

2009 Medway District Annual Report Public Summary

Indicators relating to the ten principles of the FSC Maritimes Standard have been monitored and reported. The purpose of this report is to provide a summary of the benchmark indicators completed in 2009. There are several new initiatives that have been undertaken as a result of implementing the FSC Maritimes Standard in Medway District.

1. Yield of all forest products harvested

The Medway District primarily provides wood products to Bowater Mersey Paper Company Limited (BMPCL) manufacturing facilities, which include the BMPCL paper mill, Brooklyn Power Corporation, and Oakhill Sawmill. Products such as sawlogs, studwood, pulpwood, energy fibre, and veneer are sold to a variety of other sawmills, paper mills, and energy facilities throughout Nova Scotia.



Indicator: Total actual harvest level	
<u>Results</u>	153,581 metric tonnes
Indicator: Forest products delivered (percent of total)	
<u>Results</u>	Sawlogs 37 percent
	Studwood 6 percent
	Pulpwood 55 percent
	Energy Fibre 1 percent
	Veneer <0.5 percent

2. Growth rates, regeneration, and condition of the forest

Permanent Sample Plots

Forest growth is measured through a permanent sample plot (PSP) program administered by the Department of Natural Resources. Trees are measured in a PSP every five years, which provides the data to help us understand growth patterns of various forest types. BMPCL contributes financially to the maintenance of the PSP program. Mean annual increment is the average growth per hectare per year for a specific site class. Site class is the measure of productivity of a site resulting from environmental conditions such as topography, soil depth, drainage, and bedrock material.



Indicator: Contribution to the development of growth and yield curves through support for the PSP program in Nova Scotia.	
<u>Results</u>	In 2009 BMPCL contributed financial support to the maintenance of the PSP program in Nova Scotia.
Indicator: Mean annual increment for each site class.	
<u>Results</u>	Site class 1 – 2.3 tonnes/hectare/year
	Site class 2 – 2.1 tonnes/hectare/year
	Site class 3 – 1.6 tonnes/hectare/year
	Site class 4 – 0.2 tonnes/hectare/year

Natural Regeneration

Natural regeneration assessments are completed on all harvest openings three to five growing seasons following a harvest. Acceptable tree species for natural regeneration include red and black spruce, white pine, balsam fir, hemlock, sugar maple, yellow birch, red oak, and ash. Single stem white birch and red maple are also considered acceptable regeneration. These are all typical Acadian forest species and are all considered equally when assessing the level of natural regeneration of a harvest area. Sites that do not meet acceptable levels of natural regeneration are planted within two years with species appropriate to the natural vegetation type for the site.



Indicator: Regeneration assessments	
Results	In 2009 approximately 1,080 hectares of harvest area was assessed for natural regeneration. Acceptable regeneration levels were found to occur in 56 percent of these areas. Areas that were not adequately regenerated will be planted in 2011.
Indicator: Planting	
Results	In 2009, based on natural regeneration assessments completed in 2006, 701 hectares of forestlands were planted with red and black spruce.

3. Composition and observed change in the flora and fauna

Current Condition

A landscape level assessment of the condition of the forest in the Medway District is accomplished by updating the forest resource inventory (FRI) every ten years through aerial photograph interpretation and field verification. The last FRI update was completed in 2008 based on 2007 aerial photography. It indicates that the Medway District forest is 49 percent softwood, 24 percent mixedwood, 11 percent wetlands, 9 percent hardwood, 5 percent harvest openings, and 3 percent roads and gravel pits. The dominant age class of the forest is between 70 to 80 years old.



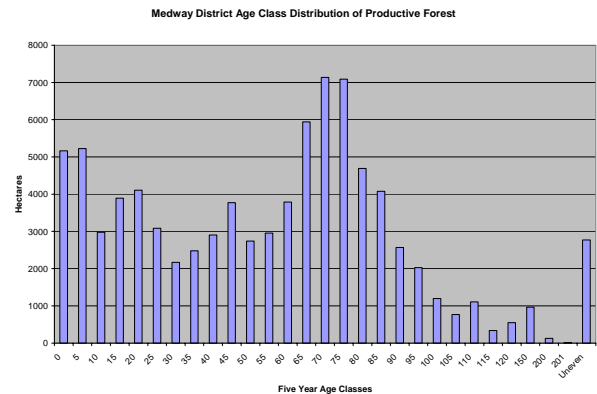
Indicator: The current forest cover type.	
Results	<p>Cover Type Distribution</p> <p>BF – balsam fir HS – hardwood dominating mixedwood HW – hardwood OP – opening (recent harvest) PI – pine SH – softwood dominating mixedwood SP – spruce</p> <p>HE - hemlock LS – low stocking Other – roads/pits SW – softwood</p>



Indicator: The current age class distribution.

Results

Age Class Distribution



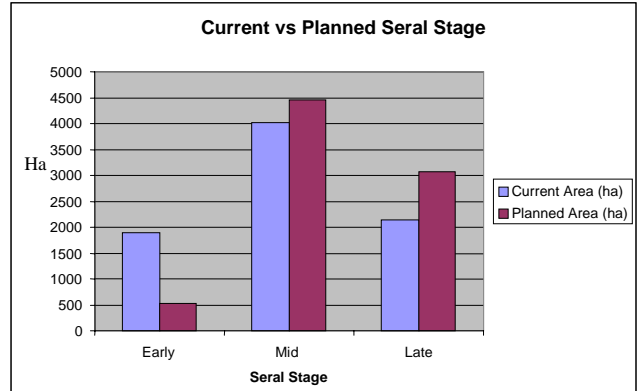
Ecological Assessment

An ecological assessment was completed to identify target levels of forest cover type and age classes that would naturally occur in the Medway District. The current forest in Medway District has been shaped by several hundred years of human disturbance primarily in the form of timber harvesting. If forests in Medway District were to have developed in the absence of human disturbance, older, multi-aged stands of shade-tolerant species known as "late seral" stage forest would be more common. Forest management planning has begun to address this need for different forest type levels and age class distribution through increased partial harvest levels and the implementation of a landscape ecological zoning process.



Indicator: The distribution of current seral stage compared to the planned change through forest management.

Results



Species at Risk

Field surveys were conducted in areas with high probability of coastal plains flora and ribbonsnake.



Indicator: Hectares surveyed by stakeholder groups.	
<u>Results</u>	<p>The Atlantic Canada Conservation Data Centre surveyed 40.1 hectares of Stoney Lake area and 9.6 hectares near Eleven Mile Lake for rare flora.</p> <p>The Mersey Tobeatic Research Institute surveyed 0.5 hectares in the Harmony Lake area for ribbonsnake.</p>

Indicator Species

Three indicator species were chosen to monitor habitat suitability within the Medway District. The American marten is known to prefer old forest with coarse, woody debris that provides structure for nesting. Common nighthawk needs the open conditions that exist in regenerating forest for nesting. American marten and common nighthawk are both listed as species at risk in Nova Scotia. Golden-crowned kinglet requires immature and mature forest for feeding and nesting.

For each of the three species, forest structure in Medway was assigned a low, medium, or high value indicating an assessment of the species preference for a forest cover type and development stage. Habitat suitability curves were created indicating the species level of preference for every natural and managed forest stand found in Medway for the next 100 years.



Indicator: The percentage of hectares maintained or enhanced at the end of the 100-year planning horizon.																																							
<u>Results</u>	<p style="text-align: center;">Golden-crowned Kinglet</p> <table border="1"> <thead> <tr> <th></th> <th>Low</th> <th>Medium</th> <th>High</th> </tr> </thead> <tbody> <tr> <td>Period 1 (2013)</td> <td>19%</td> <td>26%</td> <td>5%</td> </tr> <tr> <td>Period 20 (2109)</td> <td>19%</td> <td>25%</td> <td>9%</td> </tr> </tbody> </table> <p style="text-align: center;">Common Nighthawk</p> <table border="1"> <thead> <tr> <th></th> <th>Low</th> <th>Medium</th> <th>High</th> </tr> </thead> <tbody> <tr> <td>Period 1 (2013)</td> <td>14%</td> <td>0%</td> <td>14%</td> </tr> <tr> <td>Period 20 (2109)</td> <td>20%</td> <td>0%</td> <td>14%</td> </tr> </tbody> </table> <p style="text-align: center;">American Marten</p> <table border="1"> <thead> <tr> <th></th> <th>Low</th> <th>Medium</th> <th>High</th> </tr> </thead> <tbody> <tr> <td>Period 1 (2013)</td> <td>35%</td> <td>8%</td> <td>2%</td> </tr> <tr> <td>Period 20 (2109)</td> <td>25%</td> <td>8%</td> <td>6%</td> </tr> </tbody> </table>				Low	Medium	High	Period 1 (2013)	19%	26%	5%	Period 20 (2109)	19%	25%	9%		Low	Medium	High	Period 1 (2013)	14%	0%	14%	Period 20 (2109)	20%	0%	14%		Low	Medium	High	Period 1 (2013)	35%	8%	2%	Period 20 (2109)	25%	8%	6%
	Low	Medium	High																																				
Period 1 (2013)	19%	26%	5%																																				
Period 20 (2109)	19%	25%	9%																																				
	Low	Medium	High																																				
Period 1 (2013)	14%	0%	14%																																				
Period 20 (2109)	20%	0%	14%																																				
	Low	Medium	High																																				
Period 1 (2013)	35%	8%	2%																																				
Period 20 (2109)	25%	8%	6%																																				

4. Environmental and social impacts of harvesting and other operations

Environment

Contractor audits are completed on all types of forest operations. Audits are completed by either an Operations Coordinator or by a member of an Audit Subcommittee that is made up of staff from different departments within Woodlands. A checklist of items is reviewed that covers a number of safety and environmental aspects of the worksite.

While working near watercourses, watercourse quality is maintained through various best management practices. A 30-metre buffer on all watercourses greater than 50 centimetres wide is established to protect water quality and species at risk associated with aquatic habitats.



Indicator: The percent of audited harvest and silviculture operations that were in compliance with their treatment prescription.	
<u>Results</u>	<p>A total of 95 percent of harvest operations were in compliance with their treatment prescription.</p> <p>A total of 100 percent of silviculture operations were in compliance with their treatment prescription.</p>
Indicator: The percentage of operations in areas where species at risk are a concern that are in compliance with measures required to minimize impact on that species.	
<u>Results</u>	There were no harvesting operations completed near areas of concern for species at risk. A 30-metre buffer is established on watercourses with known species at risk.
Indicator: The percentage of operations where forest and soil productivity were maintained and water bodies and riparian zones were protected.	
<u>Results</u>	<p>A total of 89 percent of operations were in compliance with maintaining forest and soil productivity.</p> <p>A total of 100 percent of operations were in compliance with protection of water bodies and riparian zones.</p>

Social

The social impacts of forest management and wood product manufacturing were examined through a review of statistical information related to occupation and skill development provided by 2006 Statistics Canada data. Results from 2006 census data of Queens, Annapolis, and Lunenburg Counties indicated that dominant occupations are related to equipment operator trades, which are unique to a primary industry and to occupations related to equipment operation and transport. Many of these occupations can be linked to the forest industry.

The percent of experienced workforce employed as equipment operators, tradesmen, or in jobs unique to primary industry or manufacturing and utilities is significantly higher in Queens, Annapolis, and Lunenburg Counties where 33 to 35 percent of the workforce are employed in these types of jobs compared to 17 percent provincially.

A higher percentage of the workforce in Queens, Annapolis, and Lunenburg Counties work in agriculture, resource-based industries, and manufacturing compared to the whole province. Queens County had the highest percentage of jobs in those sectors at 29 percent compared to 15 percent on a provincial level. Annapolis and Lunenburg Counties had 17 percent and 25 percent, respectively.

5. Efficiency of forest management

Utilization of merchantable wood available from a harvest opening is an indicator of the efficiency of our harvest operations. The amount of merchantable wood left on-site following a harvest beyond what is required to meet wildlife habitat and watercourse protection objectives is monitored through post-harvest site surveys.



Indicator: Results of utilization studies in harvest openings.	
Results	The average volume per hectare that was underutilized was 6.7 cubic metres per hectare. The objective is to minimize the amount of underutilized wood on site.