



Annual report on forest management 2012-2013

Information to help understand Crown forest management. Also includes baseline information to compare with future forest management activities and annual reports.

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Overview

This is the eighteenth annual report on forest management in Ontario. This report provides information on forest management activities in Ontario's Crown forests covering the period April 1, 2012 to March 31, 2013. Crown forest resources within the Area of the Undertaking (AOU (Area of the Undertaking)) are the focus for this annual report. This report does not include Ministry of Natural Resources and Forestry (MNRF (Ministry of Natural Resources and Forestry)) programs that deal with private land or provincial parks.

The annual report on forest management addresses legal requirements outlined in MNRF's (Ministry of Natural Resources and Forestry) Class Environmental Assessment Approval for Forest Management on Crown lands in Ontario. The report is prepared consistent with the principles and intent of the Crown Forest Sustainability Act (CFSA (Crown Forest Sustainability Act)). It contains, in part, a summary and analysis of 42 management unit annual reports.

As of May 1, 2014, four management units had not yet submitted required annual report data: Wabigoon Forest, Big Pic Forest, Ogoki Forest and the Pic River Forest. Data for these management units were estimated based on their previous year's levels. These numbers will be revised when the final submission is received and will be reflected in next year's report.

For the official management unit annual reports, please refer to the forest management planning site: eFMP.lrc.gov.on.ca/eFMP/home.do (www.eFMP.lrc.gov.on.ca/eFMP/home.do)

The report includes the most recent data and information; however, changes in data may occur as the dataset undergoes continuous improvement. Minor rounding errors may occur due to the precision of the numbers. Annual report spatial layers have received some level of error correction and spatial adjustment. All spatial layers have been moved to a consistent projection, and exceptionally small areas have been moved into adjacent areas or have been eliminated. As well, several layers have been compared to previous years and duplication in accounting has been eliminated where it occurs. The impacts of these adjustments are exceptionally small.

More information about MNRF (Ministry of Natural Resources and Forestry) programs is available at [ontario.ca/environment-and-energy/forestry](http://www.ontario.ca/environment-and-energy/forestry) (<http://www.ontario.ca/rural-and-north/forestry>)

Executive summary

Ontario's Crown forests are managed in a sustainable manner to ensure long-term forest health while providing environmental, economic, and social benefits to Ontarians. The Annual Report on Forest Management 2012-13 provides information on how Ontario's Crown forests are being managed. The report summarizes forest management activities for the period April 1, 2012 to March 31, 2013. The following is a summary of key forest management activities for 2012-13:

Natural Disturbances

- Natural disturbances affected 1,104,277 ha
- Weather and drought affected 462,271 ha
- Fire impacted 149,145 ha
- Insects infested 492,961 ha

Forest Harvest

- Forest harvest occurred on 115,048 ha
- Harvesting generated 11.7 million cubic metres of wood
- Natural disturbances affected more area than harvesting

Forest Renewal

- Renewal activities occurred on 206,245 ha
- 49,751 ha regenerated artificially (tree planting and seeding)
- 57,838 ha regenerated naturally
- \$47.5 million spent on forest renewal

Silviculture Effectiveness Monitoring

- 118,028 ha were surveyed for regeneration
- 95% met an acceptable regeneration standard

Forest Industry

- Ontario's forest industry has \$11.9 billion in revenues
- Employment in the forest industry was 55,600 direct jobs
- Crown charge payments totalled \$83.7 million
- \$38.3 million contributed to the Forest Renewal Trust

Forest Access Roads

- 3,417 km of new road construction
- Access controls established on 952 km
- 796 km of roads were decommissioned
- Roads funding: \$60 million

Forest Compliance

- There were 3,004 inspections
- 2,274 inspections were conducted by the forest industry
- 730 inspections by MNRF
- 98% compliance rate

Forest Audits

- 9 independent forest audits were conducted
- All Sustainable Forest Licences recommended for extension
- 86 recommendations for improvement and 6 best practices

Forest Certification

- 28 of 41 units were certified
- Two forests certified under SFI for the first time
- Several units successfully re-certified

Aboriginal Involvement in Forest Management

- Nawiinginokiima Forest Management Corporation established
 - Aboriginal communities engaged in forest management and economic development activities across the province
-

Ontario's forests



Ontario is 107.6 million hectares (ha) in size.

- 87% of Ontario is publicly owned (93.2 million ha);
- 66% of the province is forest (71.1 million ha);
- 52% is productive forest (56.1 million ha);
- 4% of the productive forest is within existing and proposed parks and protected areas.

Forest management on Crown land is practised in the Area of the Undertaking (AOU (Area of the Undertaking) MNR-71 and Whitefeather Forest MNR-74), a 45.0 million hectare area that stretches across Ontario from Kemptville to Red Lake.

Land Classes are summarized below and further detail can be found in the Forest Resources of Ontario 2011 report available at: [ontario.ca/forestreporting](http://www.ontario.ca/forestreporting) (<http://www.ontario.ca/forestreporting>)

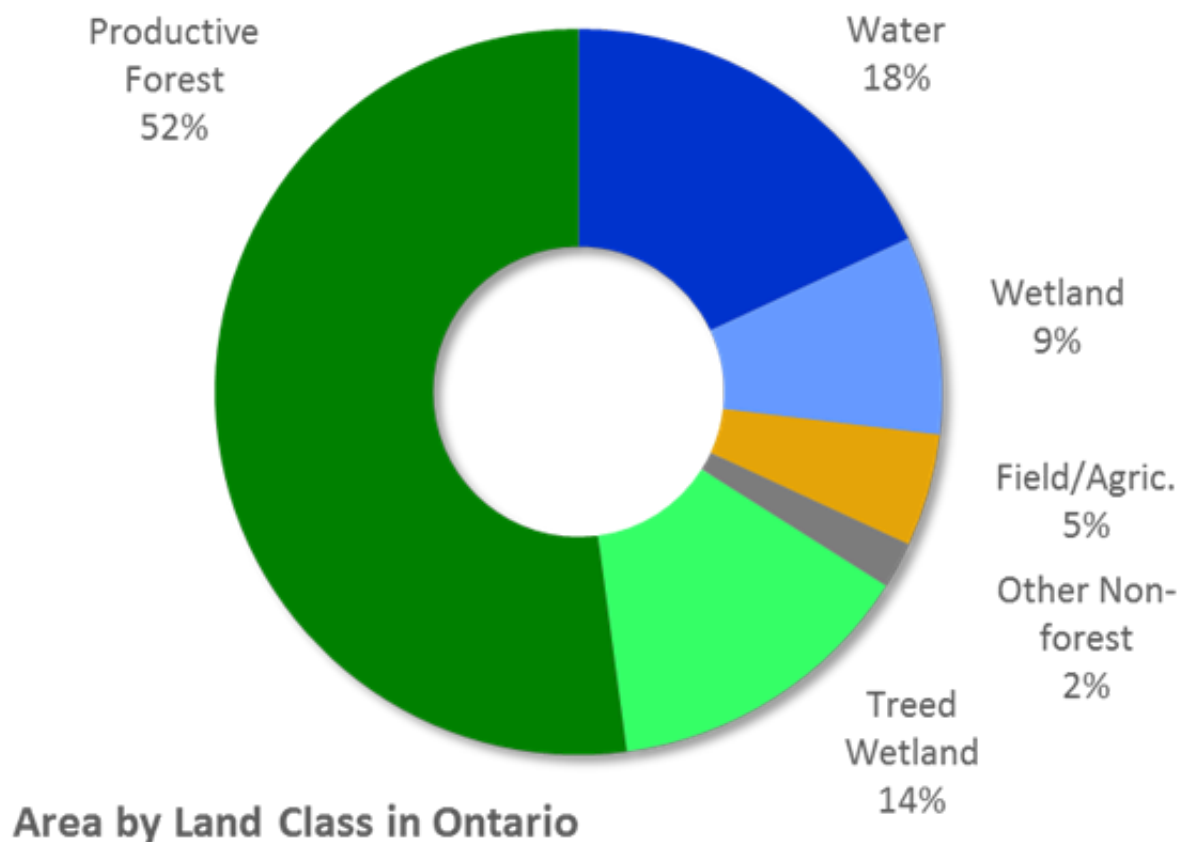
Total Provincial Area by Land Class (area in hectares)

Land Class	Crown	Parks and Protected Areas	Other	Total
Water	17,028,847	1,819,446	594,998	19,443,291
Wetland	8,170,336	1,082,148	245,512	9,497,996
Field/Agriculture	32,564	6,901	5,362,145	5,401,610
Other Non-forest	816,335	414,077	995,339	2,225,751
Treed Wetland	12,744,149	1,142,442	1,086,587	14,973,178
Productive Forest	44,683,015	5,276,719	6,134,858	56,094,592
Total:	83,475,246	9,741,734	14,419,438	107,636,418

Total Area within the AOU (Area of the Undertaking) (MNR 71 and 74) by Land Class (area in hectares)

Land Class	Crown	Parks and Protected Areas	Other	Total
Water	4,619,302	968,663	276,814	5,864,778
Wetland	296,463	72,880	98,392	467,735
Field/Agriculture	13,728	649	581,423	595,800
Other Non-forest	283,167	81,941	290,672	655,779
Treed Wetland	1,403,042	190,524	182,971	1,776,537
Productive Forest	27,804,344	3,232,693	4,581,261	35,618,298
Total:	34,420,046	4,547,349	6,011,532	44,978,927

Source: Forest Resources of Ontario 2011 with updates to include the Whitefeather Forest



Natural disturbances (fire, weather and insects)

Forest losses due to insects, fire and weather were significant, with 1,104,377 hectares of damage scattered across the province in 2012-13.

- Forest fire activity was lower than 2011 at 149,145 hectares. A large fire near Timmins (Timmins 9) consumed nearly 40,000 ha of forest;
- Drought continued into 2012 impacting 147,844 ha of forests across the province;
- Winter browning caused by early spring warm temperatures while the ground is still frozen affected large areas of coniferous trees (281,116 ha) primarily in the northwest;
- Forest insects caused significant mortality and growth loss. Spruce budworm typically affects large forest areas and causes the most mortality of any forest insect. Spruce budworm defoliation caused mortality (147,844 ha) occurred primarily in North Bay and Sudbury districts;
- Forest tent caterpillar (47,981 ha), jack pine budworm (61,836 ha), and several other insects (235,133 ha) all had minor outbreaks across the province causing defoliation.

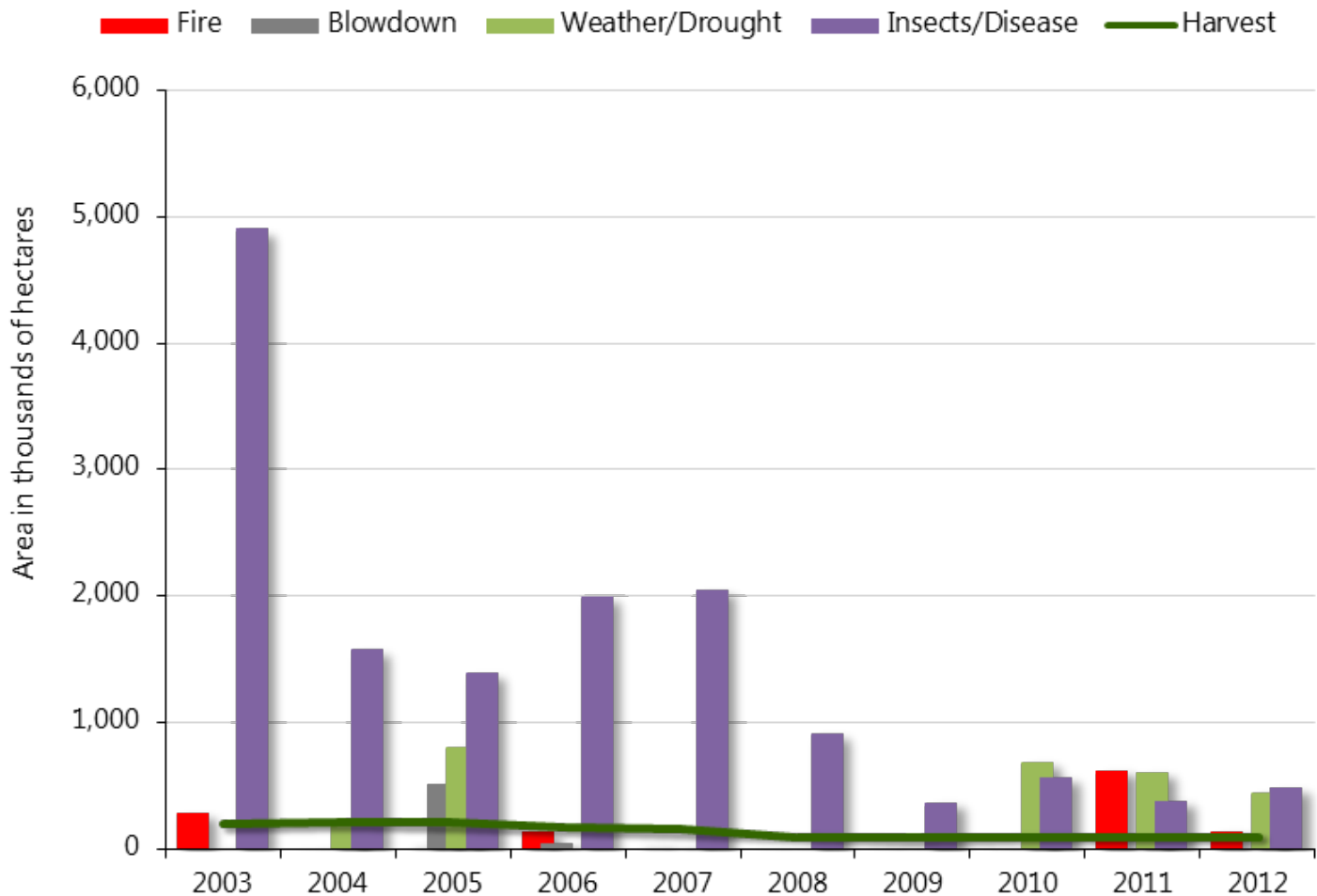
For a more detailed summary of forest health conditions in Ontario please refer to the Forest Health Conditions in Ontario Reports available at [ontario.ca/forestreporting](http://www.ontario.ca/forestreporting) (<http://www.ontario.ca/forestreporting>)

Details on forest fire conditions in Ontario are available at [ontario.ca/forestfire](http://www.ontario.ca/forestfire) (<http://www.ontario.ca/forestfire>).

Area and Estimated Volume Loss of Natural Disturbance in Ontario 2012-13

Disturbance	Ontario Area (ha)	Crown AOU (Area of the Undertaking) Mortality Area (ha)	Crown AOU (Area of the Undertaking) Mortality Volume (m³)
Fire	149,145	63,639	8,519,165
Blowdown	5,327	2,572	354,862
Drought	174,607	790	99,125
Other Weather Damage	282,337	255	-
Jack Pine Budworm	61,836	-	-
Spruce Budworm	147,844	31,496	439,548
Forest Tent Caterpillar	47,981	-	-
Poplar/Birch Complex	183,996	-	-
Other Insects	51,137	420	12,666
Diseases	167	-	-
Total:	1,104,377	99,172	9,425,366

Area of Significant Natural Disurbance and Harvest



Harvest area

Forest managers report on the level of forest harvesting activities on Ontario's Crown forests annually. Harvesting levels remained consistent with recent years but still well below historic levels.

- Total area harvested on Crown land was 115,048 hectares;
- 84% was harvested under the clearcut silvicultural system (96,200 hectares);
- 9% was harvested under the shelterwood silvicultural system (10,400 hectares);
- 7% was harvested under the selection silvicultural system (8,448 hectares);
- Harvest levels in 2012-13 were 41% of the allowable harvest area prescribed in approved forest management plans; and
- Natural disturbances as reported in the previous section account for nearly ten times more area than harvested.



Clearcut size

Management unit annual reports were analyzed to determine size and frequency of areas harvested under the clearcut silvicultural system in 2012-13. This report uses landscape guide regions to report on clearcut size, consistent with the landscape approach to forest management planning.

Boreal Forest Landscape Guide Region

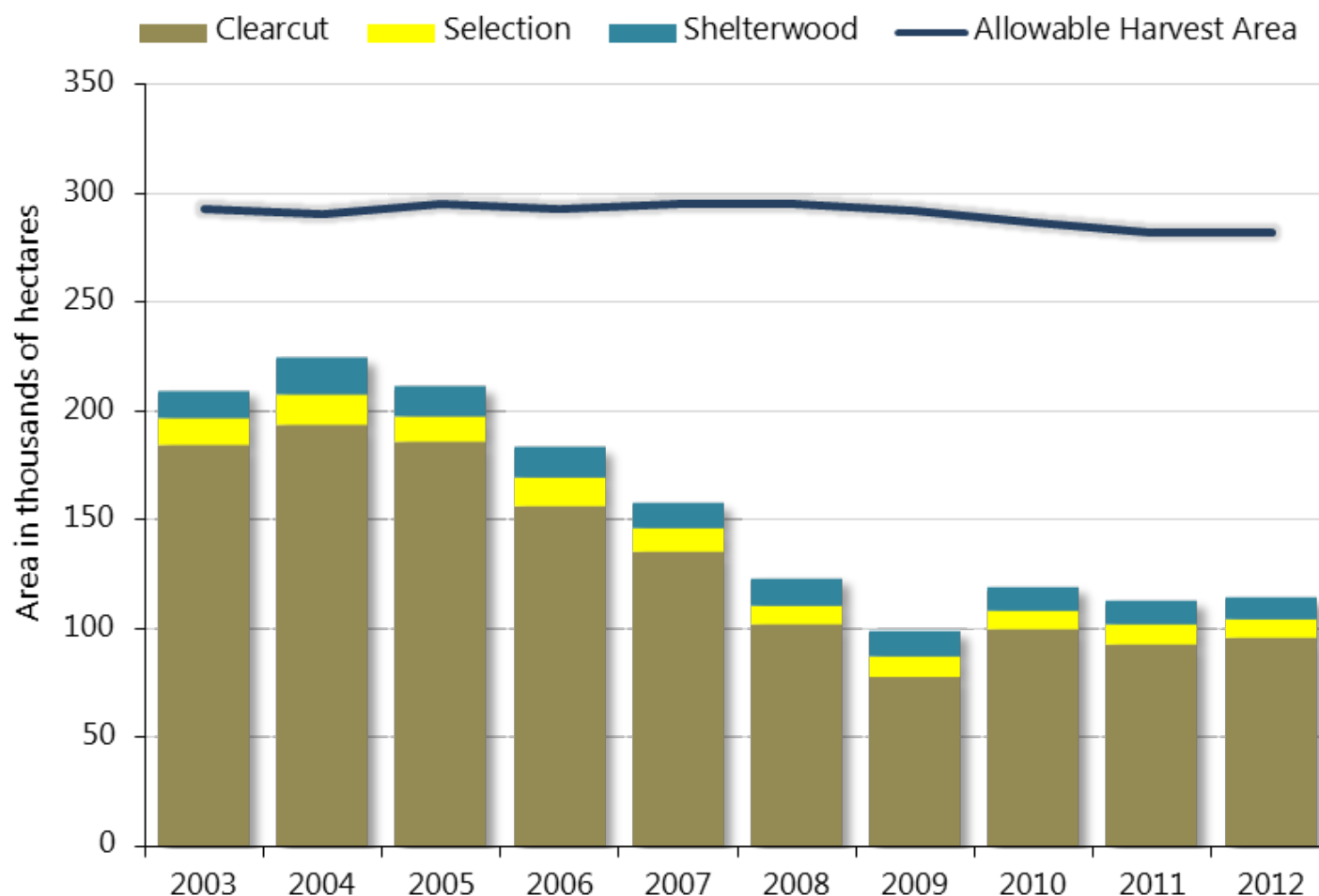
A total of 1,365 active clearcut harvest areas occurred in the Boreal Forest Landscape Guide Region. Of these clearcuts, 1,318 (97%) were less than 260 hectares in size. The average clearcut size was 53 hectares and the maximum clearcut was 2,078 hectares.

Great Lakes-St. Lawrence Forest Landscape Guide Region

A total of 504 active clearcut harvest areas occurred in the Great Lakes-St. Lawrence Forest Landscape Guide Region. Of these clearcuts, 497 (99%) were less than 260 hectares in size. The average clearcut size was 31 hectares and the maximum clearcut was 540 hectares.

Management Unit Annual Reports are available online at the MNRF's (Ministry of Natural Resources and Forestry) electronic Forest Management Planning Website [ontario.ca/forestplans](http://www.ontario.ca/forestplans) (<http://www.ontario.ca/forestplans>). Additional details regarding clearcut size under the clearcut silvicultural system can be found in these reports.

Harvest Area by System



Harvest volume

The MNRF (Ministry of Natural Resources and Forestry) tracks volumes of wood harvested annually by species and product type in its scaling and billing system. Stumpage charges and renewal contributions are also tracked through this system.

- Market conditions and a downturn in the forest industry have contributed to significantly less harvest volume over the last five years;
- 7 million cubic metres of wood was harvested on Crown land with the majority being spruce and jack pine volume; and

- The total volume harvested is slightly higher than the total mortality volume (9.4 million cubic metres in the AOU (Area of the Undertaking)) caused by insects, severe weather, and fire combined.



Volume Harvested by Species 2012-13

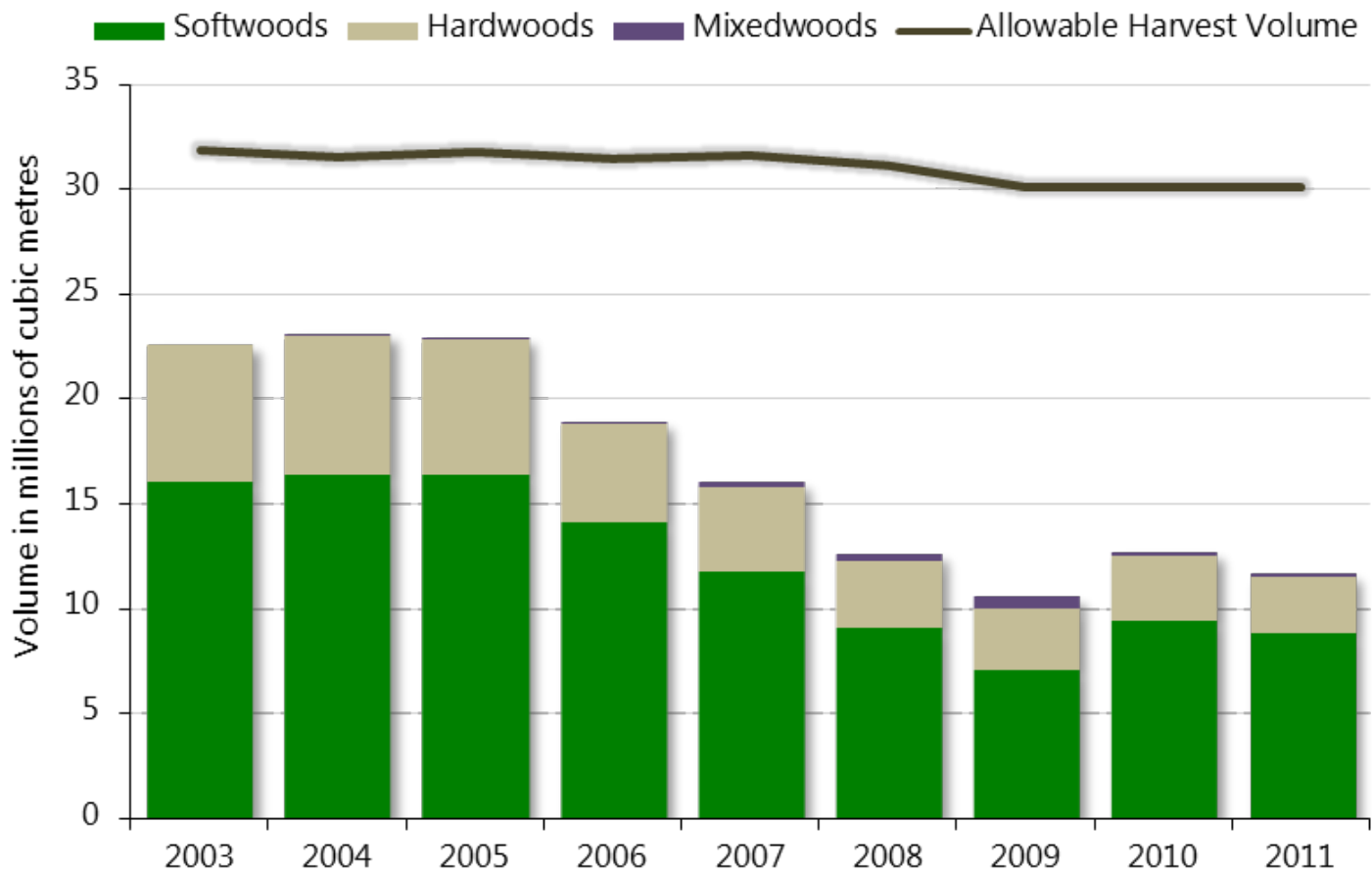
Tree Species	Volume (cubic metres)
White Pine	239,940
Red Pine	156,065
Jack Pine	3,170,319
Spruce	4,833,377
Balsam Fir	311,447
Other Softwood	57,004

<i>Softwoods</i>	8,768,152
Poplar	1,902,403
White Birch	291,206
Maple	488,139
Oak	30,725
Yellow Birch	47,027
Other Hardwood	47,759
<i>Hardwoods</i>	2,807,258
Mixedwood	130,365
Total	11,705,775

Volume Harvested by Product - 2012-13

Product Type	Volume (cubic metres)
Biomass Cogeneration	130,365
Composite	1,323,272
Fuelwood	165,052
Other	10,236
Paper	680,651
Pulp	3,462,818
Sawmill	5,759,311
Veneer	174,070
Total	11,705,775

Harvest Volume by Species



Forest renewal and maintenance

Forest managers report the level of forest renewal and maintenance on Ontario's Crown forests annually. This includes regeneration, tending, and protection activities.

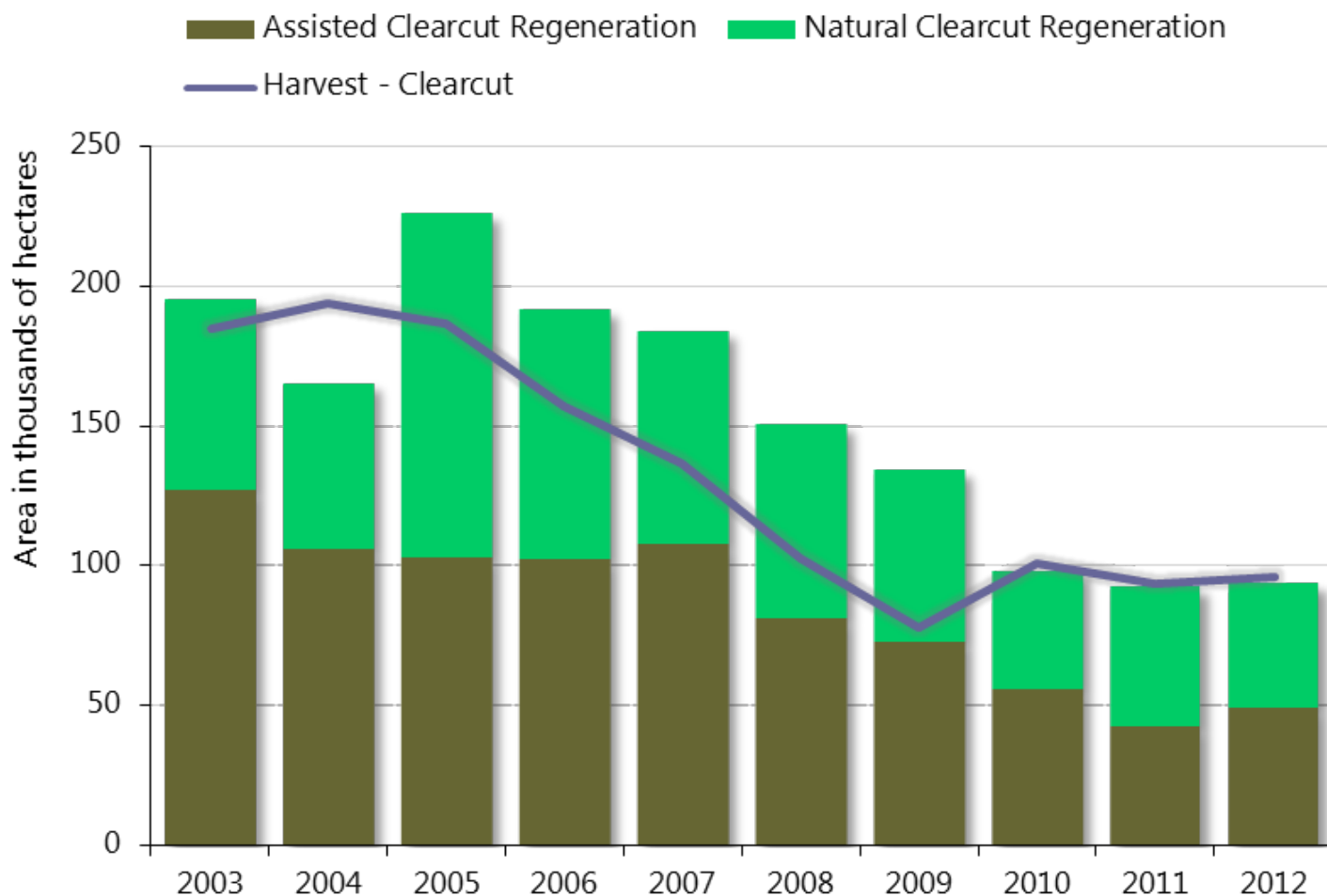
- Reduced harvest levels in previous years resulted in a third year of reduced planting, seeding, site preparation, and chemical tending in 2012-13;
- Tree planting was the main method of assisted regeneration with over 55 million trees planted, 54% of which were spruce, 37% jack pine;
- Natural regeneration was the preferred option to renew areas affected by natural disturbances;
- Natural regeneration occurred on 54% of all clearcut harvest sites;
- Seeding was implemented on 9,601 ha, utilizing over 410.8 million seeds, 84% of which were jack pine;
- Mechanical site preparation increased slightly in 2012-13, while tending activities decreased;
- No protection activities occurred in 2012-13;
- Forest Renewal Trust Fund revenues decreased while expenditures on silviculture stayed approximately the same as the previous year; and

- Planned levels are based on projected activities in the approved forest management plan (FMP (Forest management plan)) for each forest. Actual harvest occurred on 41% of the FMP (Forest management plan) planned harvest area and actual regeneration activities occurred on 42% of the FMP (Forest management plan) planned harvest area.

Renewal and Maintenance Operations 2012-13

Activity	Area (hectares)
Natural Regeneration	
Clearcut System	44,150
Shelterwood System	5,240
Selection System (uneven-aged)	8,448
Assisted Regeneration	
Planting	40,150
Seeding	9,601
<i>Trees Planted (millions of trees)</i>	<i>55.3</i>
<i>Seeds Used in Seeding (millions of seeds)</i>	<i>410.8</i>
Site Preparation and Tending	
Site Preparation	40,342
Tending - Cleaning	44,024
Tending - Improvement	9,579
Protection	-

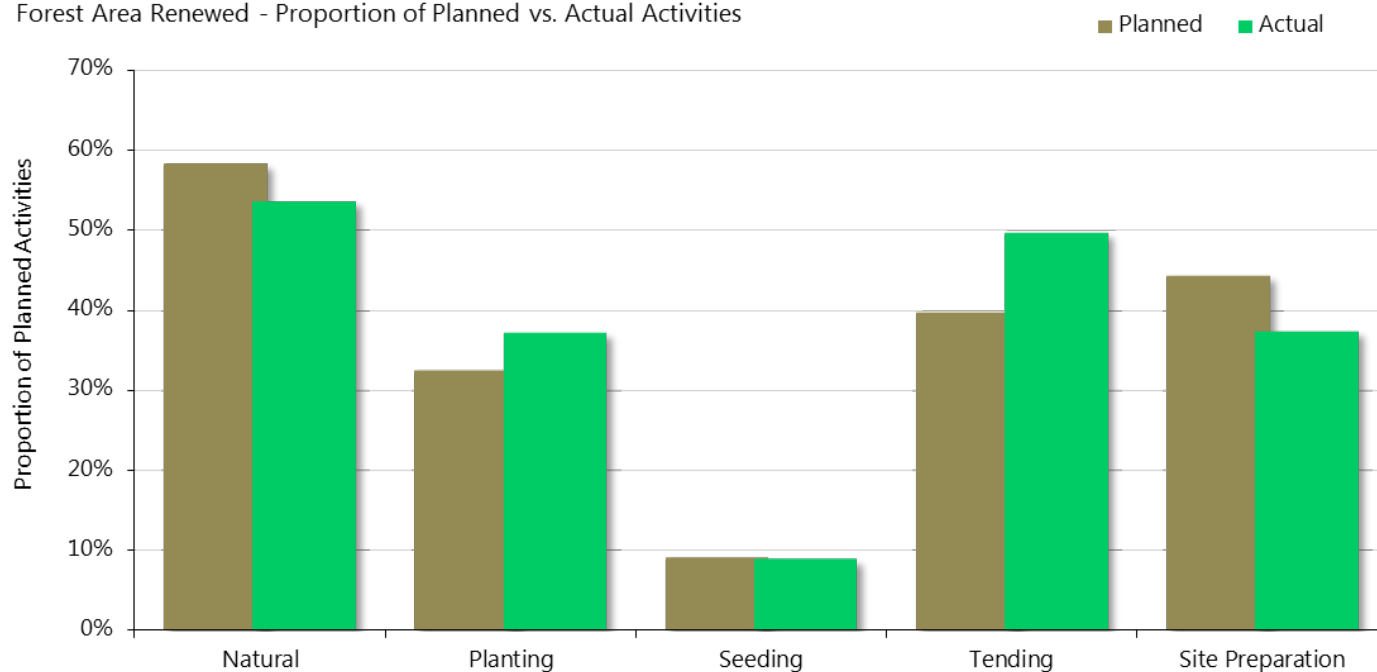
Forest Area Renewed - Clearcut Silviculture System



Forest Renewal Trust Fund Expenditures and Contributions 2012-13

Source	Expenditures (million \$)	Contributions (million \$)
Forest Renewal Trust Fund	47.5	38.3
Forestry Futures Trust Fund	8.8	17.6
Total	56.3	55.8

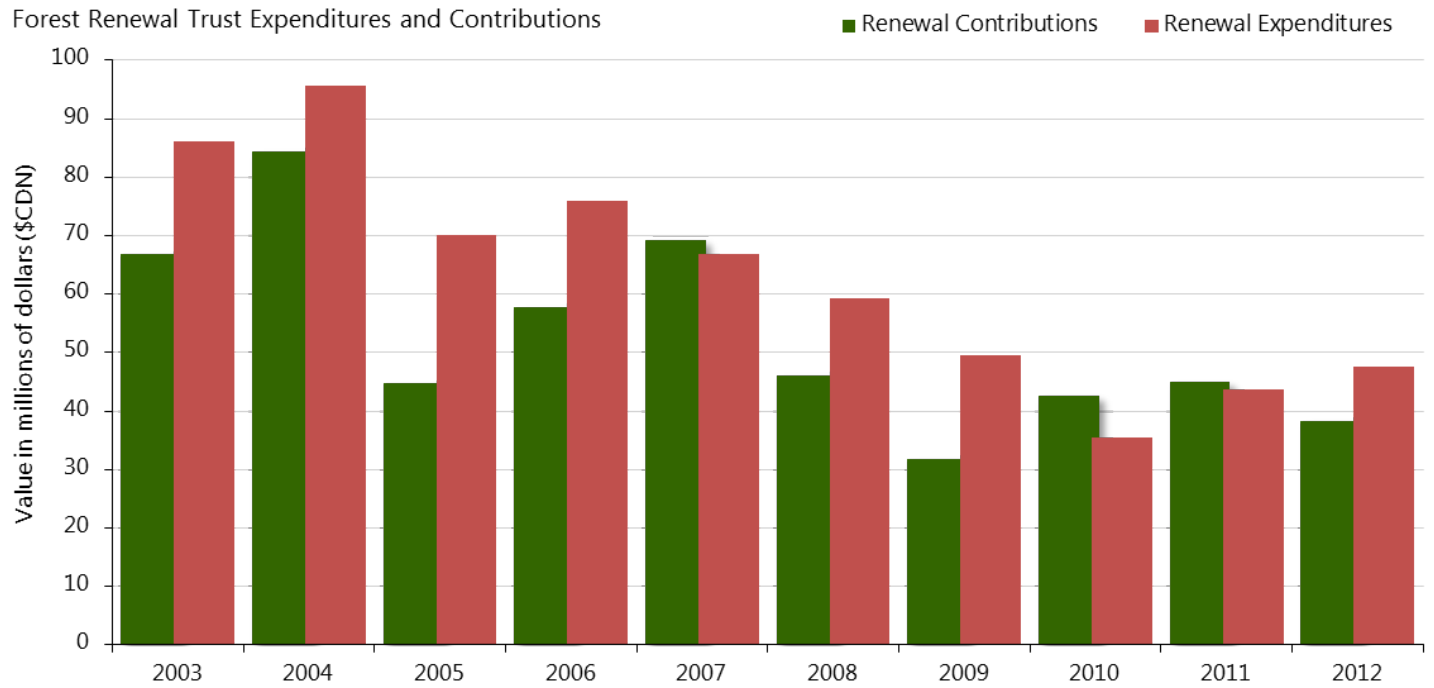
Forest Area Renewed - Proportion of Planned vs. Actual Activities



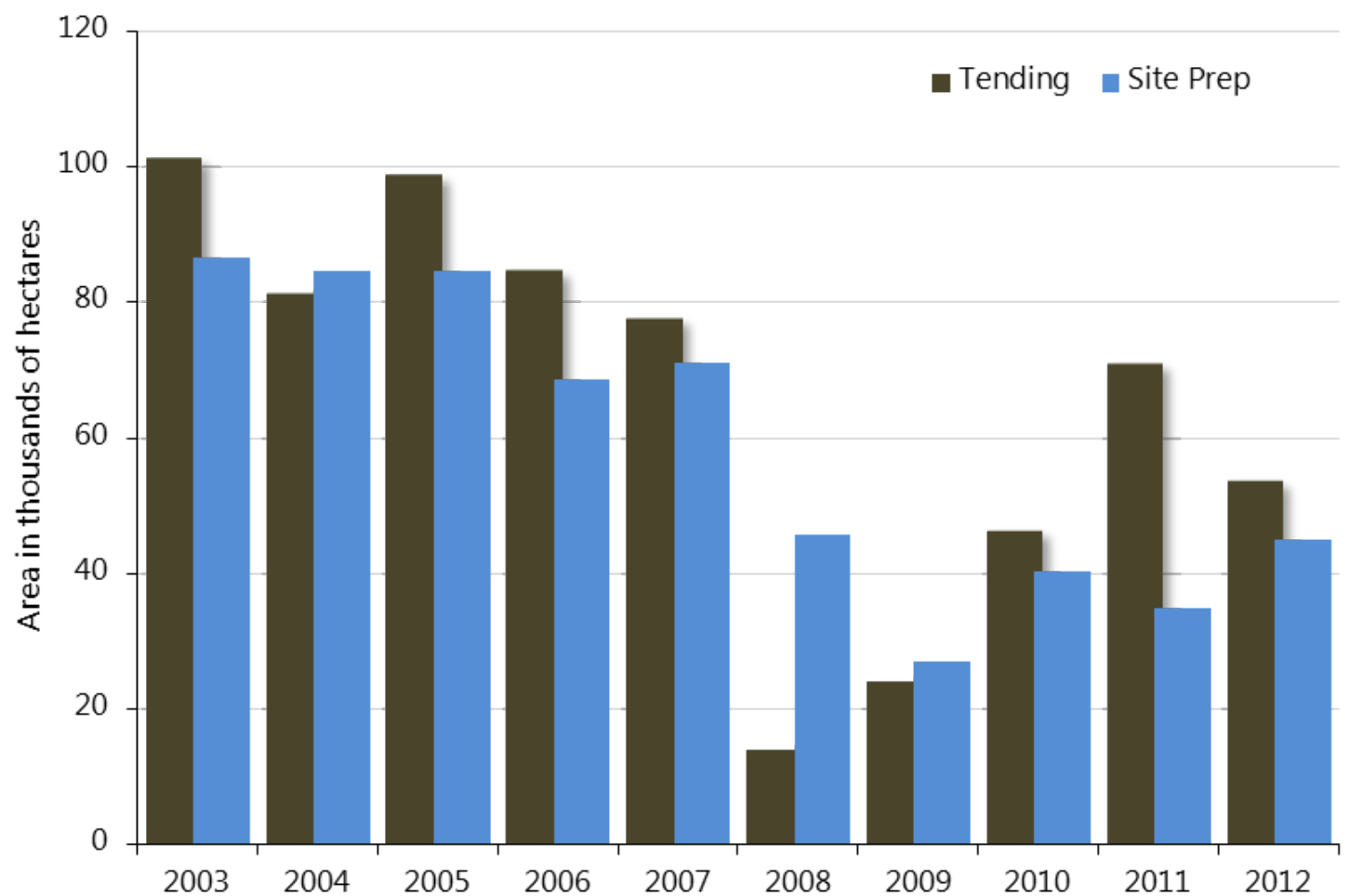
Forest Area Renewed - Selection and Shelterwood System



Forest Renewal Trust Expenditures and Contributions



Forest Area Renewed - Site Preparation and Tending



Silviculture effectiveness monitoring

Silviculture effectiveness monitoring (SEM (Silviculture effectiveness monitoring)) determines the outcome and effectiveness of forest regeneration activities. Forest managers use regeneration assessments to verify if an area has successfully regenerated and to classify those areas as Free-To-Grow (FTG (Free-To-Grow)).

On a province wide basis, “silviculture success” includes the FTG (Free-To-Grow) area that has achieved the projected or planned forest type. “Regeneration success” consists of the FTG (Free-To-Grow) area that has reached an alternate but acceptable forest type.

- FTG (Free-To-Grow) area assessed in 2012-13 was lower than the long-term average;
- Regeneration success was higher (95%) than the preceding five-year average;
- Silviculture success was higher than the five-year average (67%). Some of the assessed areas not achieving FTG (Free-To-Grow) status could be re-treated in the future to achieve silviculture success; and
- Planned area for assessment (as per approved FMP (Forest management plan)) was 265,747 hectares. The actual area assessed for 2012-13 was 118,028.

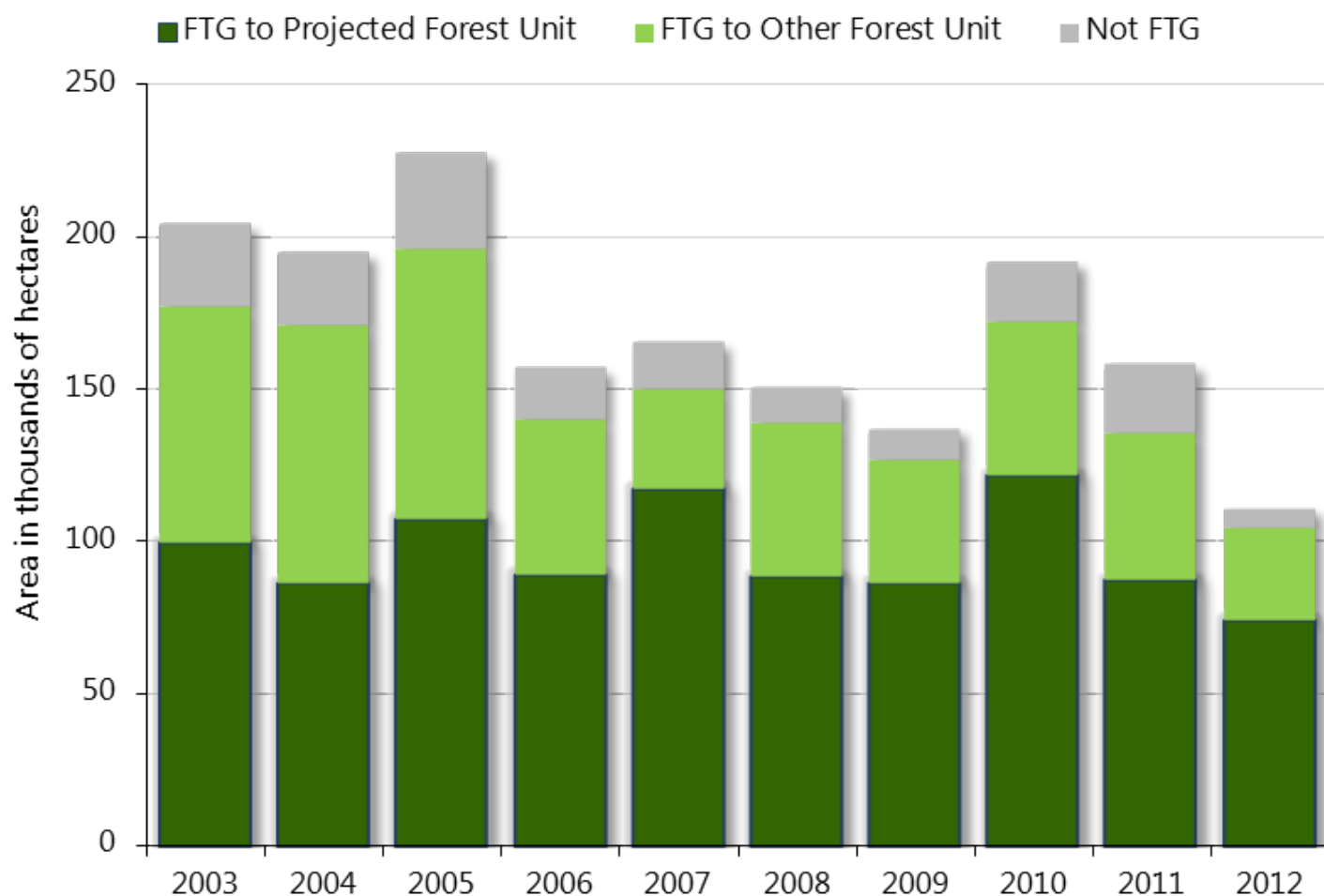


Area Assessed for Regeneration Success 2012-13

Assessment	Area (ha)
Natural Disturbance Area	
Area FTG (Free-To-Grow)	6,629
Area not FTG (Free-To-Grow)	254
Natural Disturbance Total Area Assessed	6,884
Harvest Area	
Area FTG (Free-To-Grow) to Projected Forest Type (FU)	74,524
Area FTG (Free-To-Grow) Other Forest Type (FU)	30,516
Total Area FTG (Free-To-Grow)	105,040
Area not FTG (Free-To-Grow)	6,104
Harvest Total Area Assessed	111,144
Harvest Success Ratio	
% Achieving Silviculture Success	67%
% Regeneration (Including Silviculture Success)	95%

Adjustments have recently occurred in defining and evaluating silviculture success. This may create inconsistencies if comparing the levels from this report to those from previous year's reports. Percentages compare regeneration and silviculture success to total area assessed for that year.

Harvest Area Assessed for Regeneration Success



Ontario's forest industry

Ontario's forests supply the basic resources for a variety of products including lumber, structural board, pulp, paper, and newsprint. They are also increasingly being used for producing new products, such as bio-fuel and dissolving pulp for textiles such as rayon. Reduced demand and the high value of the Canadian dollar continue to affect Ontario's forest industry.

- Revenue from sales from Ontario's forest product sector increased slightly from the previous year, reaching \$11.9 billion;
- Value-added manufacturing, excluding logging, continued at similar levels as 2011 at \$4.2 billion;
- Wood product and pulp and paper manufacturing industries had capital and repair expenditures of \$826 million, up from 2011-12 expenditures of \$781 million;
- Statistics Canada's Annual Survey of Manufacturers estimated employment in the broader forest industry was 55,600 direct jobs in 2012, and an additional 111,200 in indirect and induced employment; and
- Crown charge payments by the forest industry totaled \$83.8 million. The average stumpage charge was \$2.46 per cubic metre.

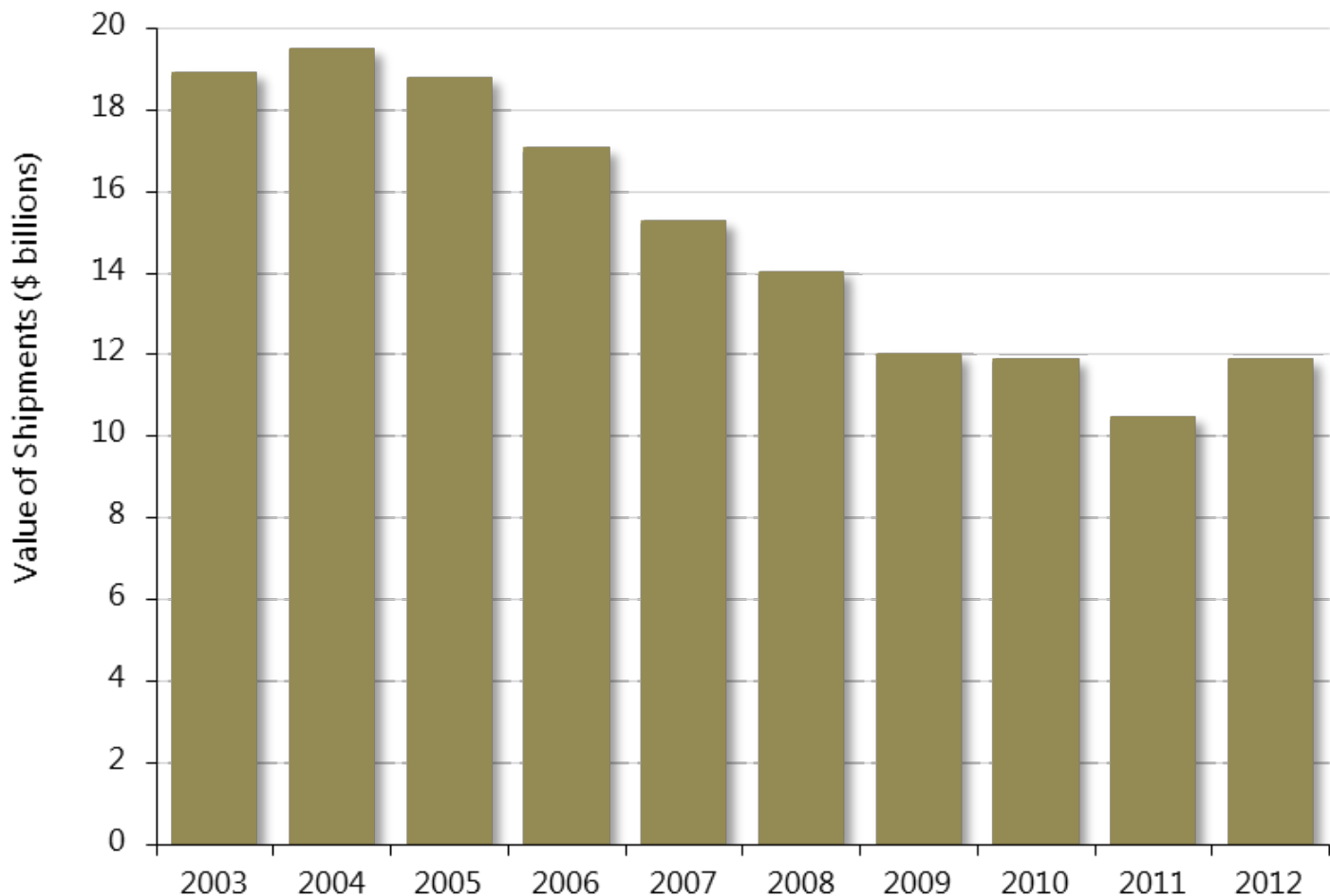
Number of Active Licences in 2012-13 by Licence Type

Licence Type	Total
Sustainable Forest Licence	34
Forest Resources Licence (commercial)	645
Forest Resources Licence (personal)	2,752
Total	3,431

Crown Charge Payments by the Forest Industry in 2012-13

Stumpage Categories	\$ millions
Consolidated Revenue Fund	27.6
Forestry Futures Trust	17.6
Forest Renewal Trust	38.3
Forest Renewal SPA	0.3
Total Payments	83.8

Value of Forest Industry Shipments



Forest access roads

Forest managers report annually on forest access road construction, maintenance, abandonment, and controls.

- 3,418 km of forest access roads were constructed. The majority of the roads constructed were operational roads at 2,892 km. Construction of primary roads amounted to 173 km, and branch roads 353km;
- 20,298 km of roads were maintained, with the majority occurring on primary roads;
- 952 km of primary, branch, and operational roads had access controls established; and
- 796 km of primary, branch, and operational roads were decommissioned by physical or natural means.

Roads Funding Programs

- Forest Access Capital Roads Program spending was \$1,243,088;
- Ministry of Northern Development and Mines (MNDM (Ministry of Northern Development and Mines)) roads expenditure was \$2,198,671;
- MNRF's (Ministry of Natural Resources and Forestry) provincial forest access roads funding program incurred costs of nearly \$60 million on the construction, maintenance, and monitoring of primary and

branch roads, and the construction/repair/replacement of stream crossings;

- The forest industry incurred 100% of the costs of constructing and maintaining all operational roads on Crown lands.

Forest Access Roads Funding Program 2012-13

Category	Amount	Construction (km)	Maintenance (km)
Primary Roads	\$ 52,240,857	173	12,067
Branch Roads	\$ 7,248,345	353	4,280
Operational	n/a	2,892	3,952
MNRF (Ministry of Natural Resources and Forestry) Admin Costs	\$ 476,998	n/a	n/a
Total	\$ 59,966,200	3,418	20,298

Forest operations compliance

The Forest Operations Information Program (FOIP (Forest Operations Information Program)) stores information collected through forest compliance monitoring for analysis and reporting to the MNRF, the forest industry and the public.

- The average compliance rate across all operations (access, harvest, renewal, and maintenance) for both industry and MNRF (Ministry of Natural Resources and Forestry) was 98%;
- Reduced levels of forest operations activity resulting from the forest industry downturn have caused an accompanying decline in the overall number of inspections over the past several years;
- Certified forest operations compliance inspectors submitted 3,004 inspections during 2012-13;
- The ratio of inspections undertaken by the industry and the MNRF (Ministry of Natural Resources and Forestry) was relatively consistent with previous years; and
- A total of 69 remedy and enforcement actions were taken, 12 of which resulted in penalties and fines totaling \$26,323.

Forest Operations Compliance Inspection Reports Summary 2012-13

Operation	Reports	Industry	MNRF	Total
Access	Compliant Reports	745	172	917
	Non-Compliant Reports	10	13	23
	Total	755	185	940
Harvest	Compliant Reports	1,314	489	1,803
Non-Compliant Reports	24	12	36	1,839
	Total	1,338	501	
Renewal	Compliant Reports	138	37	175

Non-Compliant Reports	1	1	2	177
	Total	139	38	
Maintenance	Compliant Reports	41	6	47
Non-Compliant Reports	1	0	1	48
	Total	42	6	
All	Compliant Reports	2,238	704	2,942
Non-Compliant Reports	36	26	62	
Total	2,274	730	3,004	

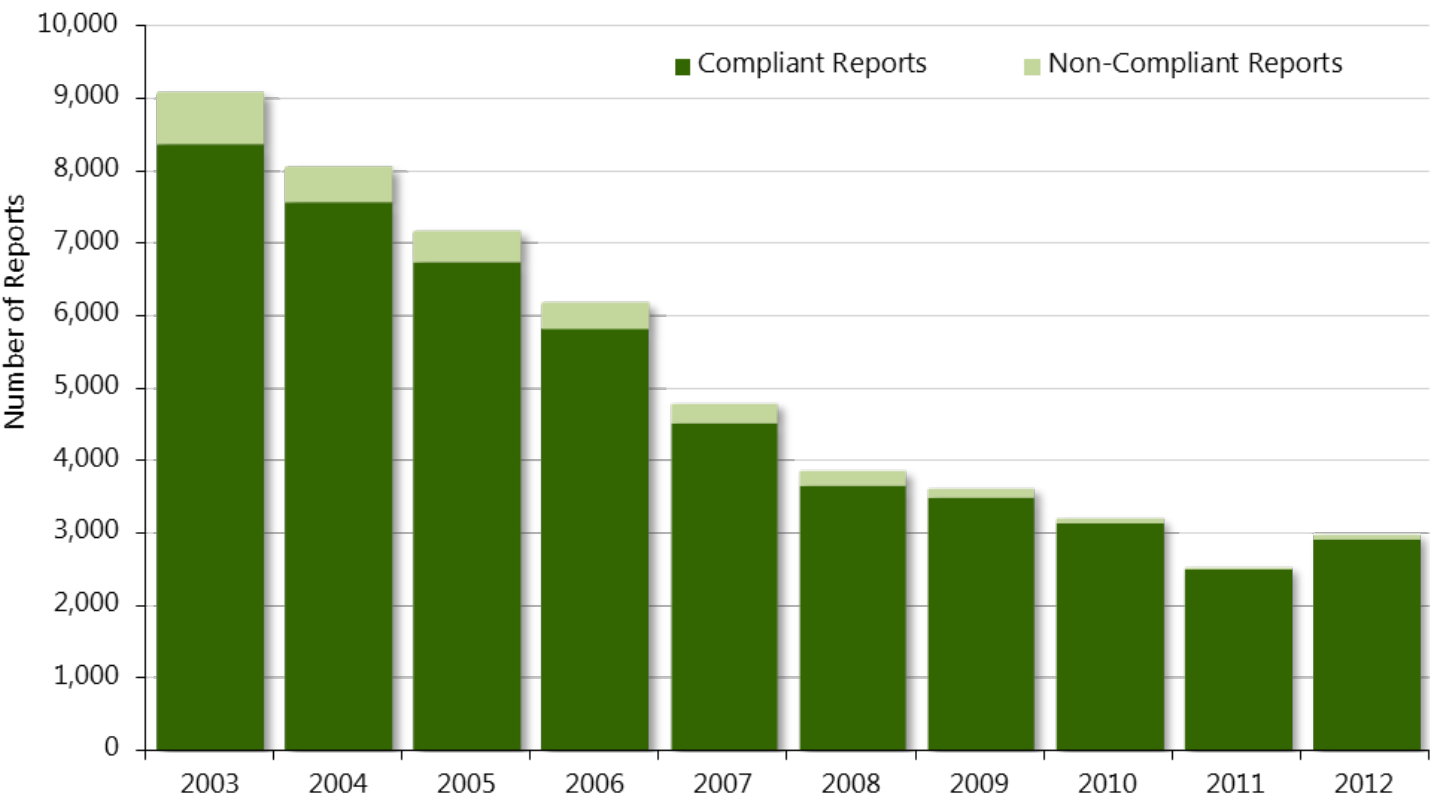
Remedy and Enforcement Actions Taken 2012-13

Method		Number	Value
Written Warning		48	
Orders	Stop/Limit/Amend	0	
	Repair	2	
	Compliance	7	
Administrative Penalty ¹		11	\$26,073
Offence Charge ²		1	\$250
License Suspension and Cancellation		0	n/a
Total Actions		69	\$26,323

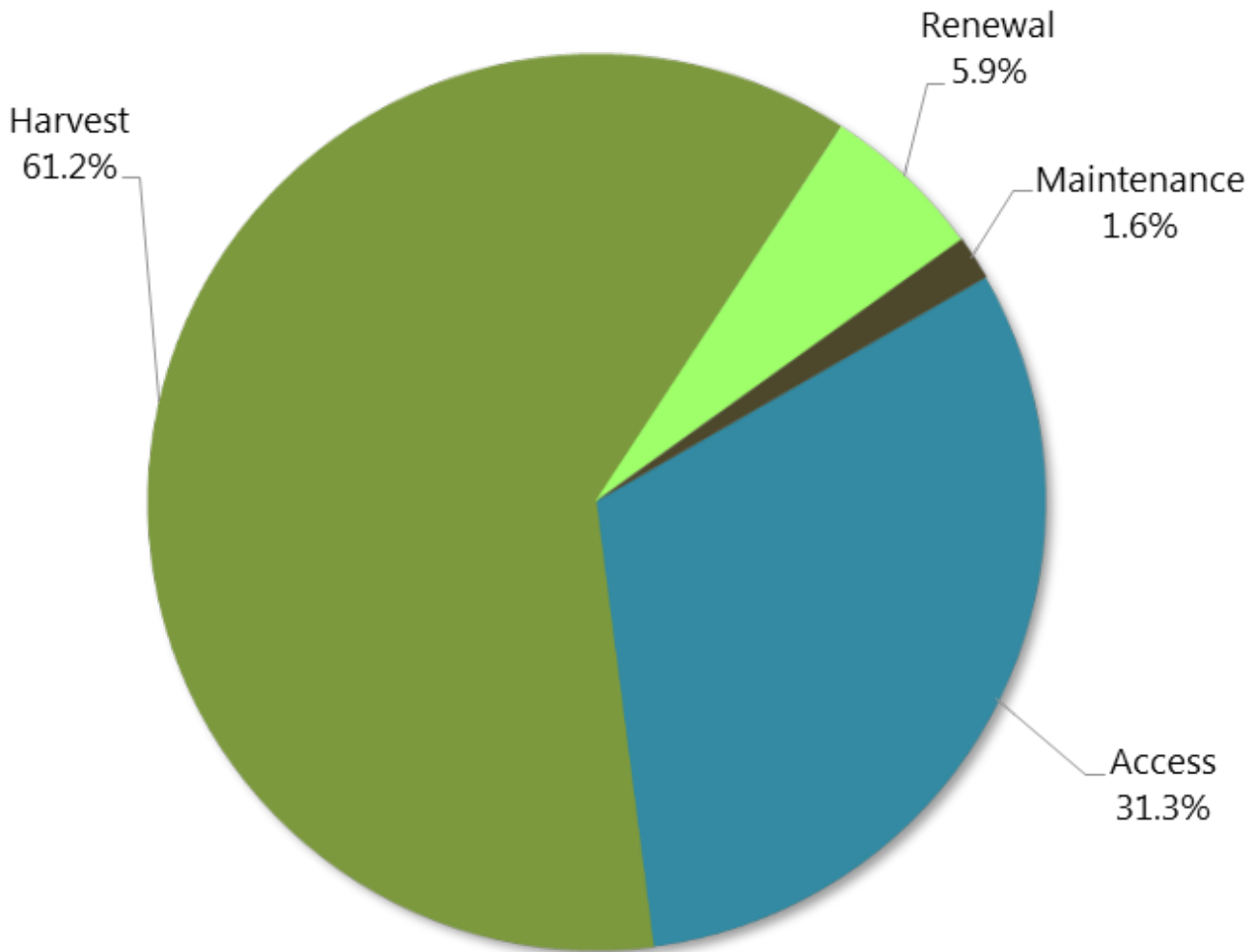
¹ To Forestry Futures Fund

² To Consolidated Revenue Fund (general revenue)

Forest Operation Compliance Inspection Reports



Compliance Inspections by Operation 2012-13



Independent forest audits

Independent Forest Audits (IFAs (Independent Forest Audits)) are a requirement of the CFSA (Crown Forest Sustainability Act), a condition of MNRF's (Ministry of Natural Resources and Forestry) Class Environmental Assessment Approval for Forest Management on Crown lands in Ontario, and a licence requirement for all SFLs (Sustainable Forest Licences). All management units are audited at least once every five to seven years, to review operations and examine forest management activities carried out since the previous audit.

- IFAs (Independent Forest Audits) were completed on nine management units in 2012;

- The results of the 2012 IFAs (Independent Forest Audits) were generally positive. All nine audits concluded that, during the term of the audit, the forests were managed in compliance with legislation and policy requirements, licence requirements, and with the principles of sustainable forest management; and
- The seven forests under SFL (Sustainable Forest Licences) received licence extension recommendations (Algonquin Park is extended under the Algonquin Park Forestry Agreement and there is no SFL (Sustainable Forest Licences) in place for the Sapawe Forest).

The audit reports included 86 recommendations and six best practices. The list below summarizes those recommendations and best practices. For more information on independent forest audits and specific details on audit recommendations go to [ontario.ca/forestreporting](http://www.ontario.ca/forestreporting) (<http://www.ontario.ca/forestreporting>)

Recommendations

- Ensuring the timely submission of forest resource inventories to support planning;
- Reducing the frequency of plan amendments and annual work schedule revisions;
- Collecting and maintaining adequate levels of values information to support planning;
- Minimizing the loss of productive forest to roads, landings, and slash and ensuring that these areas are included in strategic modelling;
- Investigating opportunities to reduce balsam fir content in regenerated forest stands;
- Ensuring effective tending treatments are conducted;
- Collecting aboriginal values information and ensuring the information remains confidential;
- Diversifying Local Citizen's Committee membership;
- Preparing compliance plans in accordance with requirements and addressing compliance issues;
- Standardizing aspects of silviculture effectiveness monitoring reporting; and
- Improving the effectiveness of a District's silviculture effectiveness monitoring program.

Independent Forest Audit Results for 2012-13

Management Unit	In Compliance	Sustainably Managed	SFL (Sustainable Forest Licences) Extension Recommended
Algonquin Park	Yes	Yes	n/a
Crossroute	Yes	Yes	Yes
Hearst	Yes	Yes	Yes
Martel	Yes	Yes	Yes
Nagagami	Yes	Yes	Yes
Northshore	Yes	Yes	Yes
Pineland	Yes	Yes	Yes
Romeo Malette	Yes	Yes	Yes
Sapawe	Yes	Yes	n/a

Best Management Practices

- Working relationships between MNRF (Ministry of Natural Resources and Forestry) District , the SFL (Sustainable Forest Licences) holder, and a First Nation community;
- Developing state-of-the-art free-to-grow survey methodology for the Great Lakes-St. Lawrence Forest;
- Conducting a forest renewal analysis that exceeded requirements;
- Conducting the first prescribed burn in Northeastern Ontario in over a decade;
- Developing and implementing an effective species at risk area of concern prescription; and
- Using an advanced information management system to ensure spatial accuracy and improve planning and operational efficiency.

Independent Forest Audits and Associated Auditors for 2012-13

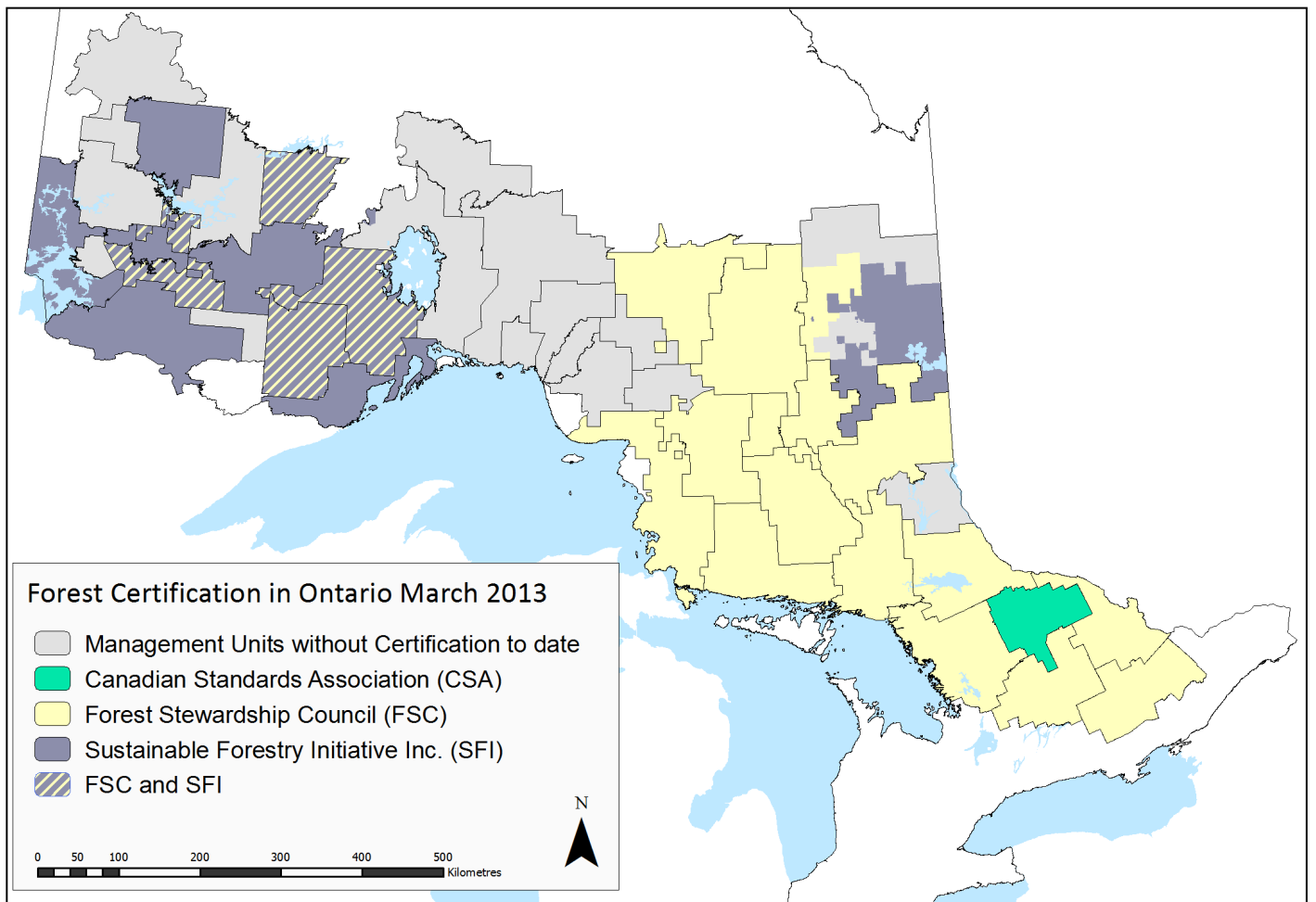
Management Unit	Auditor
Algonquin Park	Craig Howard R.P.F.
Crossroute	Arbor Vitae Environmental Services Ltd.
Hearst	Arbor Vitae Environmental Services Ltd.
Martel	KBM Forestry Consultants Inc.
Nagagami	KBM Forestry Consultants Inc.
Northshore	Arbex Forest Resource Consultants Ltd.
Pineland	KBM Forestry Consultants Inc.
Romeo Malette	Craig Howard R.P.F.
Sapawe	Arbex Forest Resource Consultants Ltd.

Forest certification

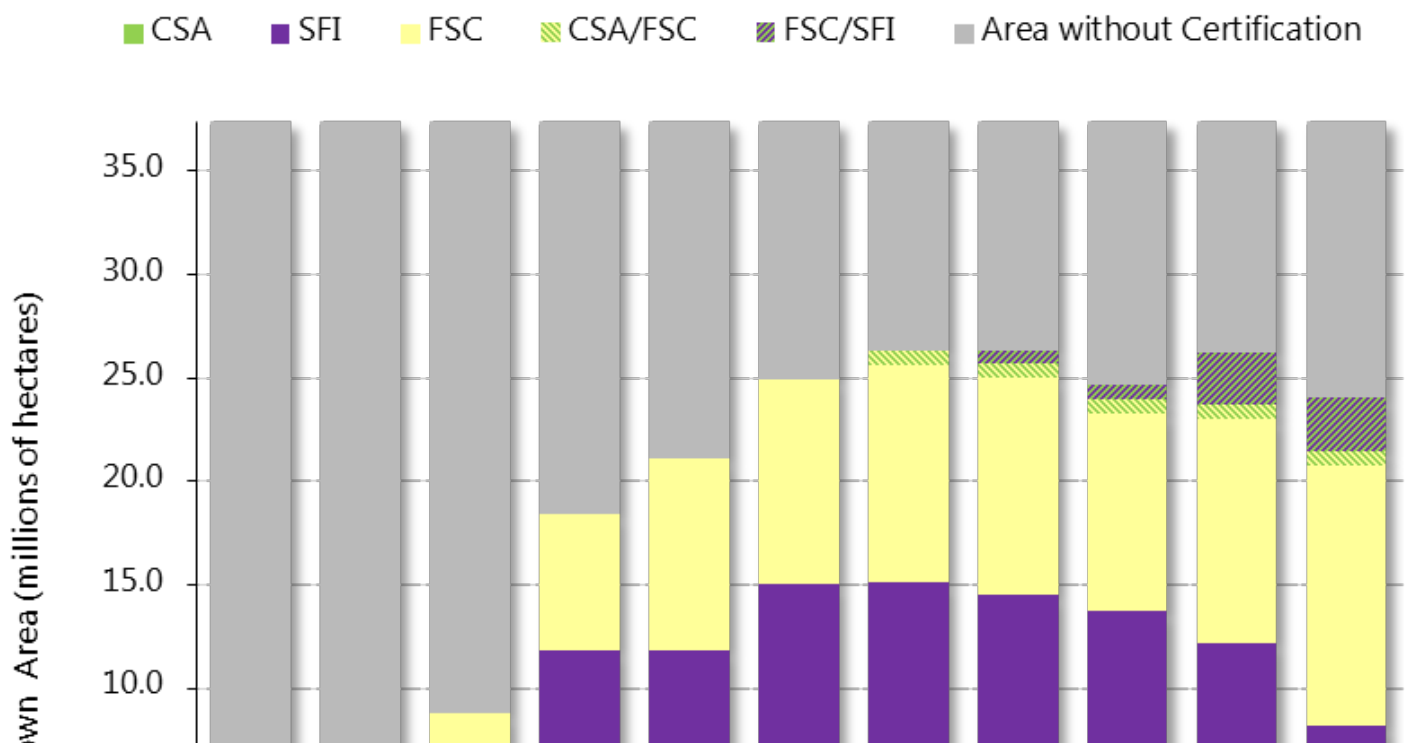
A number of management units in Ontario have received certification by independent third party organizations. Forest certification recognizes forest management planning and forestry practices that have met a forest management standard.

- Ontario had more than 24 million hectares of Ontario's Crown forests certified in 2012-2013;
- The Trout Lake and Wabigoon Forests were certified in 2012-13 under the Sustainable Forestry Initiative (SFI (Sustainable Forestry Initiative)) certification; and
- A number of management units went through re-certification audits during the year, based on certification audit cycles, and were successful in maintaining forest certification.

For more information on forest certification, view the fact sheet at [ontario.ca/environment-and-energy/forest-certification-ontario](http://www.ontario.ca/environment-and-energy/forest-certification-ontario) (<http://www.ontario.ca/environment-and-energy/forest-certification-ontario>).



Management Unit Area by Certification System





Science, research and policy development

The MNRF, in cooperation with its partners, makes advances in scientific programs, technical developments, and policy related to forest management. This practice demonstrates MNRF's (Ministry of Natural Resources and Forestry) commitment to continually evaluate and improve the forest management program.

Forest management guides

Forest management guides are developed and revised to provide forest managers with current direction and best practices based on the latest scientific knowledge. A continual program of scientific studies contributes to assessing the effectiveness of Forest Management Guides related to forest management. This information assists in the review and revision of guides. Advances included:

- Continuing with the revision of the Forest Management Guide for Boreal Forest Landscapes, the Management Guidelines for Forestry and Resource Based Tourism, and the Silvicultural Guide;
- Reviewing the Forest Management Guide for Cultural Heritage Values concluding the guide did not require revision;
- Reanalysis of moose habitat using updated methods to support the next Stand and Site Guide review;
- Analysing the effectiveness of access controls on operational roads during moose hunting season;
- Monitoring to evaluate the impact of fire and harvest disturbance on stream ecosystems;
- Developing and using GIS (Geographic information system)-based tools in forest management planning to predict areas that contribute surface and groundwater to streams;
- Monitoring to compare songbirds populations in harvest areas with naturally disturbed areas; and
- Developing spatial habitat models for specific songbirds to support development of landscape guides.

Forest compliance monitoring

Forest management operations are monitored to ensure that they conform to approved plans and permits. In response to recommendations provided by the Auditor General of Ontario, MNRF (Ministry of Natural Resources and Forestry) enhanced the program by:

- Incorporating risk management into several procedures in the Forest Compliance Handbook; and
- Improving the consistency and effectiveness in applying remedies for compliance.

Silviculture effectiveness monitoring

Silviculture effectiveness monitoring determines if forest managers are conducting forest regeneration activities and if those activities are producing expected results. In response to recommendations provided by the Auditor General of Ontario, MNRF (Ministry of Natural Resources and Forestry) initiated a Silviculture Enhancement Initiative (SEI (Silviculture Enhancement Initiative)) that includes:

- Reviewing the overall silvicultural policies for Ontario; and
- Exploring opportunities to improve the silvicultural program, including silviculture effectiveness monitoring.



Information management

MNRF (Ministry of Natural Resources and Forestry) continues to collect, manage and deliver digital data for forest management planning. Advances made in digital data and the applications used to store and distribute digital data included:

- Completing the modernization of Land Information warehouse applications;
- Consolidating wetland data and implementing new standards for species data;
- Including new FRI (Forest Resources Inventory) data into MNRF's (Ministry of Natural Resources and Forestry) public Make a Topographic Map application; and
- Reviewing the technology used to share forest management planning data with forest industry.

Analytical methodologies

Analysis supports forest management planning to address social and economic considerations, wildlife habitat supply, biological diversity, and landscape management. Developments and improvements included:

- Investigating methods to improve regard for spatial and economic considerations in planning;
- Conducting analysis in support of the Forest Carbon Policy Development Project;
- Enhancing decision support tools for forest management planning including the Zone Delineation Tool, Modelling and Inventory Support Tool, and Strategic Forest Management Model; and
- Initiating science for modelling to improve inputs such as growth and yield and natural succession.

Professional and technical training

MNR (Ministry of Natural Resources and Forestry) maintains professional and technical training programs to continually develop and update the knowledge of those involved in the planning and implementation of forest management activities. Training activities included:

- Providing information via e-newsletter on training initiatives, and promoting the Learning Compass;
- Delivering e-learning modules and dialogue sessions on climate change;
- Training on all guides as well as operator specific training for the Stand and Site Guide;
- Delivering province-wide workshops and field courses on Ecological Land Classification;
- Delivering an analyst workshop to showcase industry and MNR (Ministry of Natural Resources and Forestry) perspectives on spatial modelling;
- Training MNR staff on use of remedies in forest compliance; and
- Ongoing training, certification, or licensing of forest operations inspectors, scalers, and tree markers.

Public education on forest management

MNR (Ministry of Natural Resources and Forestry) participates in public education regarding the management of Ontario's forests, both directly and through partnerships. The principle public education activities included:

- Publishing educational material on MNR's (Ministry of Natural Resources and Forestry) website and participating in international tradeshow to highlight Ontario's forest products, the Ontario Wood initiative, and sustainable forest management.

Wildlife population monitoring

Provincial wildlife population monitoring determines if healthy populations of forest wildlife continue to exist and contributes to an understanding of how forest management affects wildlife populations. Wildlife population monitoring activities included:

- Ongoing migration monitoring and bird surveys through the Boreal Science Co-operative partnership;
- Designing, developing, and planning the Multi-Species Inventory and Monitoring program;
- Monitoring small mammals for Algonquin Park in partnership with University of Guelph; and
- Conducting moose surveys.

Ecological land classification

The Ecological Land Classification (ELC (Ecological Land Classification)) program establishes a consistent province-wide framework for ecosystem description, interpretation, and inventory. Ecological Land Classification program accomplishments included:

- Using ELC in Provincial Forest Resource Inventories; and
- Starting development of a Far North ELC (Ecological Land Classification).

Growth and yield

The Growth and Yield Program improves understanding of the growth, productivity, and dynamics of Ontario's forests. Growth and yield activities included:

- Establishing new sample plots and re-measurement of existing plots;
- Participating in a study on the impact of emerald ash borer; and
- Initiating a study on forest succession to generate information for use in forest management planning.

Full-tree harvest and biomass

The full-tree harvesting project, initiated in 1991, examines ecosystem processes and the changes occurring in response to varying levels of biomass removal. Advances related to the studies included:

- Completing 10th year site assessments and presenting results to the Provincial Forest Technical Committee for consideration in the revision of the Silvicultural Guide; and
- Establishing a new research trial to examine the potential impacts of biomass harvesting.

Invasive species centre

MNRF (Ministry of Natural Resources and Forestry) partners with the Invasive Species Centre (ISC (Invasive Species Centre)) to contribute to research and awareness of invasive species in Ontario. The ISC (Invasive Species Centre) is critical to addressing the challenges in preventing, detecting, responding and controlling invasive species. MNRF (Ministry of Natural Resources and Forestry) contributed to several projects delivered by the ISC (Invasive Species Centre) including:

- Determining the future focus for Emerald Ash Borer management in Ontario, Manitoba and Quebec through the Emerald Ash Borer Forum;
- Developing and testing new detection methods for invasive forest insects; and
- Building a GIS (Geographic information system) data layer to capture and share information on invasive species.

Aboriginal involvement in forest management

MNRF's (Ministry of Natural Resources and Forestry) Class Environmental Assessment Approval for Forest Management on Crown Lands in Ontario, requires district managers to conduct negotiations at the local level with Aboriginal communities. These negotiations identify and implement ways of achieving a more equal participation by Aboriginal peoples in the benefits provided through the forest management planning process and implementation.

The involvement of other parties is critical to successful implementation including participation of Aboriginal communities, the forest industry, and other government bodies (e.g. Indian and Northern Affairs Canada and Natural Resources Canada). Arrangements and agreements take different forms and attempt to accommodate the unique needs, capacities, and situations of individual Aboriginal communities.

Access to forest resources

On a district-by-district basis, the MNRF (Ministry of Natural Resources and Forestry) helps the forest industry and Aboriginal communities negotiate access to resources through various mechanisms. For example, issuing harvest opportunities through licences to Aboriginal communities or community members at the district level.

Silvicultural opportunities

Forest renewal and tending includes growing nursery stock, planting, seeding, spacing, cleaning, thinning, and site preparation. District managers have sought specific agreements between the forest industry and Aboriginal communities for silvicultural contract work. Agreements may also provide other key forest management activities, such as wood hauling, road construction and maintenance, and information gathering.

Employment

In 2012-13, participation levels of Aboriginal people working in all aspects of forest management varied, largely due to the reduction in the forest industry because of market conditions. As noted above, Aboriginal people were engaged in harvesting, as well as silviculture and other activities. Aboriginal people were also employed at forest resource processing facilities (mills). Business entities established may be affiliated directly with Aboriginal communities, may be run by individuals who are members of an Aboriginal community, or may be operated by non-Aboriginal parties.

The forest industry often provides the training, recruitment, hiring, and business opportunities for independent contractors. Some districts provide estimates of total numbers of Aboriginal people employed by the industry in the district. However, in many instances data are incomplete on the overall numbers of Aboriginal people working in the forest industry.

Aboriginal Access to Forest Resources 2012-13

District	Tenure type	Estimated Total ¹ Allocation (000 cubic metres)	Number of Aboriginal Communities Affected
Algonquin Park	Contract	59.1	2
Cochrane	Contract, Licence	678.0	3
Dryden	Licence	95.1	3
Fort Frances	Contract, Licence	370.8	8
Hearst	Contract	86.0	2
Kenora	Licence	95.3	3
Kirkland Lake	Contract, Licence	107.0	2
Nipigon	Licence	419.5	8
North Bay	Licence	32.9	3

Pembroke	Licence	5.7	1
Red Lake	Licence	7.9	1
Sault Ste. Marie	Conditional Commitment	40.0	3
Sioux Lookout	Licence	314.0	1
Sudbury	Licence	119.9	5
Thunder Bay	Licence	249.1	2
Timmins	Contract, Licence	unknown	2

Aboriginal Access to Silvicultural Contracts and Other Opportunities - 2012-13

District	Estimated Size of Contracts Industry & MNRF	Communities Affected	Types of Activities
Algonquin Park	385 ha	9	Tree Marking
	72 ha		Tending
Cochrane	Unknown	3	Road Maintenance, Beaver Control and Slash Management
Dryden	4.3 M Seedlings	2	Seedling Production
	91 ha		Thinning
	\$8.6 K		Road Construction and Maintenance
Fort Frances	\$289 K	9	Seedling Production, Planting, Cone Collection and Thinning
	\$66 K		Forest Management Services
	\$580 K		Road Construction and Maintenance, Water Crossing Inspections
	\$57 K		Water Crossings and Inspections
	\$72 K		Biomass Grinding and Hauling
Hearst	Unknown	1	Cone Collection
	Unknown	Unknown	Beaver Control
Kenora	\$548 K	6	Road Construction and Maintenance
	\$34 K		Slash Piling & Burning
	\$226 K		Forest Management Services
Kirkland Lake	51 ha	1	Tending
Nipigon	\$1.4 M	11	Road Construction and Maintenance
	100 K Seedlings		Tree Planting
North Bay	\$13 K	2	Tending

Sault Ste. Marie	500 K Seedlings	2	Seedling Production
	300 Hectolitres		Cone Collection
Sioux Lookout	\$1 M	1	Road Construction and Maintenance
Sudbury	950 K Seedlings	1	Seedling Production
Thunder Bay	40 K Seedlings	2	Tree Planting
	\$49 K		Road Construction and Maintenance

Training and development

District managers have helped co-ordinate programs to assist Aboriginal communities in preparing for increased participation in forest management activities. In some instances, the MNRF (Ministry of Natural Resources and Forestry) helps to foster Aboriginal training by providing funding, facilities, or equipment. Sometimes, districts provide direct training services, or leadership to training initiatives.

The most common training received by Aboriginals has been MNRF's (Ministry of Natural Resources and Forestry) forest management planning workshops. The benefits of this program are reaching more communities as Aboriginal members become increasingly involved. In addition, MNRF (Ministry of Natural Resources and Forestry) and the forest industry support a range of forest-related training and development initiatives for the benefit of Aboriginal people. Examples include:

- Eighth year of the Algonquin of Pikwakanagan Earthwalker Program (Pembroke);
- The First Nations Juvenile Spacing Training and Employment Program (Dryden);
- Fire Prevention, Road Grading, Forest Compliance Improvement Training (Nipigon); and
- Fort Frances District partnered with local First Nations to expand their existing Stewardship Youth Ranger program. The goal was to increase aboriginal participants and ensure that the young employees reflect the diversity of the District.

The MNRF's (Ministry of Natural Resources and Forestry) Aboriginal Youth Work Exchange Program (AYWEP (Aboriginal Youth Work Exchange Program)) and the First Nations Natural Resources Youth Employment Program are examples of larger, comprehensive training programs. Through the AYWEP (Aboriginal Youth Work Exchange Program), districts arrange eight-week summer employment for Aboriginal youth for up to three summers in a row. AYWEP (Aboriginal Youth Work Exchange Program) work placements may be with MNRF (Ministry of Natural Resources and Forestry) and/or with an Aboriginal Community or organization. They focus on resource management projects, job skills readiness training, and personal development training.

The First Nations Natural Resources Youth Employment Program is a six-week program employing and training youth from First Nations communities. Confederation College administers this program and receives support from the MNRF, other ministries and government agencies, and industry partners.

Role in planning and management

In addition to efforts to achieve more equal participation by Aboriginal peoples in the benefits of forest management activities, MNRF (Ministry of Natural Resources and Forestry) districts seek effective forums for Aboriginal communities to have a greater say in the planning and management of forest resources. In many

districts, Aboriginal peoples are members of Local Citizens Committees and are represented along with forest industry, government, and public on forest management planning teams.

Forest management plans include detailed Aboriginal Background Information Reports and maps of Aboriginal values. These reports summarize natural resource features, land uses, values, and forest management-related concerns of the communities. Districts have provided financial assistance to some communities to prepare these components.

MNR (Ministry of Natural Resources and Forestry) has also been investigating, creating, and encouraging new business models and tenure arrangements. First Nations and Métis people have been active participants and are increasingly pursuing opportunities for involvement in forest management and the forest sector. Some developments related to tenure arrangements include:

- Establishing the Nawiinginiima Forest Management Corporation, the province's first Local Forest Management Corporation. The communities of Pic Moberg First Nation, Ojibways of Pic River First Nation, Hornepayne First Nation, White River, Marathon, Manitouwadge and Hornepayne are partners in the corporation. Nawiinginiima manages and oversees forest management and the sale of timber in four management units — Nagagami Forest, White River Forest, Big Pic Forest and the Pic River Forest; and
- Awarding the Rainy Lake Tribal Resource Management Inc. an Enhanced Forest Resource Licence for five years to manage the Sapaw Forest. Enhanced Forest Resource Licences enable a community to not only harvest wood, but to manage the forest from which it comes.

MNR (Ministry of Natural Resources and Forestry) also works with Aboriginal communities in the Far North to respond to their interests in forest management including:

- Working with Cat Lake and Slate Falls First Nations to prepare a request for Environmental Assessment Act coverage for forest management on the Cat-Slate Forest. This will enable forest management opportunities identified in their approved community based land use plan; and
- Engaging with additional First Nations adjacent to the Area of the Undertaking on land use planning initiatives, including Eabametoong, Mishkeegogamang, Constance Lake, and Moose Cree. These planning initiatives could result in the identification of additional opportunities for forest management in areas north of the Area of the Undertaking.

Aboriginal Involvement in Planning and Management - 2012-13

	Aboriginal Communities Represented on LCCs		Aboriginal Communities Represented on Planning Teams		
District	Active Member	Non-active Member	Active Member	Non-active Member	Background Information Reports on File for a Forest
Algonquin Park	1	0	9	0	7
Bancroft	1	1	8	0	9
Chapleau	0	0	11	3	16
Cochrane	0	0	2	0	0
Dryden	0	0	8	1	13
Fort Frances	1	0	3	0	13

Hearst	0	0	7	0	11
Kenora	1	0	4	3	18
Kirkland Lake	3	2	5	0	5
Nipigon	2	6	8	13	24
North Bay	5	0	6	0	6
Parry Sound	0	1	0	2	5
Pembroke	1	0	8	1	6
Red Lake	0	0	1	0	1
Sault Ste. Marie	0	0	0	0	6
Sioux Lookout	1	8	2	7	5
Sudbury	0	1	4	10	9
Thunder Bay	6	1	4	0	6
Timmins	2	11	11	3	9

Annual report on forest management - final word

Ontario's forests provide a variety of environmental, economic and social benefits to the people of Ontario. The “Annual Report on Forest Management 2012-13” outlines the effectiveness of MNRF's (Ministry of Natural Resources and Forestry) forest programs in ensuring Ontario forests are well-managed for future generations.

This report has provided key information on the results of sustainable forest management in Ontario and addresses the legal requirements outlined in MNRF's (Ministry of Natural Resources and Forestry) Class Environmental Assessment Approval for Forest Management on Crown lands in Ontario. The report has also been prepared consistent with the principles and intent of the CFSA (Crown Forest Sustainability Act).

Your feedback is appreciated. If you would like more detailed information or have any comments on this Annual Report on Forest Management, please email them to ontforests@webmail.mnr.gov.on.ca (<mailto:ontforests@webmail.mnr.gov.on.ca>).

More information about MNRF (Ministry of Natural Resources and Forestry) programs is available at [ontario.ca/environment-and-energy/forestry](http://www.ontario.ca/environment-and-energy/forestry) (<http://www.ontario.ca/rural-and-north/forestry>)

For the year April 1, 2012 to March 31, 2013



Minister of Natural Resources and Forestry of the Province of Ontario

**To his Honour
The Lieutenant-Governor of the Province of Ontario**

May it please your Honour

The undersigned begs respectfully to present to your Honour the Annual Report on Forest Management for the fiscal year beginning April 1, 2012 and ending March 31, 2013.

Bill Mauro
Minister
July, 2014

This page represents the accessible version of the Annual Report on Forest Management 2012-13. For a copy of the official tabled report, please contact Phemie Hunter at phemie.hunter@ontario.ca (<mailto:phemie.hunter@ontario.ca>).

Updated: October 27, 2015