



**Harvesting Performance Standard**  
(Revision 5, April 2006)

And the

**Harvest Integrity System**

In order to provide logging companies with a definitive, measurable means of achieving certification, AMLCP has established eight goals, the end to which all efforts of harvesting are directed. The goals are further defined by harvest responsibilities, each with their own set of performance indicators. These indicators, when met, enable a company to achieve the eight goals and earn AML certification.

### **1.0 Maintain Legal Compliance**

#### **1.1 Establish the legal right to harvest.**

- 1.1a Due diligence by the harvesting company assures the landowner has clear title to the land that will be harvested; no title, lease, or easement disputes pending; no outstanding property taxes; and any financial commitments or liens regarding the land asset are in good standing.
- 1.1b A written harvesting agreement signed by all involved parties is secured.
- 1.1c Both parties agree, in writing, to harvest in accordance with the harvest plan (and forest management plan, if applicable).

#### **1.2 Comply with the laws and regulations that apply to province being worked in.**

- 1.2a Comply with the federal *Fisheries Act* requirements for protection of fish habitat.
- 1.2b Comply with provincial water quality legislation.
- 1.2c Comply with federal and provincial Threatened and Endangered Species legislation.
- 1.2d Comply with municipal zoning and provincial land use restrictions.
- 1.2e Comply with provincial Fish and Wildlife Protection legislation.
- 1.2f Special management area designations such as conservation easements, protected areas, nature reserves, water supply areas, or heritage sites are respected.

1.2g WHMIS and TDG regulations are complied with.

## **2.0 Document Harvest Operations Planning**

### **2.1 *The harvest company shall create a harvest operations plan based upon landowner objectives.***

- 2.1a Pre-Harvest meeting conducted with the landowner/manager to review current forest management plan if available, obtain copies of applicable maps and prescriptions, and to gain an understanding of required harvest operations. The liabilities associated with the harvest planned are reviewed and understood.
- 2.1b If landowner objectives differ from the forest management plan, an addendum is attached and approved by the landowner.
- 2.1c In the absence of a forest management plan, the harvest operations plan (Harvest Responsibility 2.2) shall be used to record landowner objectives and plan the harvest accordingly.
- 2.1d Harvest operations plans based on landowner objectives are in writing (Harvest Integrity System (HIS) with attached map or equivalent must be utilized by AML company).
- 2.1e If the property is being harvested for other future land use, e.g., residential development, agriculture, it must be clearly identified in the harvest operations plan and identified in the written and signed harvest agreement.
- 2.1f A map of the harvest area and property boundary is included in the harvest operations plan.
- 2.1g Any amendments to the harvest operations plan are noted and initialled by all parties.
- 2.1h Timeline and equipment choices of the harvest operations plan are communicated to the landowner and agreed upon.

### **2.2 Conduct a pre-harvest inspection and post harvest assessment of the site.**

- 2.2a The woodlot is toured, and a harvest planning checklist is completed, which documents current condition of the woodlot, including special areas, watercourses, wildlife habitat, property boundaries, harvest area boundaries, and close out procedures.

- 2.2b Impact of previous harvest operations (i.e., old roads, log landings, extraction trails, rutting, and residual stand damage) is documented on the harvest operations plan.
- 2.2c Upon completion of the harvest, implementation and closeout of the harvest operations plan are documented on the post-harvest checklist, reviewed with the landowner/manager and signed off by both parties.
- 2.2d Sites are checked by the harvesting company one year later for erosion, sedimentation, or other issues unless other arrangements have been made with the landowner.

### **3.0 Soil and Water Protection**

#### **3.1 Plan and construct roads, extraction trails and landings in a manner that prevents soil erosion and does not impede water flow.**

- 3.1a Layout of road, extraction trails and landings consider harvest efficiency and minimizing the number of watercourse crossings.
- 3.1b If soil disturbance is required within buffer zones, the necessary permits are acquired, and erosion protection is maintained.
- 3.1c Roads surfaces are constructed to facilitate drainage.
- 3.1d Drainage ditches are adequate to divert water away from road, are constructed with cross drains, diversions, and take-offs, where required to maintain natural drainage to avoid erosion and siltation of watercourses.
- 3.1e Plans are in place to address areas sensitive to excessive soil disturbance, which may include avoidance, harvesting when the ground is frozen or dry, or monitoring and remediation if disturbance is unavoidable.

#### **3.2 Implement strategies to minimize soil disturbance on extraction trails.**

- 3.2a Steep trails are avoided where possible, but are stabilized with vegetation, brush, or water bars when they are necessary.
- 3.2b Brush mats are placed in extraction trails to minimize compaction and mixing of soils.
- 3.2c Exposed soil areas are levelled post harvest.

### **3.3 Manage watercourse buffer zones to maintain water quality.**

- 3.3a All watercourse buffer zones are identified prior to harvest and road construction, flagged and respected in accordance with provincial regulations.
- 3.3b Harvesting within buffer zones, when permitted by law, must avoid soil and streamside vegetation disturbance.

### **3.4 Manage Watercourse Crossings During Road Building and Harvest Operations.**

- 3.4a Stream crossing devices are installed in accordance with permit conditions and consider proper sizing for peak flow conditions.
- 3.4b The use of permanent or portable bridges, or open-bottom culverts, is preferred when feasible in order to avoid disturbing the watercourse.
- 3.4c Where a road must cross a watercourse the crossing should be made at a right angle; where the watercourse is straight, narrow and has stable banks and where the approaches have minimal grade.
- 3.4d Stream crossing devices are installed in a manner not to inhibit fish passage.
- 3.4e Integrity of stream channel is maintained during installation and removal of watercourse crossing devices.
- 3.4f Exposed soil areas are stabilized to reduce erosion and prevent siltation of watercourses.
- 3.4g Temporary bridges are used on wood extraction trails to protect watercourses, and permits are obtained if required.
- 3.4h Woody material is not added to watercourses, and existing material is not disturbed.

## **4.0 Sustain Forest Ecosystems and Productivity**

### **4.1 Determine if wildlife habitat is present and is managed to preserve its integrity.**

- 4.1a Trees with cavities and nests, standing dead trees, downed woody debris, longer-lived tree species, and other wildlife features are identified and retained in accordance with landowner objectives.
- 4.1b Provincial forestry and wildlife agencies are contacted to determine the presence of significant wildlife habitat within the planned harvest area.
- 4.1c Harvest treatment is appropriate to, and consistent with, the landowner's resource values being managed.

#### **4.2 Discuss with the landowner/manager the need for attention to preserving native biological diversity.**

- 4.2a Harvests maintain natural species diversity and regeneration appropriate to the site.
- 4.2b Harvests leave downed woody debris in the forest and redistribute when appropriate.
- 4.2c Areas with unique wildlife features are identified on the harvest plan (e.g., uncommon, rare or long-lived tree species).

#### **4.3 Check all special or unique sites and clearly mark their boundaries per harvest plan.**

- 4.3a Harvest areas located within wildlife management areas, or other such provincially designated sites, are managed in accordance with regulations.
- 4.3b Areas being managed for biodiversity, in accordance with landowner objectives, are marked.

#### **4.4 Ensure that post-harvest stands are left in good condition for future forest growth and regeneration.**

- 4.4a The harvest prescription is appropriate to the site, and ensures adequate regeneration, in accordance with landowner objectives.
- 4.4b Adequate, good quality regeneration of the desired species is left undamaged, especially if advanced regeneration is relied upon for the next generation of trees.
- 4.4c Residual trees left as seed trees or for future harvest, are left undamaged.

## **5.0 Manage Forest Aesthetics**

### **5.1 Discuss the aesthetic considerations of the harvest with the landowner/manager.**

- 5.1a Pre-harvest aesthetic conditions are documented and reviewed with landowner/manager.
- 5.1b Landowner/manager understands the harvest plan and resulting post-harvest aesthetic, and harvest area boundaries are marked on the plan.
- 5.1c Landowner/manager or contractor informs abutting landowners of changing forest aesthetic due to harvest (e.g., viewscape, windthrow) and negotiates any suggestions/conflicts.
- 5.1d Cultural features of historic and/or archaeological value (i.e. stone walls, cellar holes) are marked and protected.

### **5.2 Exhibit an aesthetic sensitivity in areas that adjoin roads and highways, known recreation trails, landing areas, viewsapes, and other areas of local community value.**

- 5.2a Harvest plan documents any geologic, archaeological, historical, cultural, ecological or aesthetic special areas to be preserved.
- 5.2b Guidelines for protecting local community values are made clear to all employees of the harvesting company.
- 5.2c Property boundary markers (e.g., survey posts, blazed trees, fence lines, rock walls) are not damaged during operations.
- 5.2d Care is taken to minimize harvesting impacts on adjacent properties (i.e., debris and dust on roadways, noise).

### **5.3 Ensure the removal of all unnecessary debris from the harvest site and landing areas.**

- 5.3a Post-harvest supervision includes inspection of all key areas for debris removal and the proper rehabilitation of disturbed areas.
- 5.3b When markets do not exist, excess woody debris is removed from the landing or roadside and distributed throughout the site.

## **6.0 Ensure Workplace Safety**

### **6.1 Ensure compliance with Occupational Health and Safety legislation as it pertains to harvest operations.**

6.1a OHS regulations are known by supervisors and employees, and an occupational health and safety policy has been communicated.

6.1b Sole proprietors and each harvest employee have received applicable OHS training.

### **6.2 Establish an OHS program that includes appropriate practices and procedures, e.g., hazard communication, lockout/ tagout, remote location, equipment maintenance, etc.**

6.2a A written OHS program will include the following:

- requirements for the training and supervision of employees;
- the preparation of written work procedures required to implement safe and healthy work practices; monthly safety meetings (or more frequent, if harvest site changes) with employees are held and documented;
- a hazard identification system that includes evaluation of the workplace to identify potential hazards, and procedures and schedules for regular inspections; and,
- maintenance of records and statistics, including reports of occupational health and safety inspections and investigations.

6.2b Harvesting equipment is regularly inspected and maintained (with records), and worksite safety and environmental hazards are recognized and managed to minimize exposure to employees and the environment.

6.2c First aid kits and trained first aid providers are available in the workplace in accordance with OHS regulations.

6.2d Wood harvesters have safe work procedures that includes strategies for making their whereabouts known to others at prescribed times each day when working alone, and this is verified as a daily procedure when in the woods.

### **6.3 Initiate Best Management Practices (BMPs) that exceed minimum expectations of federal and provincial safety and environmental legislation.**

- 6.3a The harvest company is prepared for and capable to respond to any foreseen emergencies (e.g., fuel spill, medical emergency), including the posting of emergency contact numbers.
- 6.3b Employees of harvest companies are informed of workplace health, safety and environmental risks.
- 6.3c Contractor and minimum of one in-woods employee of harvest companies have received recognized<sup>1</sup> BMP training, which includes:
- water quality protection;
  - soil conservation and productivity;
  - wildlife conservation and biodiversity; forest regeneration and aesthetics; and,
  - general environmental protection.
- Contractor will review BMPs with employees and ensure that they are consistently applied in the workplace.
- 6.3d Spill kits are located on each machine and near fuel storage areas and operators are familiar with their use.
- 6.3e Garbage and other wastes are disposed of in an environmentally appropriate manner; used oil is disposed of in accordance with provincial legislation, with records retained.
- 6.3f Fire suppression equipment is available in accordance with provincial legislation, is maintained, and employees are trained in its use.

## **7.0 Demonstrate Continual Improvement**

### **7.1 Develop and implement Best Management Practices (BMPs).**

- 7.1a Employees are trained and competent to use AML Vision and Principles as definitive guidelines when faced with non-regulated scenarios.
- 7.1b A continual improvement approach is utilized to solve problems and correct mistakes.
- 7.1c Harvest company develops a documentation process with landowners or uses the Harvest Integrity System.

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<sup>1</sup> The AMLCP Advisory Board maintains a list of endorsed training programs and providers.

## **7.2 Incorporate advanced and emerging harvest technologies.**

- 7.2a Promising research and emerging harvest technology is monitored and utilized where practical.
- 7.2b Communication systems are continually upgraded.
- 7.2c Contractor shall participate in a minimum of 40 hours of continuing education per year as defined by the CIF's CFE Program<sup>2</sup>.

## **7.3 Maintain accurate production data.**

- 7.3a Tracking systems are in place for forest products to identify sources, destinations, volume and species/product harvested, and contractor maintains records.
- 7.3b Harvest planning, implementation, and extraction costs are tracked and evaluated with consideration given to variables such as weather, equipment breakdown, subcontractor delays, etc.

## **8.0 Ensure Business Viability**

### **8.1 Forest Products Utilization.**

- 8.1a Employ appropriate forest harvesting practices to minimize waste and ensure efficient utilization of harvested trees.
- 8.1b All merchantable harvested timber is utilized to the extent permitted by available markets, market conditions, and marketing practices.

### **8.2 Provide technical and training support to company employees and abide by all federal and provincial labour laws.**

- 8.2a Competitive wages and adequate benefits are provided to all employees and sole proprietors.
- 8.2b Training programs on safety, harvesting practices, and labour laws are available to employees.

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<sup>2</sup> The Canadian Institute of Forestry's Continuing Forestry Education program is outlined on their website, [www.cif-ifc.org](http://www.cif-ifc.org), or by contacting the local representative. There are no restrictions on the maximum number of hours obtained in education categories.

- 8.2c Company maintains a professional management attitude toward employees, subcontractors and the public in accordance with AML Code of Ethics.
- 8.2d Company provides a way for employees to discuss grievances and resolve work-related issues.

### **8.3 Utilize technology to improve planning and decision making.**

- 8.3a Company has an up to date business plan appropriate to the nature and scale of activities undertaken by the company.
- 8.3b Company institutes computerized cost and revenue tracking, inventory, and accounting systems.

### **8.4 Actively participate in the logging industry on local, provincial, regional, and national levels.**

- 8.4a Access to diverse markets is established through professional contacts.
- 8.4b Master Logger Certification designation is marketed and promoted to end users and consumers in local and provincial markets.
- 8.4c Membership in professional and trade associations is maintained.
- 8.4d Mentoring opportunities are provided for young men and women interested in the wood harvesting industry.
- 8.4e Harvest company encourages the landowner/manager to utilize silvicultural funding opportunities, where available, to improve ensure the long-term sustainability of harvest levels.



## **Harvest Integrity System**

Revision 1

# Harvest Integrity System

Certified Atlantic Master Loggers are expected to document the activities associated with harvest contracts. This documentation shall include:

- Timber Harvesting Agreement (written agreement between contractor and landowner)
- Harvest operations plan and post-harvest checklist that ensures requirements of performance standard were considered
- Harvest Summary (final summary of harvest results – shared with landowner)

The Harvest Integrity System (HIS) will include the following components:

1. A written agreement with landowners/managers that clearly defines the terms of the harvest process. This agreement will address at a minimum, the following requirements:
  - Description or map of the area of operation;
  - Requirement to adhere to applicable laws and regulations (e.g., Occupational Health and Safety, Forestry, Wildlife, Fire Protection Legislation, and Environmental Protection Legislation) and the standards for performance outlined in the Atlantic Master Logger Performance Standard;
  - Method and terms of payment;
  - Liability issues;
  - Cancellation/termination conditions;
  - Road construction, maintenance and upgrading;
  - Timing of operation;
  - Binding of agreement to executors and heirs of the property in case something should happen to the landowner;
  - Extension of operation timing due to unforeseeable acts; and,
  - Provision for or against assignment of contract.

It is recommended that the agreement be reviewed by legal counsel prior to use.

2. A Harvest Operations Plan that identifies property ownership information and consideration for environmental, water resources and silvicultural requirements in developing a harvest plan or prescription.
3. A Post-Harvest Checklist that reviews how well the prescription was adhered to and whether there are any follow-up requirements.
4. A Harvest Summary that provides a summary of the harvest completed on a particular property, including what was harvested, where it was delivered, and the payment to the landowner (this will be essential for chain of custody, if required).

The following pages provide examples of checklists that a Master Logger may use. Alternatively, a Master Logger may develop his/her own documents but the purpose and scope of the documents shall be consistent with this procedure and the requirements of the Program Standard.

If the Master Logger is contracted to work on Crown land, or on land certified to a forest certification standard, it is acceptable that the documentation requirements of the landowner / manager be used instead, provided there is an equivalent document in use. In these circumstances, it is expected that the contractor will maintain copies of the documentation for periodic inspection.

It is the responsibility of the Master Logger to use the HIS in every contract or agreement entered into subsequent to becoming certified, and maintains records.

It will be the responsibility of the Field Verifier to verify that the Master Logger has established and maintained an HIS.



# HARVEST OPERATIONS PLAN

**OWNERSHIP INFORMATION** *Clearly describe ownership and location of woodlot – attach additional pages if required*

Woodlot Owner Name: \_\_\_\_\_ Date: \_\_\_\_\_

Woodlot Location: \_\_\_\_\_

Approximate Area: \_\_\_\_\_ Property ID No. / Tax No. \_\_\_\_\_

**HARVEST OBJECTIVE** *Meet with Woodlot Owner, review available management plans and discuss objectives*

State Reason for Harvest: \_\_\_\_\_

Forest Management Plan Available?    Yes    No    If yes, date of Plan \_\_\_\_\_

Roadwork Required?    Yes    No    Stream Crossings?    Yes    No

Dominant Forest Type: \_\_\_\_\_ Soil Type: \_\_\_\_\_

Describe Present Forest Conditions: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

**ENVIRONMENTAL CONSIDERATIONS** *Tour woodlot, making note of the following planning considerations*

Soil Erosion Potential: \_\_\_\_\_

Insect or Disease Damage: \_\_\_\_\_

Threatened or Endangered Species: \_\_\_\_\_

Impact of Previous Harvest Operations \_\_\_\_\_

Potential for Residual Damage: \_\_\_\_\_

Wildlife Habitat Issues: \_\_\_\_\_

Aesthetic Issues: \_\_\_\_\_

Recreational / Unique Features: \_\_\_\_\_

Property Lines Marked?    Yes    No    N/A

Water Resources Present?    Yes    No    If yes, describe: \_\_\_\_\_

Are Permits Required?    Yes    No    If yes, specify: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_





# POST-HARVEST CHECKLIST

## OWNERSHIP INFORMATION

Woodlot Location: \_\_\_\_\_

Woodlot Owner Name: \_\_\_\_\_ Property ID No. / Tax No. \_\_\_\_\_

## CLOSE-OUTS *Check off all that apply. If not OK, describe problem. Attach additional sheets, or identify on map*

	OK	Not OK	N/A	Comments
All designated trees cut				_____
Integrity of boundary lines				_____
Integrity of buffer zones				_____
Cleanup of roads and landings				_____
Damage to residual trees				_____
Woody debris distributed over cut				_____
Forest products transported				_____
Aesthetics of site				_____
Water crossings checked				_____
All payments made				_____
Site regeneration plans				_____

Post-Harvest Inspection Date: \_\_\_\_\_

## CORRECTIVE ACTION *Identify what action will be taken to correct any problems identified above*

	Date Completed
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____
6. _____	_____

## FOLLOW-UP *To be completed by Contractor during follow-up site visit, within 1 year of harvest*





## HARVEST SUMMARY

**Master Logger Company Name:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Contract Arrangement:** \_\_\_\_\_

**Harvest Start Date:** \_\_\_\_\_

**Harvest End Date:** \_\_\_\_\_

**Landowner Name:** \_\_\_\_\_

**Phone:** \_\_\_\_\_

**Landowner Address:** \_\_\_\_\_

**Property Location:** \_\_\_\_\_

**Property PID** \_\_\_\_\_

**Harvest Summary:** \_\_\_\_\_

**Area Harvested:** \_\_\_\_\_

**Volume / Species / Product:** \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
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\_\_\_\_\_

**Destination / Mill:**

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**Load Slip / Transportation  
Certificate Numbers:**

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**Payment to Landowner:**

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**Follow-up Required:**

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Date Completed: \_\_\_\_\_

Signature: \_\_\_\_\_