost to natural causes and harvesting. These strategies are reflected in the forest management plan currently being implemented.

Research and Monitoring Plan

Similar to the previous indicator, it is the responsibility of the AFA to report on the area of old growth red and white pine ecosystems. A current FRI is critical to this plan. Annual monitoring of depletion and renewal activities will allow the inventory to be updated at regular intervals. Based upon new inventory data and updates from depletion and renewal activities, a new status report and future projection of old growth red and white pine will be produced for the 2010 FMP. Subsequent forest management plans are scheduled to be produced every ten years afterward. In addition, the 2010 FMP was prepared using the new *Old Growth Policy for Ontario's Crown Forests* (OMNR, 2003). This has impacted the scope and methodology for old growth planning in the Algonquin Park Forest.

Comparative Assessment of Planned versus Actual Levels

The assessments are scheduled for 2010 and 2020. At these times, an assessment of the previous term's performance will be conducted.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.1 Ecosystem Diversity

Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur on the Defined Forest Area.

VALUE: 1.1.1 Forested Ecosystems

OBJECTIVE: 1.1.1.1 To maintain a mosaic of constantly changing yet ever-present forest types within the Bounds of Natural Variation.

Indicator 1.1.1.3	Target	Variance
Hemlock presence	Maintain the hemlock forest unit within acceptable levels* of the BNV for the next 100 years. Calculate forest unit BNV using new science as it becomes available.	+/- 20 % of the 2005 FMP natural benchmark scenario

Acceptable levels as defined by the "Landscape Analysis and Assessment Paper for Southcentral Region Management Units" MNR Planning Direction 2003.

What is this indicator and why is it important?

Hemlock provides an important habitat for several wildlife species, especially deer, in the winter. Many species such as barred owl, blackburnian warbler, northern flying squirrel, and pine marten make extensive use of the hemlock forest. Values include shelter, food and perching sites. Hemlock is a heavily used browse species for deer and moose and the seeds provide food for small mammals and birds. Kershaw (1991) states that "hemlock contributes to biodiversity both at the stand and landscape level". The presence of hemlock in the hardwood forest adds to species diversity within the stand. At the landscape level, islands and corridors of hemlock aid in the dispersal of animal species from one area to another. Hemlock is of relatively low value as a commercial lumber species.

Status at SFM Plan Development

The hemlock working group occupies 40,288 hectares or 6.5% of the total productive forested land in the Park. This area has increased since 1995 (AFA FRI updates) as a result of forest management practices. Recent science (OMNR - 2007 Landscape Guide) indicates that hemlock levels in Algonquin Park are currently above the simulated range of natural variation (SRNV) for the Algonquin Park Forest. About 85% of this working group is, however, in the late successional stage, with little area identified in the FRI in the regeneration and immature stages. Hemlock studies in the Park (Vasiliauskas, 1995) have shown that the lack of younger age classes is a result of extensive deer browsing in the early 1900s and current

browsing by moose. Hemlock was also heavily cut during the 1960s for construction ties to be used in the Toronto subway, and many of these stands are now typed as MhHeBy ecosite. Areas restricted from forest management activities contain 23% of the hemlock working group area.

2009-2010 Status

Target met. Refer to the 2009-10 Annual Report for details on this 5-year VOIT.

2011-2012 Status Update

No annual update.

This indicator has been removed from the 2012 SFM Plan as provincial and local summaries both indicate hemlock levels are not declining, and it is already covered in the other ecosystem diversity VOITs in element 1.1.

Forecast

At five to ten year intervals, the planned forest management activities and projected natural disturbance and succession events will be forecast for subsequent years and reported in Table FMP-13.

Management Strategies and Implementation

Changes were made to Algonquin Provincial Park tree marking prescriptions in the early 1990s to maintain more hemlock and a strategy to get hemlock from the regeneration stage to free-growing status was developed with the 2000-2020 FMP. The 1997 independent forest audit recommended that a hemlock management strategy be developed. The 2005 plan addresses hemlock establishment, ensuring seedling growth to the free growing stage, in an integrated wildlife/forestry approach and the hemlock forest unit was changed from a uniform shelterwood to a selection forest unit (HeSEL) in order to more effectively manage regeneration and ensure its establishment and recruitment into the forest canopy. The *Hemlock Strategy for Algonquin Park Forest* is in Appendix 16 of the 2000-2005 FMP.

Research and Monitoring Plan

Similar to the previous indicator, it is the responsibility of the AFA to report on the status of hemlock ecosystems. A current FRI is critical to this plan, however, hemlock regeneration and younger age classes do not appear in the FRI because they exist as an understory. An additional VOIT (1.2.2.2) has been created to further investigate hemlock regeneration and recruitment status. Annual monitoring of depletion and renewal activities will allow the inventory to be updated at regular intervals. Based upon new inventory data and updates from depletion and renewal activities, a future projection of hemlock will be produced with the 2010 FMP. Subsequent forest management plans are scheduled to be produced every ten years afterward.

Comparative Assessment of Planned versus Actual Levels

The assessments are scheduled for 2010 and 2020. At these times, an assessment of the previous term's performance will be conducted.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.1 Ecosystem Diversity

Conserve ecosystem diversity at the landscape level by maintaining the variety of communities and ecosystems that naturally occur on the Defined Forest Area.

VALUE: 1.1.1 Forested Ecosystems

OBJECTIVE: 1.1.1.2 To maintain landscape diversity by minimizing landscape fragmentation.

Indicator 1.1.1.2.1	Target	Variance
Range of disturbance patch sizes within the BNV	A distribution of disturbance areas that will result in a patch size pattern over the long term that shows movement towards natural disturbance frequency by size class. Use new science as it becomes available.	Within the BNV

What is this indicator and why is it important?

This indicator relates to Ontario’s direction to emulate natural disturbance patterns through forest management. At the landscape (or DFA) level, this is accomplished by maintaining a range of disturbance patch sizes that emulates (as closely as possible) the patterns that would be created naturally by fire, blowdown, insect outbreaks, and gap phase dynamics. It is assumed that by maintaining a landscape pattern that emulates natural disturbances, a variety of habitats and ecosystems will be maintained, consistent with the BNV.

Forecast

At five to ten year intervals, the planned forest management activities and projected natural disturbance and succession events will be forecast for subsequent years and reported in Table FMP-12. An analysis of forest disturbances will be completed with the year seven and year ten annual reports.

Status at SFM Plan Development

Appendix 8 of the 2005-2025 FMP outlines the current and forecasted disturbance frequency distribution by size class. As discussed in section 5.5.2.8 of the FMP, movement towards the regional template has been accomplished as four of the six size (0 to 10 ha, 11 to 70 ha, 261-520 ha and 521+ ha) classes are showing movement towards the regional median disturbance frequency from 2005 to 2010.

2009-2010 Status

Target not met. Refer to the 2009-10 Annual Report for details on this 5-year VOIT.

2011-2012 Status Update

No annual update.

This indicator continues to be used in the new 2012 SFM Plan where movement towards the regional template has been accomplished from 2010 to 2020.

Management Strategies and Implementation

N/A

Research and Monitoring Plan

Similar to the previous indicator, it is the responsibility of the AFA to monitor the sizes of disturbances (harvest and natural disturbance). A current FRI is critical to this plan. Annual monitoring of depletion and renewal activities will allow the inventory to be updated at regular intervals.

Comparative Assessment of Planned versus Actual Levels

The assessments are scheduled for 2010 and 2020. At these times, an assessment of the previous term’s performance will be conducted.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.2 Species Diversity

Conserve species diversity by ensuring that habitats for the native species found on the Defined Forest Area are maintained through time.

VALUE: 1.2.1 Wildlife Species Habitat

OBJECTIVE: 1.2.1.1 To maintain wildlife habitat within the Bounds of Natural Variation.

Indicator 1.2.1.1.1	Target	Variance
Area of habitat for forest-dependent provincially and locally featured species	Maintain wildlife habitat within acceptable levels* of the BNV for the selected wildlife species (from Table FMP-5, 2005) for the next 100 years (2105) as required under the FMP process in Ontario.	Lower bound = -20% of the natural benchmark scenario. No upper bound.

* Acceptable levels as defined by the "Landscape Analysis and Assessment Paper for Southcentral Region Management Units" MNR Planning Direction 2003.

What is this indicator and why is it important?

Forest management activities can impact wildlife species through the maintenance or alteration of their habitat. Many species of wildlife can be found within the Algonquin Park Forest. During preparation of the 2005 FMP, 15 wildlife species (mammals, birds and amphibians) representing 18 different habitats (black bear, moose and white-tailed deer each have two habitat types) were analyzed to ensure that habitat availability was not deviating below the threshold limits. The species and habitat types are listed in Table FMP-5 (2005).

Status at SFM Plan Development

Of the 18 habitat types, all currently meet the target (2005 FMP).

2009-2010 Status

Target met. Refer to the 2009-10 Annual Report for details on this 5-year VOIT.

2011-2012 Status Update

No annual update.

This indicator has been broadened in the new 2012 SFM Plan to include not only the long term/coarse filter wildlife habitat but also the fine filter/short term wildlife habitat for all focal species, including species at risk. Over the long term, all of the 19 habitat types modelled met the target. Over the short term, 100% compliance with AOC prescriptions was achieved in 2011-12.

Forecast

At five to ten year intervals, the planned forest management activities and projected natural disturbance and succession events will be forecast for subsequent years and reported in Table FMP-8.

Management Strategies and Implementation

Forestry practices will continue to be modified to account for habitat needs of the native fauna as new scientific information becomes available and is accepted by the Ministry of Natural Resources. Specific types of wildlife trees will be maintained as per MNR guidelines, and provincial wildlife guidelines will continue to be implemented. The 2005 FMP guides the creation of a diversity of habitat conditions within the BNV for each ecosite and special provisions will also be made for protecting the habitat requirements of sensitive species. Dialogue with forest industry and logging contractors on the intent and practice of maintaining forest cover for other forest values will be continued. These strategies are reflected in the forest management plan currently being implemented.

Research and Monitoring Plan

The AFA will monitor the status of habitat for forest-dependent provincially and locally featured species. The analysis requires a current FRI to determine habitat types based on forest cover. The habitat matrix

is developed by government researchers and scientists³. It helps determine the significance of each particular forest stand as preferred and/or used habitat. This assignment of habitat value will change over time as stands age and develop. Based upon actual forest management activities, an updated status report and future projection of wildlife habitat will be produced for the 2010 FMP and subsequent forest management plans are scheduled to be produced every ten years afterward.

Comparative Assessment of Planned versus Actual Levels

The calculation of new habitat levels is scheduled for 2010 and 2020.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.2 Species Diversity

Conserve species diversity by ensuring that habitats for the native species found on the Defined Forest Area are maintained through time.

VALUE: 1.2.1 Wildlife Species Habitat

OBJECTIVE: 1.2.1.1 To maintain wildlife habitat within the Bounds of Natural Variation.

Indicator 1.2.1.1.2	Target	Variance
Critical habitat for forest-dependent Species at Risk (SAR)	100% compliance with Area of Concern (AOC) prescriptions for the protection of species at risk habitat (for OPUs with SAR values only).	0

What is this indicator and why is it important?

In 1983, the United Nations identified the need for sustainable development, and a cornerstone of this intention was the maintenance of biological diversity. The loss of species was immediately acknowledged as an issue requiring intense conservation and protection measures, as extinct species cannot be replaced. The *Endangered Species Act* (Ontario) and *Species at Risk Act* (Canada) require the identification, protection and monitoring of species at risk.

At the time of SFM Plan development, there were 7 species at risk that could be found in the Algonquin Park Forest: the Deepwater Sculpin, Shortjaw Cisco, Eastern Hognose Snake, Red Shouldered Hawk, Wood Turtle, Bald Eagle and Eastern Wolf. The first 2 are fish, found each as isolated and disjunct populations in the Forest and are in no way impacted by forest management activities (*Algonquin Park Biologist, 2005 FMP*). There are only a few dated records of the Eastern Hognose Snake, mainly from the Highway 60 corridor, and its existence in the Forest is in doubt. The Red Shouldered Hawk exists only in several mature hardwood stands in the Forest’s extreme south end and in fact may be delisted as a species of concern in Ontario. There was 1 confirmed nest of the Bald Eagle in the Forest and that was discovered in 2003. Bald Eagles are expanding their range in Ontario and we may expect them to become more common in the Forest (the Bald Eagle is now classed as “special concern” north of the French and Mattawa Rivers, although it is endangered in southern Ontario; see www.e-laws.gov.on.ca/DBLaws/Regs/English/900328_h.htm). The Eastern Wolf has been the subject of intense study since the early 1990s and was the primary issue driving some of the habitat management initiatives in the 2005 FMP.

³ As of 2004, the matrix is based upon Holloway, G.L., B. J. Naylor, and W. R. Watt, Editors. 2004. *Habitat relationships of wildlife in Ontario. Revised habitat suitability models for the Great Lakes-St. Lawrence and Boreal East forests*. Ontario Ministry of Natural Resources, Science and Information Branch, Southern Science and Information and Northeast Science and Information Joint Technical Report #1. 110p.

The 1 remaining species, the Wood Turtle, is in fact the only rare vertebrate in the Forest for which there is a major and immediate provincial (even global) conservation concern. The Wood Turtle, considered “endangered” by Ontario, and listed as a species of “special concern” by the Federal Committee on the Status of Endangered Wildlife in Canada (COSEWIC), has its major foothold in Ontario in the Algonquin Park Forest where it is found as several presumably disconnected populations on the Forest’s east side.

Status at SFM Plan Development

2005-2006 = 90%
2006-2007 = 98%
2007-2008 = 97%
2008-2009 = 100%
2009-2010 = 100%
2010-2011 = 100%

2011-2012 Status Update

Target met.

2011-2012 = 100%

There were no reports of non-compliance from 18 reports where AOC protection was applied for species at risk. As mentioned above in VOIT 1.2.1.1.1, in the new 2012 SFM Plan the fine filter/short term wildlife habitat now includes all focal species, not just species at risk.

Forecast

Monitoring indicator - no forecast required.

Management Strategies and Implementation

Forest management activities will be monitored to avoid infringing on species at risk populations and habitat (see attached Area of Concern category descriptions for species and habitat specific strategies.) Ontario Parks, with the assistance of the AFA, have begun to assess areas in the Recreation/Utilization zone that have forest riparian zone characteristics suitable for the improvement of beaver habitat. This will aid in providing increased prey for the eastern wolves - a species at risk. Small areas, approximately 1 hectare in size, will be harvested and monitored to determine if these forest management actions have a positive effect on beaver populations in these environments. Prescriptions and strategies are already being implemented as species at risk and their habitat are encountered.

Research and Monitoring Plan

Monitoring of this indicator for the purpose of the forest management plan, will be conducted concurrent with the Forest Operations Information Program. From the 2005 FMP, the AOC categories that guide prescriptions for the species at risk include; BE – bald eagle nesting site; RSC – red shouldered hawk (nest); WT – wood turtle habitat; WTN – wood turtle nest site; BH – beaver habitat (wolf prey); WRS – wolf rendezvous site; WDS – wolf den site. Compliance percentages are calculated only on OPUs that contain the applicable AOC types. Both AFA and MNR compliance reports are summarized.

A few key initiatives for some of the species include the AFA partnership on the implementation of the Ministry of Natural Resources' *Algonquin Wolf Advisory Group Report* and 2005 *Strategy for Wolf Conservation in Ontario*. This is reflected in the selection of AOC prescriptions for wolves, including the creation of prey habitat (beavers). The AFA also contributed \$5,000 per year for five years (2005-2009, inclusive) to assist with Wood Turtle research and monitoring in the Algonquin Park Forest. The AFA also contributed \$20,000 for wolf research in the Algonquin Park Forest.

Comparative Assessment of Planned versus Actual Levels

Compliance with AOC prescriptions will be measured annually to ensure the target is being met. Reports will be presented in Annual Report Tables AR-12 and AR-13.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: **1.2 Species Diversity**
 Conserve species diversity by ensuring that habitats for the native species found on the Defined Forest Area are maintained through time.

VALUE: **1.2.1 Wildlife Species Habitat**

OBJECTIVE: 1.2.1.2 Retain ecological values and functions associated with sensitive brook trout riparian areas.

Indicator 1.2.1.2.1	Target	Variance
Riparian buffers	100% compliance with AOC prescriptions for the protection of fisheries habitat around designated brook trout lakes.	0

What is this indicator and why is it important?

Brook trout rely on groundwater flow to create necessary spawning and rearing habitat. Riparian buffers will ensure the protection of these cold water habitats. These areas are generally stands dominated by cedar, larch, or mixed conifers adjacent to brook trout streams in low-lying areas.

Status at SFM Plan Development

2005-2006 = 97%
 2006-2007 = 93%
 2007-2008 = 100%
 2008-2009 = 100%
 2009-2010 = 96%
 2010-2011 = 100%

2011-2012 Status Update

Target not met
 2011-2012 = 98%

There was one occurrence out of 47 reports where a minor incursion into a CFH AOC occurred during a harvest operation as a result of the AOC not being updated prior to harvest operations. There was no damage to the value being protected.

This indicator has been carried forward into the new 2012 SFM Plan, but has been reworded to “Brook Trout Lake and Critical Fish Habitat AOC Integrity” and the variance has been increased to -%5. Therefore, in the new SFM Plan this target has been met.

Forecast

Monitoring indicator - no forecast required.

Management Strategies and Implementation

Self-sustaining brook trout lakes are mapped during FMP development and the BT AOC prescription is applied. In addition, a protocol has been developed between AFA and Ontario Parks to survey the perimeter of all BT lakes prior to operations and identify previously unmapped nursery creeks. When identified, these nursery creeks are protected with the Critical Fish Habitat (CFH) AOC prescription. Operators are trained regularly to ensure they understand how to apply AOC prescriptions in the field.

Research and Monitoring Plan

Compliance percentages are calculated only on OPU's that contain the BT AOC, and includes the CFH AOC. Both AFA and MNR compliance reports are summarized.

Comparative Assessment of Planned versus Actual Levels

Compliance with AOC prescriptions will be measured annually to ensure the target is being met. Reports will be presented in Annual Report Tables AR-12 and AR-13.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.2 Species Diversity
 Conserve species diversity by ensuring that habitats for the native species found on the Defined Forest Area are maintained through time.

VALUE: 1.2.2 Tree Species Diversity

OBJECTIVE: 1.2.2.1 To maintain red spruce in the Defined Forest Area.

Indicator 1.2.2.1.1	Target	Variance
Status of red spruce as documented in tree marking records, Silvicultural Effectiveness Monitoring (SEM) records and the use of local knowledge	1) Establish/maintain operational controls to ensure the identification and management of red spruce as encountered within the Recreation/Utilization Zone. 2) Produce a map showing known historic and present red spruce areas by March 31, 2009.	As reported annually

What is this indicator and why is it important?

Red spruce is uncommon in the Province, being primarily associated with the Maritimes. In Ontario, red spruce exists on the western edge of its natural range. Red spruce has experienced a decline in abundance and vigor throughout its entire range during the last 50 years. This VOIT is important to establish the level of abundance of red spruce in the DFA and ensure its maintenance over the long term.

Status at SFM Plan Development

There are no red spruce stands or species identified in the Algonquin Park FRI. Known occurrences of red spruce are protected in the following 3 Natural Zones: N45 - Cauliflower Lake Sr zone; N46 - Bruton and Clyde Sr zone; and N47 - Oak Lake Sr zone. Red spruce regeneration has been noted on several occasions during field operations, especially in the south-western part of the DFA.

2007-2008 Status

Target met.

- (1) Red spruce identification and protection training provided to tree markers in 2007 and 2008 annual tree marker refresher course. Annual field level training is ongoing.
- (2) Algonquin EcoWatch is working on acquiring an historic red spruce map (Dec. 2008), to which areas known by AFA will be added.

2011-2012 Status Update

This indicator has been carried forward into the new 2012 SFM Plan.

Target met.

- (1) Operational controls are in place to ensure the identification and management of red spruce. Map showing areas of known Sr has been produced and is being updated as more is found. AFA planted 6,900 red spruce tree seedlings in 2011. No red spruce cones were collected in 2011-12.
- (2) A historical map of Sr areas in Algonquin Park was pursued but is not available.
- (3) FRI timber cruisers were trained on the identification of red spruce and have tallied all occurrences.

Forecast

Monitoring indicator - no forecast required.

Management Strategies and Implementation

Tree marking prescriptions for Sr are contained in the 2010 FMP, if encountered. Tree marker training was conducted in 1998, 2001 and 2007 specifically around Sr identification and protection (annual training also).

Research and Monitoring Plan

Refer to target (2) above.

Comparative Assessment of Planned versus Actual Levels

N/A – there are no planned levels for red spruce. Manage as encountered.

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.2 Species Diversity

Conserve species diversity by ensuring that habitats for the native species found on the Defined Forest Area are maintained through time.

VALUE: 1.2.2 Tree Species Diversity

OBJECTIVE: 1.2.2.2 Quantify the status of hemlock in the Defined Forest Area.

Indicator 1.2.2.1	Target	Variance
Hemlock regeneration and recruitment status	Establish a committee consisting of members from the Advisory Group, Ontario Parks, Algonquin Ecowatch, AFA and others to review and report on the status of hemlock in Algonquin Park (regeneration and recruitment) by January 1, 2009. This committee will provide recommendations regarding hemlock management in Algonquin Park to the Advisory Group, LCC, Ontario Parks and AFA.	+/- three months

What is this indicator and why is it important?

Hemlock provides an important habitat for several wildlife species, especially deer, in the winter. Many species such as barred owl, Blackburnian warbler, northern flying squirrel, and pine marten make extensive use of the hemlock forest. Values include shelter, food and perching sites. Hemlock is a heavily used browse species for deer and moose and the seeds provide food for small mammals and birds. Kershaw (1991) states that hemlock contributes to biodiversity both at the stand and landscape level. The presence of hemlock in the hardwood forest adds to species diversity within the stand. At the landscape level, islands and corridors of hemlock aid in the dispersal of animal species from one area to another. Hemlock is of low value as a commercial lumber species.

Status at SFM Plan Development

The hemlock working group occupies 40,288 hectares or 6.5% of the total productive forested land in the Park. This area has increased since 1995 (AFA FRI updates) as a result of forest management practices. Recent science (OMNR - 2007 Landscape Guide) indicates that hemlock levels in Algonquin Park are currently above the simulated range of natural variation (SRNV) for the Algonquin Park Forest. About 85% of this working group is however in the late successional stage, with little area identified in the FRI in the regeneration and immature stages. Hemlock studies in the Park (Vasilias, 1995) have shown that the lack of younger age classes is a result of extensive deer browsing in the early 1900s and current browsing by moose. Hemlock was also heavily cut during the 1960s for construction ties to be used in

the Toronto subway, and many of these stands are now typed as MhHeBy ecosite. Areas restricted from forest management activities contain 23% of the hemlock working group area.

2007-2008 Status

Target met.

A six member committee has been assembled in December 2008 – 3 AFA, 1 Ontario Parks, 1 Algonquin representative and 1 Algonquin EcoWatch representative. Research dollars are being budgeted for the 2009/10 season to re-assess the Stan Vasiliauskus' hemlock plots. AFA is seeking partners to assist with this project.

2009-2010 Status

Target met.

Committee conducted several conference calls during 2009-10 and 2 field trips during the fall of 2010 (reports are on file). The second trip included Stan Vasiliauskus and Ontario Parks Biologists. Significant evidence was gathered that hemlock is regenerating and that moose browsing is not inhibiting the regeneration or recruitment of hemlock (Figure 4). The committee (with the exception of Eco Watch) did not feel that intensive re-measurements of the 1991 Vasiliauskus plots was necessary or justified. The committee also agreed that the current group selection approach to hemlock management is working, and should not be changed.

Eco Watch indicated that they would like to see a thorough re-sampling of Stan's old plots following a statistical design and the preparation of a publication quality report, complete with data analysis – preferably a masters or post-doc thesis. Algonquin EcoWatch also indicated that they will not contribute to a seedling re-measurement project unless it results in a Master's thesis.

Subsequently, a Lakehead University 3rd year forestry student has been retained to produce an undergraduate thesis on the regeneration and recruitment of hemlock in Algonquin Park. This project will involve the complete re-measurement of the 1990 seedling plots and statistical analysis of the data. Funding partners include AFA, Ontario Parks and MNR Science and Information Branch. Data collection will occur during the summer of 2011 and the thesis will be completed by April 15th 2012.

2010-2011 Status Update

Target met

Hemlock seedling re-measurement was completed in the summer of 2011. Data compilation occurring over the fall/winter and completion of thesis scheduled for spring of 2012.

2011-2012 Status Update

This indicator has been carried forward to the new 2012 SFM Plan but the target has been revised to "review and report on the status of hemlock regeneration and recruitment in Algonquin Park by June 1, 2013".

A Lakehead University thesis entitled "The Dynamics of Eastern Hemlock Regeneration in Algonquin Provincial Park" was completed over the winter of 2012 and was received by AFA and Ontario Parks in the summer. The Abstract of this paper reads as follows:

"An examination of eastern hemlock (*Tsuga canadensis*) across 56 diverse sites in Algonquin Provincial Park over a 19 year period was conducted so as to extrapolate the future condition of the species in the area. Results obtained during the study supported the findings of some others in terms of the most beneficial light, space and canopy composition conditions for hemlock seedling growth. The greatest pressure on the species on a stand spatial scale was shown to be from elevated moose densities, followed by single-tree harvesting. In combination, these two factors were shown to be capable of removing hemlock from upland environments, where currently, communities are most threatened. At relatively high densities (approx. 0.5/km²) for a number of years, moose (*Alces alces*) repeatedly browsed seedlings. This resulted in high mortality rates. Single-tree harvesting then acted to promote sugar maple (*Acer saccharum*)

abundance which caused hemlock to senesce in upland areas as a result of the combined pressure. At fluctuating, moderate moose densities (0.2-0.45/km²) however, mortality by browsing was greatly reduced and single-tree harvesting was shown to provide an acceptable growing environment for hemlock and may even act as a beneficial disturbance for hemlock regeneration. On an individual spatial scale, a small portion of hemlock seedlings were able to survive under repeated browsing pressure. These seedlings revealed what may be an evolving trait under selection from browsing pressure called browse tolerance that has been observed in many other plant species”.

Additional observations include:

- Moose browsing pressure has been reduced significantly from 1998 to 2011
- A decrease in moose density and corresponding browsing pressure allows seedlings to repair damage and recover lost growth
- As overstory basal area increases, seedling height growth decreases
- Logging provides many benefits to hemlock regeneration as well
- Plots that had logging done in the area, but which were not severely disturbed, experienced high growth rates
- Browse tolerance is, in part, a function of site quality
- Ideal growing conditions are not necessary for the survival of hemlock as it has adapted to surviving under challenging conditions
- The vast majority of browsed damaged seedlings in this study recovered well. Within that decade, they improved to the point of showing little to no evidence of having ever been browsed, and their annual height growth was only slightly less than their unbrowsed, healthy counterparts.



Figure 1 Re-measurement of Hemlock Regeneration in 2011

A follow-up analysis of the Lakehead University thesis data was also conducted by Dr. Margaret Penner of Forest Analysis Ltd to extract any other possible trends or conclusions from the data collected. The following additional observations were obtained from this analysis:

- This study only examined seedlings tagged in 1992. It did not account for any recruitment. The fraction of healthy/recovered trees in 2011 is likely underestimated as there is no allowance for recruitment in this study
- To cover a range of seedling sizes, approximately half the selected seedlings were taller than 50 cm (above the approximate snow line) and half were shorter than 50cm
- The percentage of trees browsed decreased considerably from 40% in 1998 to 12% in 2011
- Some browsed trees have fully recovered (almost half the trees classified as browsed in 1998 were classified as healthy/recovered in 2011)

Based on the findings of the 2012 Hemlock thesis described above, in conjunction with the subsequent analysis by Penner, along with the hemlock committee field trip findings and AFA observations and regeneration assessments, ungulate browsing pressure has reduced in Algonquin Park from mid 1990 levels and previously browsed hemlock seedlings appear to be recovering and recruiting into the upper canopies (above browsing height). AFA will continue to establish group openings in hemlock stands to establish new regeneration and liberate existing regeneration (over 190 hemlock group openings are currently on record in the AFA silviculture system). AFA will also continue to establish and monitor hemlock group openings as part of its regular tree marking and silvicultural effectiveness monitoring program. The results of this monitoring will continue to be reported in the AFA Annual Reports prepared for the Ministry of Natural Resources. The new Forest Resource Inventory, expected in 2014, will also be used to assess the overall status and abundance of hemlock in the Algonquin Park Forest.

Forecast

Monitoring indicator - no forecast required.

Management Strategies and Implementation

Changes were made to Algonquin Provincial Park tree marking prescriptions in the early 1990s to maintain more hemlock and a strategy to get hemlock from the regeneration stage to free-growing status was developed with the 2000-2020 FMP. The 2005 plan addresses hemlock establishment, ensuring seedling growth to the free-growing stage, in an integrated wildlife/forestry approach and the hemlock forest unit was changed from a uniform shelterwood to a selection forest unit (HeSEL) in order to more effectively manage regeneration and ensure its establishment and recruitment into the forest canopy.

Research and Monitoring Plan

N/A

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.3 Genetic Diversity
Conserve genetic diversity by maintaining the variation of genes within the species.

VALUE: 1.3.1 Genetic Diversity of Tree Species

OBJECTIVE: 1.3.1.1 To maintain genetic diversity within the tree species native to the Defined Forest Area.

Indicator 1.3.1.1	Target	Variance
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Application of tree marking guidelines	100% of sites where natural regeneration is a preferred treatment must retain appropriate leave trees as a seed source or retain local genetic reproductive material.	0
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What is this indicator and why is it important?

Genetic information forms the building blocks of diversity within an individual and its species. Since most of the silviculture activities within the Algonquin Park Forest are conducted using partial harvesting techniques and natural regeneration, tree marking is important to the selection of leave trees. Unless superseded by more critical requirements, leave trees are selected for their ability to form high quality stands, including genetic excellence.

Status at SFM Plan Development

Due to the diligence in inspection and re-marking, the trend has been to achieve 100% marking compliance with the prescription every year.

- 2007-2008 = 100%
- 2008-2009 = 100%
- 2009-2010 = 100%
- 2010-2011 = 100%

2011-2012 Status Update

Target met
 2011-2012 = 100%
 No tree marking inspections failed as a result of species priority infractions.

Forecast: Monitoring indicator - no forecast required.

Management Strategies and Implementation

Tree marking guidelines will be applied to assist in the maintenance of genetic diversity. The guidelines will ensure that dominant/co-dominate trees in good health will be retained as a seed source while maintaining cavity trees, mast producing trees and den trees for wildlife.

The objectives and strategies are implemented during the tree marking field season by trained and qualified crews. These activities are guided by Tree Marking Prescriptions (FMP appendix), Silviculture Ground Rules and Annual Work Schedules.

Research and Monitoring Plan

The monitoring program is comprised of inspection of the tree marking. Algonquin Forestry Authority supervisors regularly inspect the tree marking program to the standards that are in place. This is done using the EMS Tree Marking Inspection form. A variance of +/- 5% is allowed from the standards and variations beyond this point usually require that the area be re-marked. However, as indicated above, 100% compliance is expected so variance is shown as zero. Ministry of Natural Resources technicians also audit the tree marking throughout the year. Results of all AFA tree marking inspections are forwarded to the Ministry of Natural Resources.

Comparative Assessment of Planned versus Actual Levels: N/A

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.3 Genetic Diversity
 Conserve genetic diversity by maintaining the variation of genes within the species.

VALUE: 1.3.1 Genetic Diversity of Tree Species

OBJECTIVE: 1.3.1.1 To maintain genetic diversity within the tree species native to the Defined Forest Area.

Indicator 1.3.1.1.2	Target	Variance
Proportion of seed used in artificial renewal derived from appropriate seed zone	100% of seed used on the DFA is from the appropriate seed zone and/or within transfer guidelines.	0

What is this indicator and why is it important?

While artificial regeneration is less common on the Algonquin Park Forest than natural regeneration, this indicator complements the previous one. Here we focus on appropriate genetic measures for artificial regeneration; that is, regeneration with some direct assistance from forestry activities.

Provincial guidelines require that artificial regeneration be derived from local seed sources in order to maintain the appropriate genetic adaptations and ensure good growth and vigour.

Status at SFM Plan Development

The 2004-2005 Annual Report indicates that 100% of all seed collected was from the appropriate local seed zone.

2011-2012 Status Update

Target met.
100% of the seed was from the appropriate local seed zone.

Forecast

No forecasting is required.

Management Strategies and Implementation

Every effort will be made to use tree seed and stock within seed zones for artificial regeneration. If this is not possible, stand collection tree seed and stock will be used in adjacent seed zones on a last resort basis and must conform to provincial standards for similarity of seed origin and host site. In the case of cross-zone movement, the origin of the seed must be well documented and the environment of the seed origin must be similar to that of the planting site. These strategies are reflected in the forest management plan currently being implemented.

Research and Monitoring Plan

Seed collection activities will be monitored by the AFA and reported in annual report Table AR-8 each year. Seed records from Angus Seed Plant are to be used.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 1. CONSERVATION OF BIOLOGICAL DIVERSITY

ELEMENT: 1.4 Protected Areas and Sites of Special Biological Significance

Respect protected areas identified through government processes. Identify sites of special biological significance within the Defined Forest Area and implement management strategies appropriate to their long-term maintenance.

VALUE: 1.4.1 Algonquin Provincial Park Management Plan Zones

OBJECTIVE: 1.4.1.1 Protect the special values represented by the four land use categories defined by the Algonquin Provincial Park Management Plan.

Indicator 1.4.1.1.1	Target	Variance
Identification and protection of zone boundaries	100% compliance with zone boundary locations.	0

What is this indicator and why is it important?

The Algonquin Park Forest has a long history of integrated resource management as witnessed by the policies and objectives for the Forest, and the long standing identification of seven land use zones. Excluding the Recreation/Utilization zone, there are four zones of biological significance: the Nature Reserve zone; Historical zone; Wilderness zone; and Natural Environment zone. As per the 1998 Algonquin Provincial Park Management Plan, these protected zones represent 19% of the gross area. The Development and Access zones are the two remaining categories, but were felt to represent no biological significance.

In order to maintain these special biological areas, this indicator will monitor the maintenance of the boundaries with the Recreation/Utilization zone.

Status at SFM Plan Development

The boundaries are currently intact.

2011-2012 Status Update

Target not met = 97%

There were 33 FOIP reports where zone boundaries were encountered within or formed a part of the operating unit boundary. There was 1 non-compliance issue reported where a portion of a road from a previous cutting cycle was re-opened within Wilderness Zone (the Wilderness Zone was established since the last harvest took place). The equipment operator went past the point that the road was to be re-opened to in error. The road was immediately rehabilitated voluntarily. An administrative penalty was issued for this occurrence and was paid promptly. A follow up inspection was conducted and verified that the rehabilitation was successful and the trees were planted. Follow-up training has also been completed with all road construction contractors to ensure proper protocols are followed when re-opening old roads, so a similar occurrence does not happen in the future.

Forecast

No forecasting is required.

Management Strategies and Implementation

Proposed operations in the vicinity of zone boundaries will be carefully marked so operators will not infringe upon them. Where the zone boundary is also the Algonquin Park Forest boundary, there is an AOC category that results in a prescription to leave a buffer on the boundary. These strategies are reflected in the FMP currently being implemented.

Research and Monitoring Plan

Monitoring will be conducted through the Forest Operations Information Program. The degree of compliance, with the target of zero infractions due to zone boundary infringement, will be reported annually. There is no acceptable variance. Compliance percentages are calculated only on OPUs that are adjacent to non RU zone boundaries. Both AFA and MNR compliance reports are summarized.

Comparative Assessment of Planned versus Actual Levels: N/A

CRITERION 2: MAINTENANCE AND ENHANCEMENT OF FOREST ECOSYSTEM CONDITION AND PRODUCTIVITY

ELEMENT: **2.1 Forest Ecosystem Resilience**
Conserve ecosystem resilience by maintaining both ecosystem processes and ecosystem conditions.

VALUE: **2.1.1 Resilient Great Lakes-St. Lawrence Forested Ecosystems**

OBJECTIVE: 2.1.1.1 Assist those ecosystems as required whose growth has been impacted by fire, insect, disease, blowdown or harvesting to regenerate or otherwise continue along their successional pathway.

Indicator 2.1.1.1.1	Target	Variance
Area successfully regenerated	100% regeneration success as forecast in table FMP-28 (2005 FMP).	0 – time frame as prescribed in silvicultural ground rules (table FMP-10 in the 2005 FMP)

What is this indicator and why is it important?

Areas that are impacted by natural disturbance or forest management activities will be most productive if they return to a vigorous state within a certain time frame. Silvicultural Ground Rules are developed to aid in the achievement of a new stand following such disturbance. This ensures the resiliency of the forest ecosystem.

Status at SFM Plan Development

Seventy-eight percent (78%) of the total area assessed for the 2000-2005 term is successfully regenerated. Sixty-nine percent (69%) of this area has regenerated to the projected forest unit. The remaining area that has not successfully regenerated will continue to be monitored in future forest management plans or treated as required to meet free-to-grow standards.

Forecast

Table FMP-28 from the 2005 Forest Management Plan identifies a target assessment area of 54,272 ha spread among a number of Forest Units and Silviculture Ground Rules. Assessments in the HDSEL (hardwood selection) Forest Unit and some of the HeSEL (hemlock selection) Forest Unit are unique compared to the other even-aged Forest Units. The HDSEL and HeSEL Forest Units require assessments of management standards and not regeneration assessments. They have been included to reflect the planned level of harvesting activity.

2008-2009 Status Update

The CFSA Annual Report for 2008-2009 indicates that a total of 4,183 hectares was assessed in 2008. Of this total, 67% has regenerated to the projected forest unit, 25% has regenerated to another forest unit and 8% has not yet successfully regenerated.

Note: A table to summarize this information annually is no longer prepared and submitted to the Crown due to changes in the Forest Management Planning Manual.

2009-2010 Status

Target not met.

Table AR-13 from the 2009-10 CFSA "Year 10" Annual Report is a summary of assessment of regeneration and silviculture success for the area surveyed during the 2005-2010 term. Analyses of the results in AR-13 indicate the following:

- For the harvest depletion area category, 82% of the area surveyed was regenerated to the projected forest unit (silviculture success), 6% to another forest unit (regeneration success), for a total of 88% of the total area surveyed classified as regenerated

- For the natural depletion area category, 51% of the area surveyed was regenerated to the projected forest unit (silviculture success), 44% to another forest unit (regeneration success), for a total of 95% of the total area surveyed classified as regenerated.
- In total, the table indicates that 88% of the total area assessed is successfully regenerated, with 81% regenerating to the projected forest unit. The remaining area that has not successfully regenerated will continue to be monitored and treated as required.

Assessments are not only required to verify free-to-grow status, but are also required to assess regeneration progress and prescribe further treatment if required. This is important on the Algonquin Park Forest where natural regeneration after harvest is heavily relied upon in many forest units. Where natural regeneration has not been successful, follow-up artificial regeneration treatments or tending are prescribed. The inclusion of regeneration progress assessments (or stocking assessments) in the data analyzed for AR-13 has the effect of lowering the regeneration success. Starting with the 2010 FMP, AFA is ensuring that all surveys are classified as either Free-to-Grow or stocking surveys, and annual reporting will only reflect the results of Free-to-Grow assessments.

2010-2011 Status Update

Target Met.

Starting in 2010-11, regeneration success is evaluated as per the new 2010-2020 FMP.

For the 2010-11 season, regeneration assessments were conducted on over 1,300 hectares of area to ensure that regeneration treatments are progressing as planned. This survey area consists of Free-to-Grow (FTG) and stocking surveys. Stocking surveys are conducted by AFA prior to FTG surveys, to ensure that regeneration treatments are progressing as planned. The results of stocking surveys are not included in this report.

A total of 230 ha of FTG survey area has been reported in 2010-11, all of which is FTG. Of the 230 hectares of FTG area, 74.3% has regenerated to the projected forest unit (silvicultural success) and 25.7% has regenerated to another forest unit (regeneration success).

2011-2012 Status Update

Target not met.

For the 2011-12 season, regeneration assessments were conducted on over 2,600 hectares of area to ensure that regeneration treatments are progressing as planned. This survey area consists of Free-to-Grow (FTG) and stocking surveys. Stocking surveys are conducted by AFA prior to FTG surveys, to ensure that regeneration treatments are progressing as planned. The results of stocking surveys are not included in this report.

A total of 933.3 ha of FTG survey area has been reported in 2011-12, of which 865.7 ha (93%) is FTG. Of the total FTG survey area, 741.3 ha (79%) has regenerated to the projected forest unit (silvicultural success) and 124.4 ha (13%) has regenerated to another forest unit (regeneration success). The other 67.6 ha surveyed are not FTG and will need further treatment or growth to achieve FTG status.

This target has been revised and expanded under the new 2012 SFM Plan to also include 80% silviculture success, and a 10% allowable variance has been added. The 2011-12 results meet this new revised target.

Management Strategies and Implementation

Areas will be regenerated according to the preferred or alternative Silviculture Ground Rule (Table FMP-10, 2005), as specified in the Forest Operations Prescription. Silvicultural effectiveness monitoring assessments will be conducted each year as areas become available and as operational conditions allow.

Research and Monitoring Plan

Silvicultural effectiveness monitoring assessments are performed regularly in order to meet the five-year target identified in Table FMP-28 (2005 FMP). The success of these activities is reported in Annual Report Table AR-14.

Comparative Assessment of Planned versus Actual Levels

The assessment is scheduled for 2010 and 2020. At these times, an assessment of the previous term's performance will be conducted.

CRITERION: 2. MAINTENANCE AND ENHANCEMENT OF FOREST ECOSYSTEM CONDITION AND PRODUCTIVITY

ELEMENT: 2.2 Forest Ecosystem Productivity

Conserve forest ecosystem productivity and productive capacity by maintaining ecosystem conditions that are capable of supporting naturally occurring species.

VALUE: 2.2.1 Healthy, Productive Forests

OBJECTIVE: 2.2.1.1 To maintain the ecological and productive capacity of the Defined Forest Area in order to provide society with a sustainable harvest of forest-based material and social values.

Indicator 2.2.1.1.1	Target	Variance
Crown Managed Production Forest Area	Less than 2.5% of production forest area harvested used for roads, landings and aggregate pits.	+10%

What is this indicator and why is it important?

This land classification indicates the extent to which sustainable forest management activities might be conducted. In addition, various wildlife habitat and other values are present and can potentially be influenced on the Crown Managed Productive Forest area. Other categories include non-forested areas like water or muskeg, as well as patent land and area outside of the Recreation/Utilization zone (wilderness, natural environment, etc.).

This is a monitoring indicator that will provide an early indication of any undesirable loss to the managed productive forest land base.

Status at SFM Plan Development

There are 488,882 ha of Crown Managed Production Forest (FMP 2010).

2009-2010 Status

Target met.

Park-wide analysis as of 2005 FMP plan end (March 31, 2010) indicates that 1.5% of productive managed forest area harvested has been used for roads, landings and aggregate pits. This includes all roads in AFA's road database (existing and old, summer and winter, primary, branch and operational classes). Some of these roads (especially winter roads) have naturally re-vegetated back to a productive forest state, but have still been included in the calculation.

2011-12 Status Update

No annual update.

This is a 5-year VOIT. Next update scheduled for 2015

Forecast

No forecasting is required.

Management Strategies and Implementation

The maximum road right-of-way is 13.7 metres for primary roads and 9.1 metres for secondary and tertiary roads. Whenever possible, existing roads (roads that were used in the previous harvest) will be used to gain access to proposed harvested areas except where Forest values will be compromised by their use. Existing roads in the Recreation/Utilization zone may also be phased out if alternative means of access, which would have a lesser impact on Forest values, are available or possible. To prevent excessive disturbance outside the road right-of-way, borrow pits will be limited to a maximum of five per kilometre.

The size of borrow pits will not exceed six metres including side slopes of 1.5:1 and will be limited to ten metres from the tree line of the road right-of-way. Maximum aggregate pit size, not including rehabilitated area, will be one hectare (2.5 acres). Landings for logs shall not exceed 0.2 hectares.

Operators have been informed of the requirements for access structures through the Standard Operating Procedure for Road and Landing Construction.

Research and Monitoring Plan

At each Forest Management Plan renewal date, the Crown Managed Productive Forest area is determined. The next renewal is scheduled for 2010 at which time this indicator can be analyzed.

Comparative Assessment of Planned versus Actual Levels

This indicator is not projected into the future. The assessment is scheduled for 2010 and 2020. At these times an assessment of any change will be conducted.

CRITERION 3: CONSERVATION OF SOIL AND WATER RESOURCES

ELEMENT: 3.1 Soil Quality and Quantity

Conserve soil resources by maintaining soil quality and quantity.

VALUE: 3.1.1 Soils of the Precambrian Upland and Ottawa Lowland

OBJECTIVE: 3.1.1.1 To maintain the living substrate for forest stands.

Indicator 3.1.1.1.1	Target	Variance
Rate of compliance for soil conservation with the AFA site impact guidelines	100% of area harvested in compliance with AFA site impact guidelines.	- 5%

What is this indicator and why is it important?

Algonquin Forestry Authority has developed guidelines to assist operators with identifying and avoiding potential site hazards and detrimental conditions. These will minimize the amount of rutting and compaction that can have negative impacts upon the soil that trees and other plants require. This is consistent with the Ministry of Natural Resources' efforts to maintain productive soils via the *Forest Management Guidelines for the Protection of the Physical Environment*.

This is an operational monitoring indicator that will identify when and where undesirable effects are taking place.

Status at SFM Plan Development

2004-2005 = 99.6%
 2005-2006 = 100%
 2006-2007 = 100%
 2007-2008 = 100%
 2008-2009 = 100%
 2009-2010 = 98%
 2010-2011 = 100%

2011-2012 Status Update

Target met.
 2011-2012 = 100%
 From 110 Harvest FOIP reports filed in 2011-2012 there were no reports where the site impact guidelines were exceeded.

Forecast

No forecasting is required.

Management Strategies and Implementation

Extra care is taken in wet or soft conditions, or alternate (drier) routes are used. Seeps and woodland pools are avoided – tree markers identify these sensitive areas where possible with an “S” marking. Operational controls are in place for operating in sensitive areas.

Research and Monitoring Plan

Monitoring will be conducted through the Forest Operations Information Program. The target will be reported annually. Both AFA and MNR Compliance reports are summarized.

Comparative Assessment of Planned versus Actual Levels
N/A

CRITERION: 3. CONSERVATION OF SOIL AND WATER RESOURCES**ELEMENT: 3.2 Water Quality and Quantity**

Conserve water resources by maintaining water quality and quantity.

VALUE: 3.2.1 Algonquin Dome Headwaters

OBJECTIVE: 3.2.1.1 Conserve the quality and quantity of interior waterways, wetlands and catchment areas within the Defined Forest Area.

Indicator 3.2.1.1.1	Target	Variance
Proportion of water crossings that are properly installed and removed	100% compliance as measured by Forest Operation Inspections on access.	- 5%

What is this indicator and why is it important?

One of the initial environmental goals stated when the Algonquin Park Forest was designated was the protection of major interior waterways. These waterways include such rivers as the Oxtongue, Big East, Madawaska, Bonnechere, Amable de Fond, York, Barron, South and Petawawa. Water crossings can have significant impacts upon waterways if not properly installed or removed. This indicator is an operational monitoring one that will apply to waterways of all sizes, and ensure the protection of these quality watersheds.

Status at SFM Plan Development

2005-2006 = 97%
 2006-2007 = 95%
 2007-2008 = 100%
 2008-2009 = 99%
 2009-2010 = 96%
 2010-2011 = 100%

2011-2012 Status Update

Target met.

2011-2012 = 100%

In 2011-12 there were 47 water crossing inspection reports in the FOIP program. There were no non-compliances related to the installation and removal of a water crossing.

Forecast

No forecasting is required.

Management Strategies and Implementation Plan

Waterway crossing installations and removals are conducted according to the Ministry of Natural Resources' *Environmental Guidelines for Access Roads and Water Crossings and the Forest Management Planning Manual (2004)*. The extensive use of portable bridges significantly reduces impacts at water crossings. Reporting of water crossing installation and removal success will be tailored from the existing Forest Operations Information Program.

Research and Monitoring Plan

Monitoring will be conducted through the Forest Operations Information Program. The target will be reported annually. Progress will be reported through Annual Reports, particularly Table AR-12. Both AFA and MNR compliance reports are summarized.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 3. CONSERVATION OF SOIL AND WATER RESOURCES

ELEMENT: 3.2 Water Quality and Quantity

Conserve water resources by maintaining water quality and quantity.

VALUE: 3.2.1 Algonquin Dome Headwaters

OBJECTIVE: 3.2.1.1 Conserve the quality and quantity of interior waterways, wetlands and catchment areas within the Defined Forest Area.

Indicator 3.2.1.1.2	Target	Variance
Compliance with prescriptions developed for the protection of water quality and fish habitat	100% compliance as measured by Forest Operation Inspections.	- 5%

What is this indicator and why is it important?

Water quality and fish habitat are significant environmental values on the Algonquin Park Forest that are interrelated. The water provides exceptional opportunities for recreationalists as well as a source of life for many species of wildlife. Quality habitat supports many species of fish and other living creatures that prey on those fish or use the same habitat.

As part of a carefully planned forestry operation, AFA has developed site level prescriptions for forest management activities conducted near these values. The prescriptions are documented in the FMP and are categorized as follows:

- CW - Lake Trout Lakes, Coldwater Streams and Unknown Lakes/Streams
- BT - Self-Sustaining Brook Trout Lakes
- CFH - Critical Fish Habitat (including Brook Trout Nursery Creeks)
- WW - Other Lakes, Coolwater and Warmwater Streams
- WT - Wood Turtle Habitat
- BH - Beaver Habitat
- MAFA - Moose Aquatic Feeding Areas and mineral licks

Status at SFM Plan Development

- 2004-2005 = 97%
- 2005-2006 = 99%
- 2006-2007 = 97%
- 2007-2008 = 99%
- 2008-2009 = 98%
- 2009-2010 = 94%
- 2010-2011 = 99%

2011-2012 Status Update

Target met.

2011-2012 = 100%

FOIP reports for 2011-2012 include 52 Access, 50 Harvest, 8 Renewal reports. All 110 reports have been reviewed for compliance to this VOIT as all OPU's contain either WW or CW AOC's. No non-compliance issues were recorded from both Industry & MNR reports.

Forecast

No forecasting is required.

Management Strategies and Implementation

Forest management activities are monitored in order to avoid infringing on fish habitat or negatively impacting water quality. Skidding across streams is avoided. Clear cutting or road building is generally not permitted in these Areas of Concern (see attached Area of Concern category descriptions for species and habitat specific strategies). Reporting will be tailored from the existing Forest Operations Information Program.

Research and Monitoring Plan

The Algonquin Forestry Authority is responsible for monitoring the status of this indicator. This will be completed through the current Forest Operation Information Program which ensures that AOC prescriptions are implemented properly. Annual Reports document each year's success, but the year seven and year ten reports will constitute the official occasion to compare actual measurements with the target. Compliance percentages are calculated only on OPU's that contain the applicable AOC types. Both AFA and MNR compliance reports are summarized.

Comparative Assessment of Planned versus Actual Levels

The assessment is scheduled for 2010 and then seven and ten years thereafter. At these times, an assessment of the previous term's performance will be conducted.

CRITERION: 3. CONSERVATION OF SOIL AND WATER RESOURCES

ELEMENT: 3.2 Water Quality and Quantity

Conserve water resources by maintaining water quality and quantity.

VALUE: 3.2.1 Algonquin Dome Headwaters

OBJECTIVE: 3.2.1.1 Conserve the quality and quantity of interior waterways, wetlands and catchment areas within the Defined Forest Area.

Indicator 3.2.1.1.3	Target	Variance
Number of spills that enter waterbodies	Zero spills entering waterbodies, as recorded by the Environmental Management System Spill Incident Form.	+ 1

What is this indicator and why is it important?

The prevention of pollution is one of the major aspects of AFA's Forestry Policy. This indicator provides a direct link between the Forestry Policy and the element. Preventing spills will help maintain the quality of the Algonquin Park Forest's interior waterways.

Status at SFM Plan Development

Spills are tracked under the AFA's Environmental Management System.

2004-2005 = 0

2005-2006 = 0

2006-2007 = 0

2007-2008 = 0

2008-2009 = 0

2009-2010 = 0

2010-2011 = 0

2011-2012 Status Update

Target met.

2011-2012 = 0

There are no spills entering water bodies.

Forecast

No forecasting is required.

Management Strategies and Implementation

Follow the AFA SOP for Handling and Dispensing Fuel. Monitoring is conducted through AFA's Spill Incident Form, and reporting will be customized to suit this indicator.

Research and Monitoring Plan

The Algonquin Forestry Authority is responsible for monitoring the status of this indicator. This will be completed through the current Environmental Management System. This indicator is designed to be reported every year.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 3. CONSERVATION OF SOIL AND WATER RESOURCES**ELEMENT: 3.2 Water Quality and Quantity**

Conserve water resources by maintaining water quality and quantity.

VALUE: 3.2.1 Algonquin Dome Headwaters

OBJECTIVE: 3.2.1.2. To ensure the maintenance of water quality and quantity during development of aggregate pits.

Indicator 3.2.1.2.1	Target	Variance
Impacts of aggregate pits on water quality and quantity, as measured in established monitoring wells	Establish monitoring wells in 2 aggregate pits in 2008 using methodology required by MNR's Aggregate Resources Program.	As budgeted

What is this indicator and why is it important?

Aggregate extraction has the potential to impact ground water and the water table, especially when near or adjacent to brook trout waters. Potential impacts include a lowering of the water table that provides source water to upwellings, seeps and nursery creeks.

Status at SFM Plan Development

This is a new indicator – no current status to report.

2007-2008

Target met.

One monitoring well was installed in a pit in the west operations area and one in the east during 2007-2008.

2011-2012 Status Update

Target Met

New direction on the establishment of monitoring wells was identified in 2008-09. New provincial standards and the new Aggregates Protocol developed by AFA and Ontario Parks is contained in Appendix 6.2.10 of the 2010 FMP.

Groundwater modeling (recharge, discharge areas) has also been completed Park-wide to show important groundwater areas related to specific brook trout lakes. If/when aggregate sites are requested within the brook trout AOC, results of this modeling will be used to determine sensitive portions of the specific brook trout AOC on each lake.

Forecast

No forecasting is required.

Management Strategies and Implementation

Monitoring wells will be established in two aggregate pits in 2008 using methodology required by MNR's Aggregate Resources Program.

Research and Monitoring Plan

The Algonquin Forestry Authority is responsible for monitoring the status of this indicator. This indicator will be reported on annually.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION 4: FOREST ECOSYSTEM CONTRIBUTIONS TO GLOBAL ECOLOGICAL CYCLES

ELEMENT: 4.1 Carbon Uptake and Storage

Maintain the processes that take carbon from the atmosphere and store it in forest ecosystems.

VALUE: 4.1.1 Forest Ecosystem Carbon

OBJECTIVE: 4.1.1.1 To provide a pre-determined rate of carbon storage in the Defined Forest Area.

Indicator 4.1.1.1.1	Target	Variance
Carbon storage capacity in the Defined Forest Area as calculated by the FORCARB-ON model	Maintain an overall positive change in forest carbon (carbon sink) from the DFA for the next 100 years (to 2105). Adjust target if necessary as new science is developed.	0

What is this indicator and why is it important?

Forest management activities can have substantial impacts on the role of forests in the carbon cycle. The forests use, store and release carbon. The longevity and large area of forests make them particularly well adapted to long-term positive carbon balance. Conversely, conversion of forest lands to low biomass, short-lived standing crops with rapid turnover rates, or the permanent removal of forest cover, can reduce the lands capacity to absorb and store carbon. As such, AFA will monitor the degree to which its forests store carbon.

Status at SFM Plan Development

Value estimated at 119.3 million tons of carbon in 2005. Re-calculate for every update in the FMP.

Forecast

Refer to FORCARB model output – change in Forest Carbon graph. In three future decades there are slight decreases in forest carbon, but these are never more than 0.3% of the total. The remaining seven decades forecast a positive change in forest carbon (a steadily increasing carbon sink).

2009-2010 Status

Refer to the 2009-10 Annual Report for details. This report contains the updated carbon modeling projections from the 2010-2020 FMP selected management alternative. Over the long term forest carbon stocks are projected to increase and remain positive over the 100 year modeling horizon, for an overall positive forest carbon balance over the next 100 years.

2011-12 Status Update

No annual update. This is a 5-year VOIT. Next assessment scheduled for 2020 with next Forest Management Plan.

Management Strategies and Implementation

As indicated in the FMP currently being implemented, the amount of forested areas (carbon storage areas) will be maintained and vigorous regeneration encouraged.

Research and Monitoring Plan

Every ten years, as forest stands grow and develop the status of the indicator will be re-evaluated by staff at the Ontario Centre for Forest Research⁴. The assessment will be conducted using a carbon budget model called FORCARB-ON. This model estimates the carbon stored by the forest in living and dead trees and other plants, woody debris on the ground and even carbon in the soil.

Comparative Assessment of Planned versus Actual Levels

The assessment is scheduled for 2010 and ten years thereafter.

CRITERION: 4. FOREST ECOSYSTEM CONTRIBUTIONS TO GLOBAL ECOLOGICAL CYCLES

ELEMENT: 4.2 Forest Land Conversion

Protect forestlands from deforestation or conversion to non-forests.

VALUE: 4.2.1 Extent of the Defined Forest Area Production Forest Area

OBJECTIVE: 4.2.1.1 To minimize the conversion of production forest to non-forested area in the recreation/utilization zone.

Indicator 4.2.1.1.1	Target	Variance
Managed production forest area	Less than 2.5% of production forest area harvested used for roads, landings and aggregate pits.	+10%

What is this indicator and why is it important?

Maintaining the land base in a forested state is a key principle of avoiding forest land conversion. While necessary to conduct forest management activities, the construction of access structures poses a threat to the extent of productive forest area. These access structures need to be carefully planned and their use optimized in order to avoid unnecessary losses.

Status at SFM Plan Development

There are 488,882 ha of Crown Managed Production Forest (FMP 2010).

2009-2010 Status

Target met.

Park-wide analysis as of 2005 FMP plan end (March 31, 2010) indicates that 1.5% of productive managed forest area harvested has been used for roads, landings and aggregate pits. This includes all roads in AFA’s road database (existing and old, summer and winter, primary, branch and operational classes). Some of these roads (especially winter roads) have naturally re-vegetated back to a productive forest state, but have still been included in the calculation.

2011-12 Status Update

No update. This is a 5-year VOIT. Next update scheduled for 2015

Forecast Assumptions and Analytical Methods

Forecasting is not required.

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Management Strategies and Implementation

The maximum road right-of-way is 13.7 metres for primary roads and 9.1 metres for secondary and tertiary roads. Whenever possible, existing roads (roads that were used in the previous harvest) will be used to gain access to proposed harvested areas except where Forest values will be compromised by their use. Existing roads in the Recreation/Utilization zone may also be phased out if alternative means of access, which would have a lesser impact on Forest values, are available or possible. To prevent excessive disturbance outside the road right-of-way, borrow pits will be limited to a maximum of five per kilometre.

The size of borrow pits along the road will not exceed 6 metres including side slopes of 1.5:1 and will be limited to 10 metres from the tree line of the road right-of-way. Maximum aggregate pit size, not including rehabilitated area, will be 1 hectare (2.5 acres). Landings for logs shall not exceed 0.2 hectares.

Operators have been informed of the requirements for access structures through the SOP for Road and Landing Construction.

Research and Monitoring Plan

At each FMP renewal date the Crown Managed Production Forest area is determined. The next renewal is scheduled for 2010 at which time this indicator can be analyzed.

Comparative Assessment of Planned versus Actual Levels

This indicator is not projected into the future. The assessment is scheduled for 2010 and 2020. At these times, an assessment of any change will be conducted.

CRITERION 5: MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.1 Timber Resources

OBJECTIVE: 5.1.1.1. To provide timber resources from the Defined Forest Area for local industry.

Indicator 5.1.1.1	Target	Variance
Long-term projected available harvest volume by product	<ol style="list-style-type: none"> 1. Average volume of white and red pine sawlogs for the first 10 terms >110,000 m³. 2. Red pine poles/treelength annually in 5 or more terms >16,700 m³. 3. Hardwood and white birch sawlogs for each of the first 10 terms >70,000 m³ per year. 4. Produce 520,000 m³ of forest products on an annual basis - 248,000 m³ is in sawlog and better products and 272,000 m³ of pulp and composite quality products. <p>Note: 1 term = 10 years</p>	+/- 25% over 5 year period

What is this indicator and why is it important?

Building on the broad measure identified in the previous indicator, this one identifies the details of product diversification on value added derived from the available timber harvest. The manufacturing of sawlogs, veneer and poles requires higher quality logs than pulp and composite products. Targets 1 to 3 identify these higher quality products, while target 4 compares the balance of higher quality products to pulp. These targets will be measured using the AFA Sales System.

Status at SFM Plan Development

Prior to implementation of the FMP, the level of this indicator was as follows⁵:

1. 113,252 m³
2. 14,755 m³
3. 75,998 m³
4. 253,772 m³ sawlog and better / 306,456 m³ pulp

⁵ Average for the 2000-2005 period from the 2004-2005 Year Ten Annual Report (AFA Sales System). Note that the previous targets were slightly different.

2009-2010 Status Update

Target	Assessment
1. Average volume of white and red pine sawlogs for the first 10 terms >110,000 m ³ .	Target met. 111,609 m ³ /yr of Pw/Pr sawlogs harvested during the 2005-2010 term.
2. Red pine poles/treelength annually in 5 or more terms >16,700 m ³ .	Target met. 17,252 m ³ /yr of Pr poles/treelength harvested during the 2005-2010 term.
3. Hardwood and white birch sawlogs for each of the first 10 terms >70,000 m ³ per year.	Target met. 59,075 m ³ /yr of hardwood/white birch sawlogs harvested during the 2005-2010 term. (25% variance on target => 52,500 m ³ per year).
4. Produce 520,000 m ³ of forest products on an annual basis - 248,000 m ³ is in sawlog and better products and 272,000 m ³ of pulp and composite quality products.	Target met for total volume where 503,526 m ³ /yr were harvested during the 2005-2010 term (25% variance on target = >390,000 m ³ per year). Target met for total sawlog and better volume where 228,498 m ³ /yr were harvested (25% variance on target => 186,000 m ³ per year). Target met for pulp/composite quality products where 275,028 m ³ /yr were harvested during the 2005-2010 term.
Note: 1 term = 10 years	

All targets met (variance applied). Challenges in meeting these volume targets are a result of declining market conditions during the later years of the 2005-2010 term. Note: the inclusion of bridging volume harvested in 2010-2011 will increase these volumes - this information is currently not available.

The 100 year projections from the new 2010 FMP indicate available long term projected volumes by product in excess of these 2005 FMP targeted volumes for each product category (source 2010 Table FMP-13).

2009-2010 Status

Refer to the 2009-10 Annual Report for details.

2011-12 Status Update

No annual update. Next update scheduled for 2015. Volume targets need to be revised to correspond with 2010-2020 FMP.

Forecast

The forecast uses historical harvest data combined with projected harvest and sales. Unforeseen deviations from the planned harvest such as fires, mill closures or market disturbances will have an impact upon the targets.

Management Strategies and Implementation

The wood supply will be allocated to individual companies based on the range of species and qualities available from particular cutting areas. Surplus species and quantities will be identified and made known to the forest industry, so that it may assess the feasibility of altering its operations to utilize this material. Alternative opportunities will be provided, where possible, to industries which face shortages of traditional raw materials and provide for the use of wood fibre as a source of energy. New markets for pulp quality material will be actively sought.

Research and Monitoring Plan

Algonquin Forestry Authority is responsible for monitoring this indicator. AFA sales records will be used to evaluate performance. Evaluation will be conducted in 2010 – plan end.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.1 Timber Resources

OBJECTIVE: 5.1.1.2. To maintain the Ministerial wood supply commitments from the DFA.

Indicator 5.1.1.2.1	Target	Variance
Directly link wood supply commitment to long term, sustainable wood supply volume	No new wood supply allocations without adjustment to existing volumes by the Minister.	N/A

What is this indicator and why is it important?

Local mills rely upon a predictable flow of wood, which is partially based upon the Ministerial commitments. Therefore, it is important to maintain the commitment levels in order to ensure the continued and reliable provision of wood to the dependent mills, and the associated socio-economic benefits. Further, if new wood supply allocations are made by the Minister of Natural Resources, the existing volume commitments must be adjusted in order to maintain a reliable flow of timber for all users.

Status at SFM Plan Development

The Ministerial commitments are identified in table FMP-24 (2005–2025 FMP) and are re-evaluated with each FMP. These Ministerial commitments are currently being met.

2011-2012 Status Update

Target Met

Table FMP-19 of the 2010-2020 Forest Management Plan outlines the wood supply commitments for the new plan. No new wood supply commitments have been identified, however, on January 31, 2012 the MNR announced 2 potential new recipients of wood from the Algonquin Park Forest as a result of the Provincial Wood Supply Competitive Process (WSCP). These successful proponents of the WSCP are required to fulfill certain conditions under the wood supply offers prior to entering into formal Crown wood supply commitments. As part of this same letter, MNR announced that 4 of the existing wood supply commitments are no longer recognized by the Crown because of inactivity or mill closures.

This indicator and target has been removed from the new 2012 SFM Plan.

Forecast

N/A

Management Strategies and Implementation

Prior to the preparation of the FMP, the forest resource inventory is updated to reflect recent depletions and accruals. This updated inventory is the basis for the determination of the available harvest area and volume in the FMP, and the subsequent wood supply commitments made by the Minister.

Research and Monitoring Plan

N/A

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.1 Timber Resources

OBJECTIVE: 5.1.1.3. To recognize good forestry practices within the Defined Forest Area.

Indicator 5.1.1.3.1	Target	Variance
Certification status	Achieve and maintain registration to CAN/CSA-Z809 SFM standard by end of 2007.	+/- 3 months

What is this indicator and why is it important?

- To demonstrate to the public and its customers that the Algonquin Park Forest is being managed on a sustainable basis
- Allows AFA to promote the successful results of their SFM efforts using independent, third-party verification
- Voluntary participation in the requirements of the standard will provide AFA with the opportunity to continually improve forest management performance and engage interested parties in a focused public participation process
- Certification verifies that forests are well managed as defined by the standard

Certification ensures that planning and operations are conducted in a consistent, transparent, and sustainable manner. This is becoming an increasingly common practice, and will ensure that the Defined Forest Area is managed in accordance with the principles of Sustainable Forest Management (environmental, economic and social).

Status at SFM Plan Development

The Defined Forest Area is not currently certified.

2010-2011 Status Update

Target met.

Original CAN/CSA Z809-02 certificate received dated February 4, 2008.

Updated CAN/CSA Z809-02 certificate re-issued February 9, 2011.

2011-2012 Status Update

Successful re-registration audit to Z809-08 in November 2012 – new certificate issued in February 2013.

Forecast

Maintenance of certification and re-certification prior to expiry date.

Management Strategies and Implementation

N/A

Research and Monitoring Plan

The CAN/CSA-Z809 SFM standard requires annual third party audits. Once achieved, certification requirements will be monitored on a regular basis in accordance with the standard.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.2 Recreation and Tourism

OBJECTIVE: 5.1.2.1 To maintain or improve the back country qualities of recreation and tourism opportunities within the DFA, through the reduction of sight and sound evidence of AFA operations.

Indicator 5.1.2.1.1	Target	Variance
Number of documented public complaints about forestry impacts on back-country recreation	<ol style="list-style-type: none">1. 100% of documented public responses (to redesigned feedback program) from interior users within the RU zone without noted logging impacts.2. Establish a simple system to measure on the ground conflicts/complaints between Park users and forest industry by December 1, 2008 and review the system with the Advisory Group before implementation. (A sub-group will be set-up to determine the methodology with representation from Ontario Parks, Friends of Algonquin, Outfitters, Recreational Users and an AFA designate).3. Complaints to be investigated in relation to the FMP's Operational Prescriptions for Areas of Concern including designated canoe routes, campsites, portages and hiking/back-packing trails – towards having the complaints resolved and/or the prescription reviewed.	- 5%

What is this indicator and why is it important?

Recreation and tourism are major benefits provided by the DFA. This is reflected in the Algonquin Provincial Park Management Plan.

Still relating to the recreation and tourism value, the objective of this indicator is to directly monitor public feedback on the impacts of forestry operations on recreation values and activities. It is assumed that many comments may not be associated with any direct impact resulting from forestry operations. Where a comment is related to an impact resulting from a forestry operation and it is possible to address the concern through forest management activities, the target is to implement mitigation in 100% of instances. This contributes to the continual improvement of forestry operations.

Status at SFM Plan Development

Regarding visitor complaints, new reporting program - no previous data available. Consult with Ontario Parks regarding availability of public comment information for use in tracking this indicator.

2007-2008 = 100%

2008-2009 = 100%

2009-10 = 100%

2010-2011 Status Update

Target met.

2010-2011 = 99.9%

- (1) One complaint was received out of 243,920 total interior camper nights. The complaint was regarding forestry related noise heard on Scorch Lake in August 2010.
- (2) A Forestry–Recreation Visitor Comment Management System (FRVCMS, October 2007) has been created by Ontario Parks. The database system records information on forestry recreation comments and tracks response to these comments.
- (3) The Scorch Lake complaint was addressed and resolved. A response email was received from the complainant thanking us for our response and indicating that he hopes to return to Algonquin Park sometime in the future.

2011-2012 Status Update

Target met.

2011-2012 = 99.9%

There were 3 complaints out of 245,655 interior camper nights. These items consisted of a camper complaint on the Rock lake road (noise and haul truck speed), a camper at Ryan Lake (noise complaint) and a recreational vehicle complaint related to hauling on the Shirley Lake Road.

This target has been reworded and simplified in the new 2012 SFM Plan. Sub-target 2 has been removed.

Forecast

The assumption used in setting this target is that the number of visitors to the Algonquin Park Forest will continue on a steady basis unless management decisions deter visitors. Uncontrollable factors that may also influence this indicator include such things as weather and/or various economic conditions. No forecast necessary for number of complaints.

Management Strategies and Implementation

Recreational values will be identified on values maps and Area of Concern guidelines will be implemented to ensure protection of these values. These strategies are reflected in the FMP currently being implemented. When possible, public concerns will be addressed through forest management activities. Continue to utilize Environmental Management System procedure 4.4.3 Communication, and develop a reporting mechanism.

Research and Monitoring Plan

A system for reviewing comments is already operating and documentation resulting from it will be tailored to suit this indicator. This will be monitored on a yearly basis in order to allow for timely improvements. Data will be requested from Ontario Parks annually to supplement the information.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.2 Recreation and Tourism

OBJECTIVE: 5.1.2.1 To maintain or improve the back-country qualities of recreation and tourism opportunities within the DFA, through the reduction of sight and sound evidence of AFA operations.

Indicator 5.1.2.1.2	Target	Variance
Provision of information with respect to location of planned forest operations on the AFA website	Post harvest schedule map with primary haul routes for summer operations on AFA website.	N/A

What is this indicator and why is it important?

The internet is increasingly the most easily accessible source of information for a growing number of Canadians. Posting information on the website will ensure that AFA's operational plans are accessible to as many members of the public as possible, including recreational users who may be concerned about the proximity of forestry operations during their stay in Algonquin Park.

Status at SFM Plan Development

Map already posted at <http://www.algonquinforestry.on.ca/summary.htm>

2010-2011 Status Update

Target met.

Map completed and posted to website July 23 for 2010-2011 season. AWS approval was delayed with approval of the new 2010-2020 Forest Management Plan. Map was posted as soon as AWS was approved, and prior to operations commencing.

2011-2012 Status Update

Target met. Map was posted on April 1, 2011. This VOIT has been maintained in the new 2012 SFM Plan, including seasonal updates where possible.

Forecast

No forecasting is necessary.

Management Strategies and Implementation

AFA updates this map annually after the Annual Work Schedule approval.

Research and Monitoring Plan

N/A

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.3 Cultural Heritage

OBJECTIVE: 5.1.3.1 To collect and preserve knowledge.

Indicator 5.1.3.1.1	Target	Variance
Ongoing research/assessment/support	Demonstrate financial and/or in-kind support for cultural heritage initiatives beyond those mandated or required.	As budgeted

What is this indicator and why is it important?

Algonquin has a rich and varied human history, with traditional dependence upon the resources of the Park being a dominant theme. Extensive field research has identified more than 300 areas of historical human activity and a comparable number of archaeological sites. Those sites that provided the best representation of the Parks history have been selected as Historical Zones. Ongoing research and assessment is important to complete the system of archaeological and historical sites. The collection and preservation of knowledge will provide opportunities to enhance the public's understanding and awareness and appreciation of Algonquin Park's heritage.

Status at SFM Plan Development

The historical zones in Algonquin Park encompass 1,680 hectares and include 48 historical sites and 38 archaeological sites. The location of archeological sites is confidential in order to ensure their protection. The park protects all newly discovered historical resources dated prior to 1940, pending thorough study and documentation of their significance. A major focus of historical resources interpretation is at the Algonquin Logging Museum near the east gate. Algonquin Forestry Authority contributes annually to the Algonquin Park Loggers Day (cash and in-kind). Cultural heritage training of woodworkers and tree markers has been conducted. Funding for a new roof on the cabin at Basin Depot was provided by AFA. Stage 2 archaeological assessments were conducted in 2004-2005 in order to determine the presence of cultural artifacts in areas scheduled for forestry operations.

2007-2008:

A \$5,000 contribution was made for Logging Museum upgrades. A stage two archaeological assessment in 2007-2008 was conducted in order to determine the presence of cultural artifacts in areas scheduled for forestry operations.

2008-09:

AFA display presented at Basin Depot Archaeological Project 2009. \$5,000 contributed to the project.

2009-2010

Target met.

\$10,000 budgeted for the Camboose Camp repairs at the Algonquin Park Logging Museum.

2010-11 Status Update

Harvesting and delivery of logs for the Camboose Camp repairs at the Algonquin Park Logging Museum was completed in Jan/Feb 2011. Repairs commenced in the summer of 2011.

2011-12 Status Update

Camboose Camp repairs at the Algonquin Park Logging Museum were completed in the summer of 2011. This VOIT has been maintained in the new 2012 SFM Plan.



Figure 2: Repairs to the Algonquin Park Logging Museum Camboose Camp

Forecast

No forecasting is necessary.

Management Strategies and Implementation

During forest management activities (primarily tree marking), all newly discovered cultural heritage sites are identified and verified by Ontario Parks prior to operations. An AOC is established if warranted. In addition, high potential cultural heritage areas are identified during the FMP process and have an AOC prescription identified that includes a stage two archaeological assessment for certain activities to be permitted.

Research and Monitoring Plan

Document activities and expenditures.

Comparative Assessment of Planned versus Actual Levels: N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.3 Cultural Heritage

OBJECTIVE: 5.1.3.1 To collect and preserve knowledge.

Indicator 5.1.3.1.2	Target	Variance
Clarification of sensitive vs. non-sensitive information	September 2009.	As budgeted

What is this indicator and why is it important?

Some cultural and historical knowledge needs to be protected from general use, such as areas on the landscape that are sensitive to disruption (e.g. burial or spiritual sites). This type of information also needs to be preserved, but this must be done while protecting its confidentiality. In order to determine what types of information require confidentiality, types of information need to be identified as sensitive and non-sensitive. The Ontario Ministry of Culture is the custodian for all registered archeological site data and therefore sets conditions to access this data. The promotion of cultural heritage values is currently limited by Ministry of Culture directives to maintain this as sensitive information. While archaeological values are considered sensitive, other cultural heritage values may not be.

Status at SFM Plan Development

The current FMP treats all cultural heritage information as sensitive. The new Forest Management Guide for Cultural Heritage Values (2007) provides new direction on the confidentiality of cultural heritage information. This new guide will be used for the preparation of the 2010 FMP.

2007-2008

No update for 2007/2008. Time frame for completion is September 2009.

2008-2009 Status Update

Completed – New Forest Management Guide for Cultural Heritage Values (2007) used in 2010 FMP and values updated through FMP process. CHS 1,2,3 all classified as confidential. Archeological potential areas not treated as confidential.

Forecast

No forecasting is necessary.

Management Strategies and Implementation

Clarification will be provided during the development of the 2010 FMP.

Research and Monitoring Plan

N/A

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.1 Timber and Non-Timber Benefits

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.3 Cultural Heritage

OBJECTIVE: 5.1.3.2 To assist in the sharing/promotion of cultural heritage information.

Indicator 5.1.3.2.1	Target	Variance
Establishment of website linkages to information (within the constraints of confidentiality) and promotion of cultural heritage events	Provide information (publications, website linkages) as allowed by provincial guidelines/direction.	As budgeted

What is this indicator and why is it important?

Information that can be provided to the general public is distributed most widely via the internet, as noted in relation to indicator 5.1.2.1.2. Therefore, non-sensitive cultural information can be provided to the public via websites. Linkages to relevant available information will be established from the AFA website. Sharing this type of information will help ensure the appreciation of these values and that it is not lost to future generations.

Status at SFM Plan Development

N/A – new indicator.

2007-2008

Target met

In 2007-2008 AFA assisted in the construction of the Big Pines Trail and continued support for Loggers Day.

2008-2009

Target met

AFA provided funding (\$2500) towards the Algonquin Park Logging Museum for upgrades and continued support for Loggers Day and contributed \$500 towards the Hastings Highlands Loggers Games. AFA display was presented at Basin Depot Archaeological Project 2009 and \$5,000 was contributed to the project.

2009-2010

Target met

Website linkages added to the AFA website for the Ontario Archaeological Society (Ottawa Chapter) and the Friends of Bonnechere Provincial Park. Contribution towards the Ontario Archaeological Society Newsletter Arch Notes.

2010-2011 Status Update

Target Met

Contribution made towards upgrading the Algonquin Park Logging Museum Camboose camp. Contributions also provided to Barry's Bay Timberfest, and the Hasting's Highlands Loggers Games in Bancroft.

2011-2012 Status Update

Target Met

Contributions provided to Barry's Bay Timberfest, the Hasting's Highlands Loggers Games in Bancroft and the Killaloe Sno Fun Weekend which includes logger sporting events.

Forecast

No forecasting is necessary.

Management Strategies and Implementation

The availability of relevant cultural heritage information will be determined. Linkages to this information on the AFA website will be established where possible.

Research and Monitoring Plan

Document information provided and expenditures.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY**ELEMENT: 5.1 Timber and Non-Timber Benefits**

Manage the forest sustainably to produce an acceptable and feasible mix of both timber and non-timber benefits.

VALUE: 5.1.4 Natural and Spiritual

OBJECTIVE: 5.1.4.1 To maintain a wilderness-like experience for users within the Defined Forest Area.

Indicator 5.1.4.1.1	Target	Variance
Compliance with Area of Concern prescriptions which schedule operations such that there is a separation in time and/or space between wilderness recreation and forestry operations	100% compliance with applicable AOCs in 2005 FMP Table 17.	0

What is this indicator and why is it important?

The sound of forestry operations can negatively impact the perceived wilderness experience of recreationalists within the Park. This indicator will assess whether or not the careful scheduling of operations, through the use of Area of Concern prescriptions, can successfully ensure that operations occur at times and places that are separate from wilderness recreation.

As part of a carefully planned forestry operation, AFA has developed site level prescriptions for forest management activities conducted near these values. The prescriptions are documented in the FMP and are categorized as follows:

- CR – MNR Designated Canoe Routes
- C – Campsites
- P – Portages
- H – MNR Designated Hiking/Backpack Trails
- ST – MNR Designated Cross Country Ski Trails

Status at SFM Plan Development

2005-2006 = 99%
 2006-2007 = 97%
 2007-2008 = 100%
 2008-2009 = 99%

2009-2010 = 100%
2010-2011 = 100%

2011-2012 Status Update

Target met

2011-2012 = 100%. There were no non-compliances identified from the 35 FOIP reports associated with these values.

Forecast

No forecasting is necessary.

Management Strategies and Implementation

Based on the land use direction summarized in Table FMP-7 (2005), Area of Concern prescriptions will be developed that will place timing restrictions upon operations within the R/U zone during the tourist season.

Research and Monitoring Plan

The Algonquin Forestry Authority is responsible for monitoring the status of this indicator. This will be completed through the current Forest Operation Information Program which ensures that Area of Concern prescriptions are implemented as prescribed. Annual Reports document each year's success. Compliance percentages are calculated only on OPU's that contain these applicable AOC types and from both AFA and MNR compliance reports.

Comparative Assessment of Planned versus Actual Levels

Annual Reports document each year's success.

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.2 Communities and Sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

VALUE: 5.2.1 Economic Value Added

OBJECTIVE: 5.2.1.1. To maintain or enhance the economic value added that harvesting in the Defined Forest Area contributes to the provincial and local economies.

Indicator 5.2.1.1.1	Target	Variance
Managed Crown Forest area available for timber production	Maintain the area available for forestry management within the DFA.	+/- 10%

What is this indicator and why is it important?

The managed Crown forest area available for timber production is the area used to calculate the available harvest area. Any reduction in this area will result in reduced area available for forest management operations, and a reduction in economic value added.

Status at SFM Plan Development

There are 481,214 ha of managed Crown forest available for timber production (FMP 2005). Of this area, 60,509 hectares are occupied by Area of Concern no-cut reserves, leaving 420,705 hectares available for timber production.

2009-2010 Status Update
Target met

In the 2010 FMP, there are 481,478 ha of managed Crown forest available for timber production. Of this area, 59,577 hectares are occupied by Area of Concern no-cut reserves, leaving 421,901 hectares available for timber production.

2011-2012 Status Update

No update. This is a 5-year VOIT

Forecast

No forecasting is necessary.

Management Strategies and Implementation

The Algonquin Park Management Plan defines the area that is available for timber production in Algonquin Park.

Research and Monitoring Plan

The assessment is scheduled for 2010 and seven and ten years thereafter.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.2 Communities and Sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

VALUE: 5.2.1 Economic Value Added

OBJECTIVE: 5.2.1.1. To maintain or enhance the economic value added that harvesting in the Defined Forest Area contributes to the provincial and local economies.

Indicator 5.2.1.1.2	Target	Variance
Amount of available harvest volume utilized (short term)	Full utilization of the planned 2005-2010 available harvest volume of 3,386,492 m ³ .	+/- 20%

What is this indicator and why is it important?

This indicator is identical to that used for value 5.1.1 (indicator 5.1.1.1). For this value the objective is similar; to maintain the economic and employment contribution from the Forest.

Status at SFM Plan Development

Prior to the current Forest Management Plan period, the 2004-2005 Annual Report shows that the level achieved for this indicator was 2,707,148 m³. Note that the target was less during that time (2000-2005 FMP). The target has therefore been revised.

2009-2010 Status Update

Target not met

The 2009-10 "Year 10" Annual Report indicates a total 5-year harvest volume (2005-2010) of 2,290,233 m³. This falls short of the target (with variance applied) by 418,960 m³ or 15%.

During the 2005-2010 FMP market conditions took a significant downturn, resulting in only 68% of planned volume utilized in the 2005-2010 term. Demand for veneer, pine sawlogs and poplar has softened significantly. At the same time, price for maple 1 common and better hit lows not seen since around 2000. Reduced home construction in the United States, global competition, the cost of fuel/energy

and a higher valued Canadian dollar has resulted in a difficult economic climate for Ontario's forest industry. These declining market conditions have had an impact on the ability to meet all socio-economic Sustainable Forest Management Plan objectives.

2011-2012 Status Update

No annual update. This is a 5-year VOIT. This VOIT has been removed from the new 2012 SFM Plan as it has been incorporated into VOIT 5.1.1.1.1

Forecast

The available harvest area is determined by the Strategic Forest Management Model. From this area, volumes are calculated based on species and forest unit yield curves and reported in the FMP Table FMP-15. Forecast and utilized volumes are generally considered to match when the utilized volume is within 20% of the forecast volume.

Management Strategies and Implementation

The wood supply will be allocated to individual companies based on the range of species and qualities available from particular cutting areas. Surplus species and quantities will be identified and made known to the forest industry, so that it may assess the feasibility of altering its operations to utilize this material. Alternative opportunities will be provided, where possible, to industries which face shortages of traditional raw materials and provide for the use of wood fibre as a source of energy. New markets for pulp quality material will be actively sought.

Research and Monitoring Plan

Algonquin Forestry Authority is responsible for monitoring the volume of timber harvested from the Algonquin Park Forest. This information is summarized annually in Annual Report Table AR-4. The indicator will be evaluated at the end of the current five year term (2010) and at seven and ten year intervals thereafter (2017 and 2020) using Annual Report Table AR-4.

Comparative Assessment of Planned versus Actual Levels

The assessment is scheduled for 2010 and seven and ten years thereafter.

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.2 Communities and Sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

VALUE: 5.2.1 Economic Value Added

OBJECTIVE: 5.2.1.1. To maintain or enhance the economic value added that harvesting in the Defined Forest Area contributes to the provincial and local economies.

Indicator 5.2.1.1.3	Target	Variance
Value added per cubic metre	Maintain the value of the previous five year harvest volume times the value added per cubic metre (Living Legacy Trust 2001 report).	+/- 20%

What is this indicator and why is it important?

Value added is a measure of enhanced economic benefit to a community. By further processing timber resources, an increased level of employment and manufacturing is supported. In addition, value added increases the diversification of an area's economy.

Status at SFM Plan Development

\$288 per cubic metre or \$779,658,624 for the 2000-2005 period.

2009-2010 Status Update

Target not met

\$288 per cubic metre or \$659,587,104 for the 2005-2010 period.

2011-2012 Status Update

No annual update. This is a 5-year VOIT. This VOIT has been revised in the new 2012 SFM Plan. The indicator has been revised to state "Level of investment in initiatives that contribute to community sustainability" and the target will be an assessment of AFA direct program costs paid, assessed every 5 years.

Forecast

No forecasting is necessary.

Management Strategies and Implementation

The strategies referenced by indicator 5.1.1.1 will continue to be pursued with an emphasis on value added production.

Research and Monitoring Plan

The harvest level will be monitored annually using Annual Report Table AR-4. In addition, updates to the base factor will be monitored. The current value is \$288 per cubic metre⁶. The indicator will be evaluated at the end of the current five year term (2010) and at seven and ten year intervals thereafter (2017 and 2020) using Annual Report Table AR-4.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.2 Communities and Sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

VALUE: 5.2.1 Economic Value Added

OBJECTIVE: 5.2.1.2. To support local production facilities by providing affordable wood fibre from the Defined Forest Area.

Indicator 5.2.1.2.1	Target	Variance
Number of local production facilities (wood supply commitment holders) that utilize wood fibre from the DFA	Establish a benchmark from 2006-07, monitor trends and maintain production facilities over time.	N/A

⁶ Jaakko Poyry Consulting. 2001. Assessment of the Status and Future Opportunities of Ontario's Solid Wood Value-Added Sector, Final Summary Report. Prepared for the Living Legacy Trust, Government of Ontario.

What is this indicator and why is it important?

The number of local production facilities using wood from the forest is an indicator of the local economic benefits derived from the forest. If more of the wood remains in the local area, the economic benefit to local communities and businesses is greater.

Status at SFM Plan Development

There are currently 13 local production facilities that utilize wood fibre from the DFA. These are identified in Table FMP-24 of the 2005-2025 Forest Management Plan.

2007-2008 Status Update

Target met. A benchmark has been prepared from 2006-2007 - **12 wood supply commitment holders** utilized wood fibre from the DFA. In 2007-2008 there were also 12 commitment holders that utilized wood fibre from the DFA. The two facilities that did not receive wood were Grant Forest products in Englehart and Pre-cut Hardwood in North Bay.

2008-2009 Status Update

Target met. In 2008-2009 there were also 12 commitment holders that utilized wood fibre from the DFA. The two facilities that did not receive wood were Grant Forest products in Englehart and Pre-cut Hardwood in North Bay. Commonwealth Plywood in Pembroke was closed and was not able to accept veneer logs but the W.C Edwards sawmill at the same site did accept sawlogs. The two facilities are grouped together under the allocation letters; so have been considered as one facility for the purpose of utilizing wood fibre.

2009-2010 Status Update

Target not met.

In 2009-2010 there were 11 commitment holders that utilized wood fibre from the DFA (one short of benchmark 12). The two facilities that did not receive wood were Pre-cut Hardwood in North Bay and Smurfit Stone – which announced a permanent closure in October 2008. Grant Forest Products in Englehart was sold to Georgia Pacific and did receive some wood in 2009-10. Commonwealth Plywood in Pembroke was closed and was not able to accept veneer logs but the W.C Edwards sawmill at the same site did accept sawlogs. The two facilities are grouped together under the allocation letters; so have been considered as one facility for the purpose of utilizing wood fibre.

2010-11 Status Update

Target not met.

In 2010-2011 there were 9 commitment holders that utilized wood fibre from the DFA (three short of benchmark 12). The three facilities that did not receive wood were Pre-cut Hardwood in North Bay, Grant Forest Products in Englehart (was sold to Georgia Pacific) and Tembec Mattawa. Smurfit Stone, which announced a permanent closure in October 2008 is not a commitment holder in the 2010-20 FMP.

2011-12 Status Update

Target not met.

In 2011-2012 there were 8 commitment holders that utilized wood fibre from the DFA (4 short of benchmark 12). The four facilities that did not receive wood were Pre-cut Hardwood in North Bay, Grant Forest Products in Englehart (was sold to Georgia Pacific), Tembec Mattawa and Columbia Forest Products Ltd in Rutherglen. On January 31, 2012 the MNR announced that 3 of these 4 wood supply commitments are no longer recognized by the Crown because of inactivity or mill closures.

The weakened economy reduced demand for forest products worldwide and resulted in numerous temporary and permanent mill closures across the province, affecting all forest sectors. Many of the users of pulp quality forest products are either permanently or temporarily shut down or running at reduced capacity. The veneer mills in Rutherglen and Pembroke have been shut down due to markets and/or labour issues, and 2011/12 also saw some weakening demand for sawlogs. Murray Brothers Lumber Co. Ltd in Madawaska took significantly less wood from the Algonquin Park forest than previous years.

Forecast

This is a monitoring indicator – no forecast required.

Management Strategies and Implementation

The wood supply will be allocated to individual companies based on the range of species and qualities available from particular cutting areas. Surplus species and quantities will be identified and made known to the forest industry, so that it may assess the feasibility of utilizing this material. New markets for pulp quality material will be actively sought.

Research and Monitoring Plan

Local production facilities that utilize wood from the DFA is currently defined as the 2005 FMP client mills (Table FMP-24).

Comparative Assessment of Planned versus Actual Levels

The assessment is scheduled for 2010 and seven and ten years thereafter.

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.2 Communities and Sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

VALUE: 5.2.1 Economic Value Added

OBJECTIVE: 5.2.1.3. To ensure that if wood volume becomes available, local production facilities will receive first opportunity to receive the wood volume.

Indicator 5.2.1.3.1	Target	Variance
Available wood volume offered to local production facilities	100% is offered.	0

What is this indicator and why is it important?

The wood volume available to local production facilities is an indicator of the local economic benefits derived from the forest. If more of the wood is made available to facilities in the local area, the economic benefit to local communities and businesses is greater.

Status at SFM Plan Development

- 2000-2005 = 90% sold to commitment holders; 10% outside sales
- 2006-2007 = 93% sold to commitment holders; 7% outside sales
- 2007-2008 = 96% sold to commitment holders; 4% outside sales
- 2008-2009 = 89% sold to commitment holders; 11% outside sales
- 2009-2010 = 81% sold to commitment holders; 19% outside sales
- 2010-2011 = 66% sold to commitment holders; 34% outside sales

2011-2012 Status Update

Target met. 100% was offered.
2011-2012 = 71% sold to commitment holders; 29% outside sales

Forecast

N/A

Management Strategies and Implementation

The Algonquin Park Forestry Agreement provides AFA with the direction to meet wood supply commitments that are set by the Minister of Natural Resources. These commitments are spelled out in Table FMP-24 of the 2005-2025 Forest Management Plan. In the event that a commitment holder is unable to utilize its committed volume, AFA may offer the wood to other commitment holders and/or other existing markets. The volume of wood sold to these other existing markets will be summarized for reporting on this Value, Objective, Indicator and Target.

Research and Monitoring Plan

This will be accomplished by reviewing the annual report and reporting on the percent of volume sold to commitment holders and facilities other than commitment holders.

Comparative Assessment of Planned versus Actual Levels

The assessment is scheduled for 2010 and 2020. At these times, an assessment of any change will be conducted.

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.2 Communities and Sustainability

Contribute to the sustainability of communities by providing diverse opportunities to derive benefits from forests and to participate in their use and management.

VALUE: 5.2.2 Cottage Experience

OBJECTIVE: 5.2.2.1. To maintain the quality of the cottage experience within the Recreation/Utilization (RU) zone of the Defined Forest Area.

Indicator 5.2.2.1.1	Target	Variance
Compliance with the cottage/lease AOCs	100% compliance with cottage lease AOCs.	0

What is this indicator and why is it important?

There are 305 cottage properties held under lease, license or land use permit in the Park as of January 1998 (Algonquin Park Management Plan). Only a small percentage of these are in the RU zone and are potentially impacted by forest management operations. An AOC has been developed to afford protection for these features within the RU zone.

Status at SFM Plan Development

2005-2006 = no active operations adjacent to cottage leases

2006-2007 = 100%

2007-2008 = 100%

2008-2009 = 100%

2009-2010 = 100%

2010-2011 = 100%

2011-2012 Status Update

Target met.

2011-2012 = 100%

No active operations reported on in FOIP were adjacent to cottage leases.

Forecast

No forecast necessary.

Management Strategies and Implementation

Cottaging/lease values will be identified on values maps and Area of Concern guidelines will be implemented to ensure that operations do not negatively impact the cottaging experience. These strategies are reflected in the forest management plan currently being implemented.

Research and Monitoring Plan

This will be monitored annually. Compliance percentages are calculated only on OPUs that contain the cottage lease AOC. Both AFA and MNR compliance reports are summarized.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY**ELEMENT: 5.3 Fair Distribution of Benefits and Costs**

Promote the fair distribution of timber and non-timber benefits and costs.

VALUE: 5.3.1 Revenues to the Crown

OBJECTIVE: 5.3.1.1. To provide Crown timber stumpage revenue from the Defined Forest Area.

Indicator 5.3.1.1.1	Target	Variance
Crown timber stumpage paid to government consolidated revenues	Maintain/increase a revenue stream of \$2.6 million per year of Crown stumpage payments from the DFA (2000-2005 annual average). Evaluate using a 5-year rolling average.	+/- 20%

What is this indicator and why is it important?

A fee, called stumpage, is paid to the province for the harvest of Crown timber from the Algonquin Park Forest. Stumpage fees are used for the benefit of the entire province; to pay for expenditures from such activities as highway maintenance, operation of schools and hospitals, and civil service payroll, making this a good indicator of how society benefits from forest management activities. Stumpage fees for this indicator do not include fees paid to the Forestry Futures Trust Fund or the Forest Renewal Fund.

Status at SFM Plan Development

As stated by the target, past revenues averaged \$2.6 million per year for the 2000-2005 period.

2007-2008 Status

Target not met. \$1.014 million paid in Crown stumpage. Due to deteriorating market conditions, the "residual rate" component of the Ontario Crown Timber Charges was reduced to zero for most sectors and species in 2007-08. As a result, the Crown stumpage per m3 collected by the Province was significantly less than in previous years. Harvest volumes have also dropped by 25% from 2006/07.

2008-2009 Status

Target not met. \$814,646 in Crown revenues in 08/09. Same reasons as above. Five year rolling average (04/05 to 08/09) = \$1,669,131

Note: due to changes directed by the Forest Management Planning Manual the Crown stumpage value paid is no longer reported in the CFSA Annual Report.

2009-2010 Status

Target not met.

\$703,952 in Crown revenues in 09/10. Same reasons as above. Five year rolling average (05/06 to 09/10) = \$1,291,722

2010-2011 Status Update

Target not met.

\$ 620,385 in Crown revenues in 10/11. Same reasons as above. Five year rolling average (06/07 to 10/11) = \$939,844

2011-2012 Status Update

Target not met.

\$ 726,786 in Crown revenues in 11/12. Same reasons as above. Five year rolling average (07/08 to 11/12) = \$781,440. This indicator has been maintained in the new 2012 SFM Plan, however the target has been reduced to reflect a more realistic current level. This new target would be achieved with the 2011-12 crown revenues generated.

Forecast

No forecasting required.

Management Strategies and Implementation

Strategies referenced by indicator 5.1.1.1, with an emphasis on value added production, will continue to be pursued.

Research and Monitoring Plan

The annual value of payments made to the Crown is monitored in Annual Report Table AR-11.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.3 Fair Distribution of Benefits and Costs

Promote the fair distribution of timber and non-timber benefits and costs.

VALUE: 5.3.2 Opportunities to Local Aboriginal Communities

OBJECTIVE: 5.3.2.1. Encourage participation of local Algonquin's and increase involvement of Algonquin Negotiation Representative (ANR) communities/people in the economic opportunities provided by forest management.

Indicator 5.3.2.1.1	Target	Variance
Percentage of total volume harvested by Algonquin Aboriginal organizations/people.	Maintain/increase the total volume harvested by ANR communities per year (from a benchmark set in 2006-2007).	As defined by target.

What is this indicator and why is it important?

This indicator is a measure of the distribution of economic opportunities to various demographic groups. In this particular case, Aboriginal people are identified in respect of the unique role they play in forest management.

Status at SFM Plan Development

2006-2007 = 12.2%
 2007-2008 = 16.7%
 2008-2009 = 18.5%
 2009-2010 = 18.9%
 2010-2011 = 16.2%

2011-2012 Status Update

2011-2012 = 16.7%
 Target met – above benchmark of 12.2%

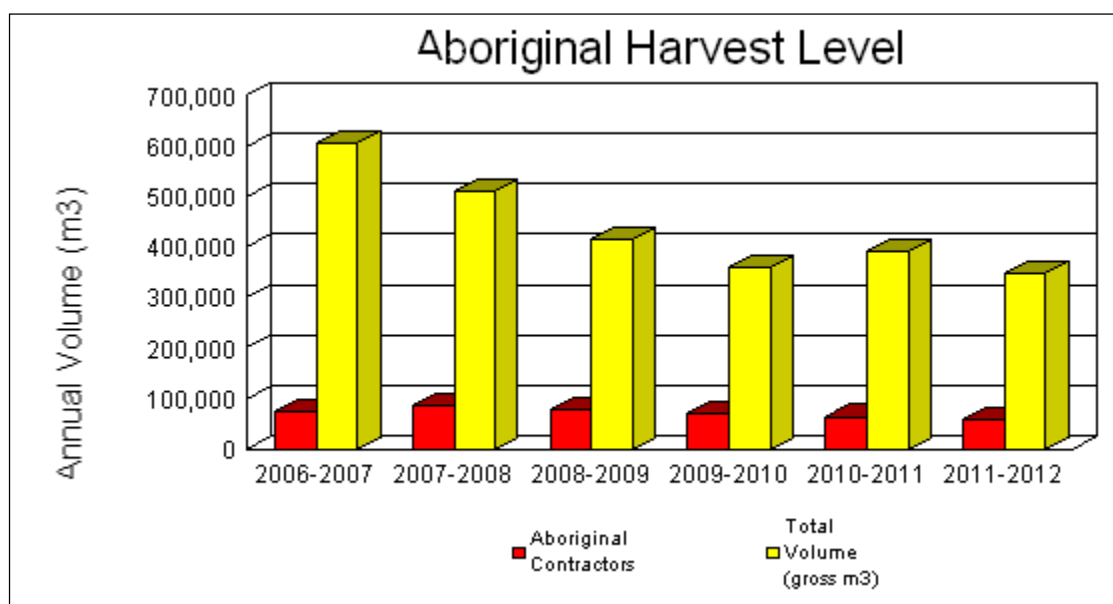


Figure 3: Aboriginal Harvest Level

This indicator has been maintained in the new 2012 SFM Plan and the target has been increased to be consistent with more recent levels of activity (16%).

Forecast

No forecasting is required.

Management Strategies and Implementation

The 2005 Year Ten Annual Report explains the initiative to date. "Work opportunities were provided for the Algonquin First Nation communities in tree marking, road construction and maintenance, logging, releasing trees from competition, and growing nursery stock. Value of all work to Aboriginal contractors in 2003-2004 was \$4.2 million, in 2004-2005 was \$3.3 million".

Research and Monitoring Plan

As part of the Annual Report prepared by AFA, the Ministry of Natural Resources provides information on the progress toward implementing ways of achieving a more equal participation by Aboriginal communities in the benefits provided through forest management activities. This is referred to as the Environmental Assessment Condition 34 Report and will be coordinated between AFA and the Ministry of

Natural Resources. This information will be used to assess progress towards meeting these targets. To be tracked from 2000 looking at volume and percent of total volume harvested, with 2007 as the benchmark year.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.3 Fair Distribution of Benefits and Costs

Promote the fair distribution of timber and non-timber benefits and costs.

VALUE: 5.3.2 Opportunities to Local Aboriginal Communities

OBJECTIVE: 5.3.2.1. Encourage participation of local Algonquin’s and increase involvement of Algonquin Negotiation Representative (ANR) communities/people in the economic opportunities provided by forest management.

Indicator 5.3.2.1.2	Target	Variance
Percentage of tree marking by Algonquin Aboriginal organizations/people	Percent of total area tree marked by Algonquin organizations/people per year (from a benchmark set in 2006-2007).	As defined by target

What is this indicator and why is it important?

This indicator is a measure of the distribution of economic opportunities to various demographic groups. In this particular case, Aboriginal people are identified in respect of the unique role they play in forest management.

Status at SFM Plan Development

- 2005 = 26.6%
- 2006 = **25.2% - benchmark**
- 2007-2008 = 13.9%
- 2008-2009 = 10.7%
- 2009-2010 = 5.9%
- 2010-2011 = 12.4%

2011-2012 Status Update

Target not met.
 2011-2012 = 15.6%
 Increase over last year, however, the reduced harvest due to the slowing economy meant further reduction in the area required to be tree marked.

This indicator has been broadened in the new 2012 SFM Plan to include all silviculture completed by Algonquins, not just tree marking, and the target has been revised accordingly to 9%. The 2011-12 level would meet this new target, as total Algonquin silviculture activity represented 10% of the total silviculture program.

Forecast

No forecasting is required.

Management Strategies and Implementation

The 2005 Year Ten Annual Report explains the initiative to date. "Work opportunities were provided for the Algonquin First Nation communities in tree marking, road construction and maintenance, logging, releasing trees from competition and growing nursery stock.

Research and Monitoring Plan

As part of the Annual Report prepared by AFA, the Ministry of Natural Resources provides information on the progress toward implementing ways of achieving a more equal participation by Aboriginal communities in the benefits provided through forest management activities. This is referred to as the Environmental Assessment Condition 34 Report and will be coordinated between AFA and the Ministry of Natural Resources. This information will be used to assess progress towards meeting these targets.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.3 Fair Distribution of Benefits and Costs

Promote the fair distribution of timber and non-timber benefits and costs.

VALUE: 5.3.2 Opportunities to Local Aboriginal Communities

OBJECTIVE: 5.3.2.1. Encourage participation of local Algonquin's and increase involvement of Algonquin Negotiation Representative (ANR) communities/people in the economic opportunities provided by forest management.

Indicator 5.3.2.1.3	Target	Variance
Provide Algonquin Aboriginal organizations/people fair sharing of economic opportunities/silvicultural activities when available	To be recorded as it happens (no target).	N/A

What is this indicator and why is it important?

This indicator is a measure of the distribution of economic opportunities to various demographic groups. In this particular case, Aboriginal people are identified in respect of the unique role they play in forest management.

Status at SFM Plan Development

Value of all work to Aboriginal contractors:

2003-2004 = \$4.2 million

2004-2005 = \$3.3 million

2005-2006 = \$3.5 million

2006-2007 = \$3.7 million

2007-2008 = \$3.8 million

2008-2009 = \$3.6 million

2009-2010 = \$2.9 million

2010-2011 = \$2.9 million

2011-2012 Status Update

Target met

Value of all work to Aboriginal contractors for 2011-2012 was \$2.7 million. This VOIT has been revised slightly in the 2012 SFM Plan to track Algonquin contractors in comparison to total direct program costs, with a target of 19% set.

Forecast

No forecasting is required.

Management Strategies and Implementation

The 2005 Year Ten Annual Report explains the initiative to date. "Work opportunities were provided for the Algonquin First Nation communities in tree marking, road construction and maintenance, logging, releasing trees from competition and growing nursery stock. Contracts for this work in 2000-2001 totaled \$1.2 million and were \$1.4 million as of January 31, 2002 for the 2001-2002 fiscal year. Value of all work to contractors in 2003-2004 was \$4.2 million and in 2004-2005 was \$3.3 million (the difference was reduced harvest activity by the Algonquin First Nation communities)."

Research and Monitoring Plan

As part of the Annual Report prepared by AFA, the Ministry of Natural Resources provides information on the progress toward implementing ways of achieving a more equal participation by Aboriginal communities in the benefits provided through forest management activities. This is referred to as the Environmental Assessment Condition 34 Report and will be coordinated between AFA and the Ministry of Natural Resources.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.3 Fair Distribution of Benefits and Costs

Promote the fair distribution of timber and non-timber benefits and costs.

VALUE: 5.3.2 Opportunities to Local Aboriginal Communities

OBJECTIVE: 5.3.2.2. Shared stewardship, co-management for Aboriginal people.

Indicator 5.3.2.2.1	Target	Variance
Increased participation	As determined by the Treaty under negotiation.	N/A

What is this indicator and why is it important?

This indicator is a measure of the distribution of economic opportunities to various demographic groups. In this particular case, Aboriginal people are identified in respect of the unique role they play in forest management.

Status at SFM Plan Development

No shared stewardship or co-management agreements have been made at this time.

2011-2012 Status Update

Work is ongoing on a preliminary draft Agreement-in-Principle which was made public in 2012, with consultation proceeding in 2013.

Forecast

No forecasting is required.

Management Strategies and Implementation

The Algonquin's of Ontario are currently engaged in negotiations with Ontario and Canada working towards an Agreement in Principle and eventually a Treaty. These discussions involve the future of Algonquin Park and the Algonquin's participation in the future management of the Park.

Research and Monitoring Plan

As part of the Annual Report prepared by AFA, the Ministry of Natural Resources provides information on the progress toward implementing ways of achieving a more equal participation by Aboriginal communities in the benefits provided through forest management activities. This is referred to as the Environmental Assessment Condition 34 Report and will be coordinated between AFA and the Ministry of Natural Resources.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.3 Fair Distribution of Benefits and Costs

Promote the fair distribution of timber and non-timber benefits and costs.

VALUE: 5.3.3 Direct and Indirect Employment

OBJECTIVE: 5.3.3.1. Maintain non-forestry benefits.

Indicator 5.3.3.1.1	Target	Variance
Interior visitor days per year	Maintain the current level of interior visitor days at 300,000/year.	+/- 10%

What is this indicator and why is it important?

Algonquin has experienced steady visitation growth in the past thirty years. Since 1985, total Park visitation has nearly doubled from 500,000 to 1,000,000 visits annually. While Algonquin Park continues to be an important destination for domestic users, the Park has witnessed an increase in the number of international visitors. International visitation to the Park has doubled since 1995, and Algonquin has become a cornerstone Ontario Tourism's outdoor product. For the past fifteen years interior camping use has grown on average from 175,000 to 300,000 camper nights.

Status at SFM Plan Development

300,000 /year

2007-2008 = 272,000 - Target met

2008-2009 = 250,950 - Target not met

2009-2010 = 255,169 - Target not met

2010-2011 = 243,920 - Target not met

2011-2012 Status Update

Target not met.

2011-2012 = 245,655

The decline in interior visitor numbers is also being experienced in car camping and day use. Contributing factors may be weather, the economic recession and higher gasoline prices. There is nothing in the data that suggests that visitation is down as a result of forest management activities. This indicator has been changed in the 2012 SFM Plan to assess the level of maintenance of public access roads in Algonquin Park.

Forecast

No forecasting is required.

Management Strategies and Implementation

The management of non-timber values information is the responsibility of the Ministry of Natural Resources (*Forest Information Manual, 2007*). Non-timber values discovered as new, or in a different location, are identified by AFA during tree marking/operations and verified by MNR. All values are protected according to Area of Concern prescriptions – as identified in table FMP-17. These AOC prescriptions include buffers and timing restrictions designed to maintain recreational values throughout the forest. In addition, AFA posts a Schedule of Operations map on its internet site to provide information to the public on the location of planned forest management operations (VOIT 5.1.2.1).

Research and Monitoring Plan

Numbers are to be provided by Ontario Parks on an annual basis.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 5. MULTIPLE BENEFITS TO SOCIETY

ELEMENT: 5.3 Fair Distribution of Benefits and Costs

Promote the fair distribution of timber and non-timber benefits and costs.

VALUE: 5.3.3 Direct and Indirect Employment

OBJECTIVE: 5.3.3.1. Maintain non-forestry benefits.

Indicator 5.3.3.1.2	Target	Variance
The amount of revenue generated by the visitor days	Sustain the revenue generated by interior visitor days/year.	+/- 10%

What is this indicator and why is it important?

Algonquin has experienced steady visitation growth in the past thirty years. Since 1985, total Park visitation has nearly doubled from 500,000 to 1,000,000 visits annually. While Algonquin continues to be an important destination for domestic users, the Park has witnessed an increase in the number of international visitors. International visitation to the Park has doubled since 1995, and Algonquin has become a cornerstone Ontario Tourism's outdoor product. For the past fifteen years, interior camping use has grown on average from 175,000 to 300,000 camper nights.

Status at SFM Plan Development

Impact	Park Management	Park Visitors	Total
Initial Expenditure	\$2.48 million	\$3.30 million	\$5.78 million
Value Added	\$3.95 million	\$3.59 million	\$7.54 million
Wages & Salaries	\$3.04 million	\$2.12 million	\$5.16 million
Employment (py's)	105 person years	53 person years	158 person years

Note: Figures do not include revenue from the purchase of park permits.

Source: SEIM 2000 Version 7.1 April 2004 and Algonquin Park Economic Impact Fact Sheet

2011-2012 Status

No update. Will be assessed every 5 years – next update 2012/13. However, this VOIT has been removed from the new 2012 SFM Plan, to be consistent with the changes made to the previous VOIT on visitor days. As a result, this VOIT will no longer be evaluated.

Forecast

No forecasting is required.

Management Strategies and Implementation

The management of non-timber values information is the responsibility of the Ministry of Natural Resources (*Forest Information Manual, 2007*). Non-timber values discovered as new, or in a different location, are identified by AFA during tree marking/operations and verified by MNR. All values are protected according to Area of Concern prescriptions – as identified in Table FMP-17. These AOC prescriptions include buffers and timing restrictions designed to maintain recreational values throughout the forest. In addition, AFA posts a Schedule of Operations map on its internet site to provide information to the public on the location of planned forest management operations (VOIT 5.1.2.1).

Research and Monitoring Plan

Numbers are provided by Ontario Parks every five years.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION 6: ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.1 Aboriginal and Treaty Rights
Recognize and respect Aboriginal and Treaty rights.

VALUE: 6.1.1 Aboriginal and Treaty Rights

OBJECTIVE: 6.1.1.1 To recognize the Aboriginal and Treaty rights applicable to the Defined Forest Area.

Indicator 6.1.1.1.1	Target	Variance
Respect and allow for Aboriginal treaty rights during management of forest resources/harvesting within the DFA	Identification of Aboriginal values in the DFA and 100% compliance with Aboriginal-value Area of Concern prescriptions.	0

What is this indicator and why is it important?

During preparation of Forest Management Plans, consultation is conducted with Aboriginal communities and prescriptions are developed and implemented for the protection of Aboriginal values. The goal of this indicator is to ensure that these values receive the protection that they require. Aboriginal values are protected in the current FMP under the following categories:

- CHS – cultural heritage site
- HPA – high potential cultural heritage areas

The CHS AOC type includes more than just aboriginal values. Instances of non-compliance will be verified on a case-by-case basis.

Status at SFM Plan Development

Section E of the 2005 Forest Management Plan Supplementary Documentation contains the current Native Background Information Report and Section M contains the Native Consultation Summary. A summary of the Forest Operations Information Program reveals the following:

2005-2006 = 99.5%
2006-2007 = 99%
2007-2008 = 100%
2008-2009 = 100%
2009-2010 = 100%
2010-2011 = 100%

2011-2012 Status Update

Target met.

2011-2012 = 100%

There were 0 non-compliance issues from the 33 FOIP reports where cultural heritage sites or high potential heritage values were identified within active operating units.

Forecast

No forecasting is required.

Management Strategies and Implementation

Tree marking and harvest layout crews will be kept informed of Aboriginal value locations and prescriptions in order that they may receive adequate protection. Ensure that operational crews follow stop work procedures when unidentified values are discovered, and that they report such values to their supervisors and to the Ministry of Natural Resources for verification. Roads, harvesting and other disturbances may be restricted within these areas. Where operations are allowed, they will be in a

modified manner in order to minimize the disturbance of soil and physical values (modified conditions identified in Table FMP-17, 2005).

Reporting will be tailored from within the existing Forest Operations Information Program.

Research and Monitoring Plan

Algonquin Forestry Authority is responsible for monitoring compliance with Aboriginal Area of Concern prescriptions. The Area of Concern categories are CHS - Cultural Heritage Site (known) and HPA - High Potential Cultural Heritage Areas. The values represented by these categories may be confidential and thereby require that their location remain undisclosed on maps presented to the public. Compliance is reported on an annual basis in the Annual Report Tables AR-12 and AR-13.

Compliance percentages are calculated only on OPU's that contain the applicable AOC types. Both AFA and MNR compliance reports are summarized.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 6. ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.2 Respect for Aboriginal Forest Values, Knowledge, and Uses

Respect traditional Aboriginal forest values and uses identified through the Aboriginal input process.

VALUE: 6.2.1 Aboriginal Consultation in the Forest Management Planning Process

OBJECTIVE: 6.2.1.1. Involve Algonquin Communities (Algonquin Negotiation Representatives) and other Aboriginal Groups on the identification and protection of Aboriginal values and uses in the Defined Forest Area.

Indicator 6.2.1.1.1	Target	Variance
Opportunities for involvement provided to, and involvement of, Aboriginal communities in forest management planning activities	1. Meet as required with those Aboriginal communities expressing interest to participate in forest management planning. 2. Notifying the Algonquin Negotiation table of the certification process and its outcomes.	0

What is this indicator and why is it important?

One of the first steps in achieving meaningful respect for Aboriginal values is communication and consultation. This indicator ensures that AFA, with the assistance of the Ministry of Natural Resources, if necessary, remains available to consult with Aboriginal communities as required.

Status at SFM Plan Development

New reporting program - no previous data available.

2007-2008 Status

Target met.

- (1) The 2010 FMP Planning Team includes 9 members from Aboriginal communities. The attendance level for meetings held in 2007-2008 is 91%. In addition, individual communities have been consulted and are actively involved with the preparation of Native Background Information Reports for the 2010 FMP.

- (2) A letter was sent to all Algonquin communities to invite participants to be a member in the advisory committee (Aug. 25, 2006). The Principal Negotiator (B. Potts) was sent a letter on June 18, 2007 to advise of developments and encourage ongoing participation.

2008-2009 Status

Target met.

The 2010 FMP Planning Team includes 9 members from Aboriginal communities. The attendance level for meetings held in 2008-2009 was 78%.

2009-2010 Status

Target met.

The 2010 FMP Planning Team includes 9 members from Aboriginal communities. The attendance level for meetings held in 2009-2010 was 62%. Overall attendance level throughout the 2010 FMP planning process was 74% over 16 meetings. Annual Work Schedule letters are sent out each year to all of the Algonquin communities to request information for any community members interested in Condition 34 employment opportunities.

2010-11 Status Update

Target met. An AWS letter is sent out annually to all Algonquin communities advising them of current harvest and access planning, and EA condition 34 employment opportunities.

2011-12 Status Update

Target met. Six Forest Certification Advisory Group meetings were held throughout 2012 during the development of the 2012 CSA Sustainable Forest Management Plan. These meeting were well attended by representatives from the interested Algonquin communities. The advisory group consists of 22 members in total, 9 of which are Algonquins of Ontario representatives.

Also, an AWS letter is sent out annually to all Algonquin communities advising them of current harvest and access planning, and EA condition 34 employment opportunities.

Forecast

No forecasting is required.

Management Strategies and Implementation

An enhanced effort is made through the forest management planning process and the *Crown Forest Sustainability Act* to involve Aboriginal communities. Updated contact information for all interested Aboriginal communities is maintained. Requests will be responded to in a timely manner.

Research and Monitoring Plan

The number of meetings will be monitored against the requests of Aboriginal communities. Currently, the Ministry of Natural Resources provides information on the progress toward this target as an addition to the Annual Report prepared by the AFA.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 6. ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.3 Public Participation

Demonstrate that the Sustainable Forest Management public participation process is designed and functioning to the satisfaction of the participants.

VALUE: 6.3.1 SFM Public Participation Performance

OBJECTIVE: 6.3.1.1. To implement a public participation process that is supported by the participants.

Indicator 6.3.1.1.1	Target	Variance
SFM public participation evaluation by the Advisory Group	Achieve a satisfactory evaluation from a minimum of two-thirds of the Advisory Group members.	0

What is this indicator and why is it important?

Public participation is a major requirement of the forest management system in Ontario. Since forest management is conducted on Crown land, the public has the right to influence it. Algonquin Forestry Authority's mandate for Sustainable Forest Management arises from public influence as well as formal legislative and contractual arrangements with the government. These mechanisms ensure that the social and environmental values that benefit the province are respected⁷. The Advisory Group is the mechanism that AFA is using to maintain communication with the public and stakeholder groups. Public consultation is also undertaken during the development of Forest Management Plans and through ongoing consultation with a Local Citizens Committee.

Status at SFM Plan Development

New reporting program - no previous data available.

2007-2008 Status Update

Target met.

An evaluation from the Advisory Group showed the overall satisfaction rating of 85%.

2011-2012 Status Update

Target met. During the development of the 2012 SFM Plan, a total of 15 Advisory Group members responded to the Satisfaction Survey that was distributed in June 2012 at the 5th Advisory Group meeting. An overall satisfaction score of 90% was achieved from all members combined. No total individual scores of less than 79% were received. A satisfactory evaluation was defined in the new SFM Plan as a 75% score from a minimum of two-thirds of the Advisory Group members.

Forecast

No forecasting is required.

Management Strategies and Implementation

Ensure that members of the Advisory Group are included in all aspects of the forest management planning process. This can be done by confirming that required information is sent to them before each meeting so that they can be prepared to take part. The assessment will be conducted every three years using a standardized survey.

Research and Monitoring Plan

Every three years, an assessment will be conducted in order to determine the satisfaction of the Advisory Group with the public participation process. The target is to achieve a passing grade on this evaluation.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 6. ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.3 Public Participation

⁷ Wang, Sen. 2005. Managing Canada's forests under a new social contract. The Forestry Chronicle. Volume 81 Number 4. pp.486-490.

Demonstrate that the sustainable forest management (SFM) public participation process is designed and functioning to the satisfaction of the participants.

VALUE: 6.3.1 SFM Public Participation Performance

OBJECTIVE: 6.3.1.1. To implement a public participation process that is supported by the participants.

Indicator 6.3.1.1.2	Target	Variance
SFM public participation evaluation by the broader public	Annually review with the Advisory Group all public comments with respect to forestry activities and how they were responded to.	N/A

What is this indicator and why is it important?

Similar to the preceding indicator, this one focuses on the broader public not directly engaged in the Advisory Group. Combined with the Advisory Group evaluation, this will ensure a thorough assessment of public satisfaction.

Status at SFM Plan Development

New reporting program - no previous data available.

2007-2008 Status Update

Target met.

A review of public comments occurred during review of the 2007-2008 Annual Report with the Public Advisory Group (March 2009).

2008-2009 Status Update

Target met.

A review of public comments occurred during review of the 2008-2009 Annual Report with the Public Advisory Group (April, 2010). There were no recorded complaints associated with forest management in 08/09 that came through the Friends of Algonquin Park website or via comment forms that were distributed to access points. The 2010 FMP Public Consultation Summary was discussed and made available which contains all public comments with respect to forestry activities/forest management planning and how they were responded to.

2009-2010 Status

Target met.

A review of public comments occurred during review of the 2009-2010 Annual Report with the Public Advisory Group (May, 2011). There were no recorded complaints associated with forest management in 09/10 that came through the Friends of Algonquin Park website or via comment forms that were distributed to access points.

2010-11 Status Update

Target met.

A review of public comments occurred during review of the 2010-2011 Annual Report with the Public Advisory Group (Feb 1, 2012). There was one recorded complaint associated with forest management in 2010/11. The complaint was regarding forestry related noise heard on Scorch Lake in August 2010 (VOIT 5.1.2.1.1).

2011-12 Status Update

Target met.

A review of public comments occurred during review of the 2011-2012 Annual Report with the Public Advisory Group. There were 3 complaints out of 245,655 interior camper nights. These items consisted of a camper complaint on the Rock lake road (noise and haul truck speed), a camper at Ryan Lake (noise compliant) and a recreational vehicle complaint related to hauling on the Shirley Lake Road.

Forecast

No forecast required.

Management Strategies and Implementation

Information regarding the Sustainable Forest Management process will be distributed to the public. Members of the public will be encouraged to comment and take part in the process and each suggestion will be considered. The assessment will be conducted every five years using a standardized survey, similar to the survey distributed to the Advisory Group.

Research and Monitoring Plan

Every five years, an assessment will be conducted in order to determine the satisfaction of the broader public with the public participation process. Individuals will be selected at random from a list of individuals expressing interest in the FMP or general interest in management of the Algonquin Park Forest.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 6. ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.4 Information for Decision Making

Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

VALUE: 6.4.1 SFM Education

OBJECTIVE: 6.4.1.1. To maintain/increase the knowledge and awareness of SFM to the general public.

Indicator 6.4.1.1.1	Target	Variance
SFM education evaluation	Identify new and ongoing opportunities for public awareness, including, but not limited to the list below: a) Update and monitor the AFA website b) Provide educational tours/seminars on SFM c) Loggers Day d) Support of high school forestry initiative e) Brochure f) Track enquiries from interested parties g) FMP open houses h) Friends of Algonquin Park publications i) Explore partnerships	N/A

What is this indicator and why is it important?

This indicator provides the most direct measure of the element. An increase in Sustainable Forest Management knowledge by the public will result in more meaningful consultation and a greater awareness of the issues involved in the management of the Algonquin Park Forest.

Status at SFM Plan Development

New reporting program - no previous data available.

In 2007-2008 the following groups were provided a field tour of forest management activities in the DFA: committee members from Nature Quebec, Laval University, students from Algonquin College, 2

representatives from the Wildlands League, the Niagara Horticultural School Group, 4th year students from Lakehead University and visitors from Belgium.

A presentation regarding CSA/ISO certification was heard by the Ottawa Valley Sustainable Forest License (SFL), Lanark Mazinaw SFL, the Bancroft Minden SFL, and by the Algonquin Nation Kijicho Manito of Bancroft.

Algonquin Forestry Authority participated in the annual Loggers Day at the Algonquin Park Logging Museum. AFA also participated in the Killaloe Centennial Loggers Event.

There were 10 recipients of the AFA funded Forest Industry Scholarships in 2007 to students attending Secondary Schools in communities around Algonquin Park.

2008-2009 Status Update

Target met

In 2008-09 the following groups were provided information on forest management activities in the DFA: 2 research foresters from Armenia, Nipissing University students in North Bay. Primary students at St. Mary's School in Huntsville learned about mapping & GIS and tours were conducted with ecologists and avian biologists and Algonquin College forestry technician students.

Presentations were provided by AFA staff at a woodlot conference in Burnstown, Ontario and at the Canadian Ecology Centre in Mattawa for their 10th anniversary.

Algonquin Forestry Authority participated in the annual Loggers Day at the Algonquin Park Logging Museum. AFA contributed sponsorship to the Hastings Highlands Loggers Games, Sno Fun weekend in Killaloe, Hagarty & Richards Township and the annual OPFA annual conference and annual teachers tour at the Canadian Ecology Centre.

There were six recipients of the AFA funded Forest Industry Scholarship in 2008 to students attending secondary schools in communities around Algonquin Park.

2009-2010

Target met

In 2009-10 the following groups were provided information/tours on forest management activities in the DFA:

- Algonquin College – GIS management,
- Finnish tour (HAMK University of Applied Technology – Evo Forestry Institute),
- Tour with the Algonquin section of the CIF,
- Forestry delegates from Guandong province in China,
- Local Citizens Committee tour,
- Tour of forestry operations in Brule – Ontario Parks
- Article in ESRI's ARC News on GIS and Forest Management in Algonquin Park

Open houses for the 2010-2020 FMP were held in 6 locations including Mattawa, Huntsville (twice), Toronto, Pembroke, Ottawa (twice) and Barry's Bay (twice).

Algonquin Forestry Authority participated in the annual Loggers Day at the Algonquin Park Logging Museum. AFA contributed sponsorship to the Parry Sound Heritage Festival, Barry's Bay Timber Fest, Snow Fun weekend in Killaloe, Hagarty & Richards Township and the annual OPFA annual conference and annual teacher's tour at the Canadian Ecology Centre.

AFA also provided \$5,000 in 2009-10 for the development of the Junior Forest Ranger Program Booklets in conjunction with the Friends of Algonquin Park. A link to the booklet has also been placed on the AFA website (<http://www.algonquinpark.on.ca/visit/programs/junior-ranger-program.php>)

There were six recipients of the AFA funded Forest Industry Scholarship in 2009 (\$3,750 awarded) to students attending secondary schools in communities around Algonquin Park.

2010-11 Status Update

Target Met

In 2010-11 the following groups were provided information/tours on forest management activities in the DFA:

- Tour with local SFL forest managers on GLSL forest silvicultural practices,
- Tour with a German TV film crew making a documentary on resource management in Ontario,
- Two presentations to the Huntsville Probus Retirement Groups on forestry in Algonquin Park,
- Presentation to a Community Environmental Leadership Program from Centennial C.V.I.,
- Hosted the interprovincial Ontario Hardwood Management Tour organized by the Forest Research Partnership,
- Hosted forestry delegates from Wuhan Institute of Agricultural Science and Technology in China,
- Donation of white pine logs for the Shaw Woods Outdoor Education Centre,
- Tour with international delegates from the USGBC (US Green Building Council), Architects, Builders, and government Agency staff responsible for the development of building codes in the USA,
- Local Citizens Committee ground and helicopter tour of east side of park,
- Tour of Algonquin College Forestry students,
- Tour of Grade 11/12 high school students from Bracebridge and Muskoka Lakes Secondary schools,
- Tour with MNR and Southern Regional Director of active forestry operations on the east side of Algonquin Park,
- Article in Archaeology magazine on Forest Management History in Algonquin Park.

Algonquin Forestry Authority participated in the annual Loggers Day at the Algonquin Park Logging Museum and the annual Meet the Researcher Day at the East Beach Pavilion. AFA contributed sponsorship to the Parry Sound Heritage Festival, Barry's Bay Timber Fest, Snow Fun weekend in Killaloe, Hagarty & Richards Township and the annual OPFA annual conference and annual teacher's tour at the Canadian Ecology Centre.

There were seven recipients of the AFA funded Forest Industry Scholarship in 2010 (\$3,500 awarded) to students attending secondary schools in communities around Algonquin Park.

2011-12 Status Update

Target Met

In 2011-12 the following groups were provided information/tours on forest management activities in the DFA:

- Trees Ontario & Ontario Forestry Association - tour of forest management in hardwood area
- Tour of forestry activities in Brule area with 12 people from the office of Environmental Commissioner of Ontario with MNR
- Hosted a French film crew from TVO for part of day filming logging operations
- Tour with the Society of Irish foresters
- CIF Annual General Meeting tour with 55 people at Louisa Lake area - looking at tolerant hardwood management
- CSA Advisory Group tour of Tembec mill in morning followed by a tour of Robinson's Brule operation in afternoon
- Presentation to Trinity United Church men's breakfast group about forest management in Algonquin Park

Algonquin Forestry Authority also participated in the annual Loggers Day at the Algonquin Park Logging Museum and the annual Meet the Researcher Day at the East Beach Pavilion. AFA contributed sponsorship to the Parry Sound Heritage Festival, Barry's Bay Timber Fest, Snow Fun weekend in Killaloe, Hagarty & Richards Township and the annual teacher's tour at the Canadian Ecology Centre.

There were six recipients of the AFA funded Forest Industry Scholarship in 2011 (\$3,000 awarded) to students attending secondary schools in communities around Algonquin Park.



Figure 4: Society of Irish Foresters Tour in September 2011



Figure 5: Canadian Institute of Forestry Tour in October 2011

Forecast

No forecasting is required.

Management Strategies and Implementation

Displays and information booths will be set up during the Loggers Day events, which demonstrate and explain the forest management process in Ontario. Brochures or other printed information will also be available at the Algonquin Park Information Centre throughout the year. The public will be encouraged to view the website for more information. Algonquin Forestry Authority's participation in the Canadian Ecology Centre Annual Teacher's Tour program also contributes to this target.

Research and Monitoring Plan

Every year at the Loggers Day events held in the Algonquin Park Forest, a survey will be conducted to determine whether knowledge and awareness of the forest management process has increased. The target is to increase the number of parties who respond positively every year.

Comparative Assessment of Planned versus Actual Levels

N/A

Forecast Assumptions and Analytical Methods

N/A

CRITERION: 6. ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.4 Information for Decision Making
 Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

VALUE: 6.4.1 SFM Education

OBJECTIVE: 6.4.1.1. To maintain/increase the knowledge and awareness of SFM to the general public.

Indicator 6.4.1.1.2	Target	Variance
Forestry research funding and/or in-kind assistance	1. Expenditure of \$20,000 per year (3 year rolling average). 2. The AFA reports annually to the Advisory Group on funding expended and projects undertaken.	+/- \$5,000 per year

What is this indicator and why is it important?

Research and development are necessary to support improvements and adaptive management. The trend in natural resource management has been toward an ever increasing awareness of issues and values that require addressing. This can only be successful with the type of research that this funding will support. Algonquin Forestry Authority already participates on directed and integrated studies within the Algonquin Park Forest.

Status at SFM Plan Development

2004-2005 = \$22,000
 2005-2006 = \$15,750
 2006-2007 = \$24,078
 2007-2008 = \$8,660; the 3 year rolling average is \$16,162
 2008-2009 = \$15,200; the 3 year rolling average is \$15,979
 2009-2010 = \$8,500; the 3 year rolling average is \$10,787
 2010-2011 = \$22,331; the 3 year rolling average is \$15,344

2011-2012 Status Update

Target met
 (1) 2011-2012 = \$20,505; the 3 year rolling average is \$17,112
 (2) Projects undertaken were the continuation of hardwood selection research, hemlock regeneration and recruitment research as part of a Lakehead University thesis, initiation of a long skidding study to assess the feasibility of long skidding vs. road construction, and the establishment of ongoing stock type seedling trials to monitor the effectiveness of different planted stock types.



Figure 6: Long Skidding Research in Hardwood Forest

Forecast

N/A

Management Strategies and Implementation

Resources will be provided to research projects of a high priority.

Research and Monitoring Plan

With the assistance of AFA, financial information will be summarized regarding research efforts.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 6. ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.4 Information for Decision Making

Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

VALUE: 6.4.1 SFM Education

OBJECTIVE: 6.4.1.1. To maintain/increase the knowledge and awareness of SFM to the general public.

Indicator 6.4.1.1.3	Target	Variance
Local Citizens Committee self-evaluation of its effectiveness in forest management plan development	Achieve a satisfactory evaluation from a minimum of two thirds of the Local Citizens Committee on the effectiveness of the LCC.	0

What is this indicator and why is it important?

The Local Citizens Committee is hosted by the District Manager of the Ministry of Natural Resources. This committee participates in forest management planning activities, similar to the Algonquin Park Forest Advisory Group. They will have some knowledge of forest management activities. Monitoring their effectiveness in forest management plan development will provide an indirect indicator towards an informed public.

Status at SFM Plan Development

Prior to the implementation of the FMP, the Year Ten Annual Report prepared in 2005 for the 2000-2005 period indicated that the Local Citizens Committee rated their performance at 81%.

2009-2010 Status

Target met.
LCC survey completed for the 2010 FMP indicated an overall 80% satisfaction rating.

Forecast

Forecasting is not required.

Management Strategies and Implementation

Participation of the Local Citizens Committee in the planning process will be encouraged.

Research and Monitoring Plan

Every five years, as part of Algonquin Forestry Authority's annual reporting requirements, this evaluation is required. It will be provided in the Annual Report Table RPFO-18.

Comparative Assessment of Planned versus Actual Levels

N/A

CRITERION: 6. ACCEPTING SOCIETY'S RESPONSIBILITY FOR SUSTAINABLE DEVELOPMENT

ELEMENT: 6.4 Information for Decision Making

Provide relevant information to interested parties to support their involvement in the public participation process, and increase knowledge of ecosystem processes and human interactions with forest ecosystems.

VALUE: 6.4.1 SFM Education

OBJECTIVE: 6.4.1.2. Promote and market achievement of certification.

Indicator 6.4.1.2.1	Target	Variance
Efforts made to create awareness of certification designation on the DFA	1. Make information available to the public and document. 2. Advertise.	N/A

What is this indicator and why is it important?

The general public is often unaware of efforts made by the forest industry to contribute to Sustainable Forest Management. Making the public aware of SFM certification will assist in broadening public understanding of Sustainable Forest Management in the DFA. It is important in order to increase the knowledge of the general public with respect to SFM practices in the DFA to enable them to develop informed opinions.

Status at SFM Plan Development

AFA currently provides information regarding Sustainable Forest Management on its website at <http://www.algonquinforestry.on.ca/>. Information is also presented to the public during FMP open houses and annually at Loggers Day in Algonquin Park.

In 2007-2008 the following announcements were communicated:

- (1) Printed copies of SFM Policy (February 2007) arrived in July 2007 and were distributed to AFA Staff and Directors, Ontario Parks, clients and contractors, LCC and to the public at Loggers Day.
- (2) Advertising announcing the Algonquin Park's Forest to CSA/Z809 certification was sent out March 4, 2008 by the AFA Chair. In February and March, newspapers from communities surrounding the park printed a similar message.

2008-2009 Status Update

An invitation to participate in the 2010-2020 Forest Management Plan was conducted from March 1 – April 18, 2008 and information products related to sustainable forest management were made available. AFA website continues to portray CSA SFM certification information.

2009-2010 Status

Target met.

Nine FMP open houses were conducted in 2009-10. Display panels were used at each open house that included advertizing related CSA Z-809 and ISO 14001 registration. The AFA website continues to portray CSA SFM certification information.

2010-2011 Status Update

Target met.

CSA certification was promoted at the annual Logger's Day and Meet the Researcher day in July 2010. CSA certification was also promoted on most of the SFM education events identified in VOIT 6.4.1.1.1. The AFA website continues to portray CSA SFM certification information.

2011-2012 Status Update

Target met.

CSA certification was promoted at the annual Logger's Day and Meet the Researcher day in July 2011. CSA certification was also promoted on most of the SFM education events identified in VOIT 6.4.1.1.1. The AFA website continues to portray CSA SFM certification information.

Forecast

Forecasting is not required.

Management Strategies and Implementation

Build on existing mechanisms to provide information on SFM certification to the public.

Research and Monitoring Plan

Document advertising efforts and information made available to the public.

Comparative Assessment of Planned versus Actual Levels

N/A

6.0 SUMMARY

6.1 2011 Audit Summary

The November 2011 Surveillance Audit findings were: 0 non-conformances, 4 areas of concern and 1 opportunity for improvement recommendations. Four best management practices were also identified. An action plan was prepared and all of the findings were addressed. The detailed audit report can be found on the AFA website at <http://certification.algonquinforestry.on.ca/Audit.html> under Forest Certification/Audit Reports.

6.2 Future Plans

Future plans are derived from responses to audits performed by the registrar and internal audits, and from the review that AFA conducts at the annual Management Review of the ISO 14000 and CSA Z809 systems. Reports of non-compliance or concerns received from the public, or during joint workshops conducted with Ontario Parks, are also considered in future planning.

Management Review is conducted annually. It is at this time that audits, compliance to legal requirements, compliance trends, communications with external parties, environmental programs, suitability, adequacy and effectiveness of the Environmental Management System from the past season are reviewed. It is from this comprehensive review that many future plans and up-coming training plans are developed.

At the time of production of this annual report, a new SFM Plan has been completed in consultation with the Algonquin Park Forest Certification Advisory Group, and uploaded to the AFA internet site (October 2012). A new certificate has also been issued for registration to the CSA Z809-08 standard. This new SFM plan has resulted in changes to VOITs, primarily to address changes in the new 2010-2020 Algonquin Park Forest Management Plan, and changes to the requirements of the new CSA Z809-08 standard which was officially released by the Canadian Standards Association in April 2010.

6.3 Conclusion

There are 51 indicators within the SFM plan that have associated targets, not all of which are reported on an annual basis. There are 17 long term indicators that are not updated on an annual basis; these are generally being reported on a 5 year basis. There is one indicator to be determined by the Algonquin Treaty Chief negotiator. There is one indicator that cannot be evaluated by Ontario Parks until 2012/13. The remaining 32 indicators have an annual target.

Of these 32 annual indicators, 25 have had their targets achieved (78%). There are 7 of the 32 annual indicators reported where the target has not been achieved. Declining market conditions have contributed most significantly to the underachievement of targets (socio-economic targets). Aggressive target setting at the time of SFM Plan development with no allowable variance has also contributed to the underachievement of targets. Future targets (developed for the 2012 SFM Plan) have recognized those indicators that are beyond the control of the forest manager, and have been revised as required. A greater level of acceptable variance has also been added where appropriate to quantify success.

2011-12 VOIT Summary

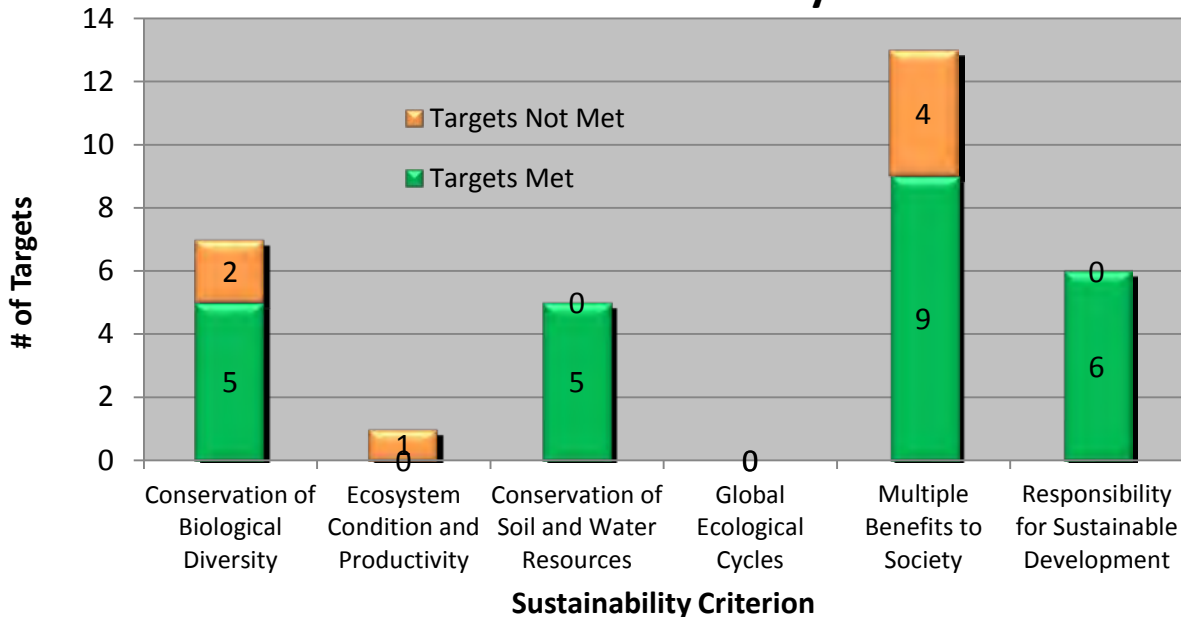


Figure 7: 2011-12 VOIT Summary

The 7 indicators where targets have not been achieved are:

- 1.2.1.2.1 100% compliance with Area of Concern prescriptions for the protection of fisheries habitat around designated brook trout lakes. There was one occurrence out of 47 reports where a minor incursion into a CFH AOC occurred during a harvest operation as a result of the AOC not being updated prior to harvest operations. There was no damage to the value being protected. This indicator has been carried forward into the new 2012 SFM Plan, but has been reworded to “Brook Trout Lake and Critical Fish Habitat AOC Integrity” and the variance has been increased to -%5. Therefore, in the new SFM Plan this target has been met.
- 1.4.1.1.1 100% compliance with zone boundary locations. There were 33 FOIP reports where zone boundaries were encountered within or formed a part of the operating unit boundary. There was 1 non-compliance issue reported where a portion of a road from a previous cutting cycle was re-opened within Wilderness Zone (the Wilderness Zone was established since the last harvest took place). The equipment operator went past the point that the road was to be re-opened to in error. The road was immediately rehabilitated voluntarily. An administrative penalty was issued for this occurrence and was paid promptly. A follow up inspection was conducted and verified that the rehabilitation was successful and the trees were planted. Follow-up training has also been completed with all road construction contractors to ensure proper protocols are followed when re-opening old roads, so a similar occurrence does not happen in the future.
- 2.1.1.1.1 100% regeneration success as forecast in table FMP-28 in 2005 FMP. A total of 933.3 ha of Free-to-Grow (FTG) survey area has been reported in 2011-12, of which 865.7 ha is FTG (93% regeneration success). Of this, 741.3 ha (86%) has regenerated to the projected forest unit (silvicultural success) and 124.4 ha (14%) has regenerated to another forest unit (regeneration success). The other 67.6 ha surveyed are not FTG and will need further treatment or growth to achieve FTG status. This target has been revised

and expanded under the new 2012 SFM Plan to also include 80% silviculture success, and a 10% allowable variance has been added. The 2011-12 results meet this new revised target.

- 5.2.1.2.1 Number of local production facilities (wood supply commitment holders) that utilize wood fibre from the DFA. Establish a benchmark from 2006/07, monitor trends and maintain production facilities over time. In 2011-2012 there were 8 commitment holders that utilized wood fibre from the DFA (4 short of benchmark 12). On January 31, 2012 the MNR announced that 3 of these 4 wood supply commitments are no longer recognized by the Crown because of inactivity or mill closures. The weakened economy reduced demand for forest products worldwide and resulted in numerous temporary and permanent mill closures across the province, affecting all forest sectors. Many of the users of pulp quality forest products are either permanently or temporarily shut down or running at reduced capacity. The veneer mills in Rutherglen and Pembroke have been shut down due to markets and/or labour issues, and 2011/12 also saw some weakening demand for sawlogs. Murray Brothers Lumber Co. Ltd in Madawaska took significantly less wood from the Algonquin Park forest than previous years.
- 5.3.1.1.1 Crown timber stumpage paid to government consolidated revenues. Due to deteriorating market conditions, the "residual rate" component of the Ontario Crown Timber Charges was reduced to zero for most sectors and species in 2007-08. As a result, the Crown stumpage per m³ collected by the Province was significantly less than in previous years. Harvest volumes have also dropped significantly from 2006/07. This indicator has been maintained in the new 2012 SFM Plan, however the target has been reduced to reflect a more realistic current level. This new target would be achieved with the 2011-12 crown revenues generated.
- 5.3.2.1.2 Percentage of tree marking conducted by Algonquin Aboriginal organizations/people. 2011-12 saw an increase over last year, however, the reduced harvest due to the slowing economy meant further reduction in the area required to be tree marked. This indicator has been broadened in the new 2012 SFM Plan to include all silviculture completed by Algonquins, not just tree marking, and the target has been revised accordingly to 9%. The 2011-12 level would meet this new target, as total Algonquin silviculture activity represented 10% of the total silviculture program.
- 5.3.3.1.1 Maintaining the number of Park interior visitor days. The decline in interior visitor numbers is also being experienced in car camping and day use. Contributing factors may be weather, the economic recession and higher gasoline prices. There is nothing in the data that suggests that visitation is down as a result of forest management activities. This indicator has been changed in the 2012 SFM Plan to assess the level of maintenance of public access roads in Algonquin Park.

All of the targets identified above have been either revised or removed from the new SFM Plan, to enable more current and realistic targets. This is the last Annual Report against the old 2007 SFM Plan. Next year's report for 2012-13 will be against the new SFM Plan. Details have been included in this Annual Report to clarify changes made to the new SFM Plan, and to identify preliminary progress against the new VOITs.

For those indicators that are assessed in this Annual Report it is concluded that, on balance, the majority of targets are being met and progress has been made to fulfill the commitments identified in the CSA SFM Plan. AFA and their partners are living up to the SFM requirements and commitments outlined in the SFM Plan and a commitment to continual improvement is being demonstrated.