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2015 Silvicultural Activities Report

Maine Forest Service
Forest Policy and Management Division

Department of Agriculture, Conservation and Forestry

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2015 Silvicultural Activities Report

including Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2015 Landowner Reports and other survey instruments.
Data collected under the provisions of 12 MRS §8885

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Maine Forest Service

Forest Policy and Management Division

#22 SHS, Augusta, ME 04333

(207)287-2791 OR 1-800-367-0223(instate)

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Report Highlights

Harvesting and Land Use Change

- 400,832 acres were harvested in 2015, a decrease from 425,301 acres in 2014.
- 372,006 acres were "partially harvested" (partial and shelterwood totals) in 2015, a 6% decrease from 396,248 acres in 2014.
- The number of harvests reported decreased from 5,953 to 5,420.

Clearcutting:

1. The total area clearcut increased, from 23,374 acres in 2014 to 25,082 acres in 2015. Clearcutting amounted to 6.3% of total harvested acres.
2. Landowners owning more than 100,000 acres in Maine created 94% of all clearcut acreage (23,642 acres).
3. Average clearcut size in 2015 was 30 acres. Landowners owning more than 100,000 acres had an average clearcut size of 36 acres. Landowners owning less than 100,000 acres had an average clearcut size of 14 acres. 42 clearcuts larger than 75 acres were created in 2015.
4. The primary silvicultural reason for clearcutting reported by large landowners was the removal of poor quality, intolerant, under stocked, short lived or mature overstories where the retention of the residual overstory trees is not justified for further increase in value, as a source of seed, or for protection of the new stand.

Land Use Changes:

- Harvesting to convert land from forest management to some other land use decreased 34% from 5,678 acres in 2014 to 3,744 acres in 2015.

Precommercial Silvicultural Activities

Herbicide Use:

- For site preparation a increase of 44%, from 1,355 acres in 2014 to 1,957 acres in 2015.
- To release crop trees from competing vegetation increased 159%, from 3,966 acres in 2014 to 10,273 acres in 2015.

Timber Stand Improvement (TSI):

- Precommercial thinning of young stands with spacing saws decreased 27%, from 16,781 acres in 2014 to 12,212 acres in 2015. 96% of the acreage was done by landowners owning more than 100,000 acres (11,715 acres).

Planting:

- Tree planting increased 31%, from 5,223 acres in 2014 to 6,820 acres in 2015. 98% of the planting acreage was by landowners owning more than 100,000 acres (6,661 acres).

Forester Involvement

- In 2015, licensed foresters supervised harvesting on 299,418 acres, compared to 299,567 acres in 2014. 75% of all harvest acres in 2015 had a licensed forester involved; an increase from 2014 (70% involvement). Licensed Forester supervision occurred on 35% (843 out of 2,380 harvests) of the harvests on non-industrial family forests (<= 100 acres) in 2015. This is a 3% increase from 2014 (771 out of 2,441 harvests).

2015 Harvesting and Land Use Changes

Commercial Harvest Information by Landowner Size and Type		Acres						
		Partial Harvests	Shelterwood			Clearcut	Land Use Change	Total Harvest
			Initial or Intermediate Entry	Final Entry	Total Shelterwood			
OwnershipType	Ownership Size							
Forest Industry Woodlands	1 to 100 acres	1	0	0	0	0	0	1
	101 to 1,000 acres	30	0	0	0	0	0	30
	1,001 to 100,000 acres	10,383	1,034	240	1,274	0	110	11,767
	100,000 + acres	8,520	8,069	7,592	15,661	8,746	0	32,927
	SubTotal	18,934	9,103	7,832	16,935	8,746	110	44,725
Investor Timberlands	1 to 100 acres	41	0	0	0	0	0	41
	101 to 1,000 acres	0	0	0	0	0	0	0
	1,001 to 100,000 acres	646	761	2,003	2,764	285	0	3,695
	100,000 + acres	14,293	6,268	28,184	34,452	8,273	29	57,047
	SubTotal	14,980	7,029	30,187	37,216	8,558	29	60,783
Non-Industrial Land	1 to 100 acres	48,768	3,293	4,889	8,182	535	1,338	58,823
	101 to 1,000 acres	57,836	4,944	5,886	10,830	317	1,183	70,166
	1,001 to 100,000 acres	24,435	6,059	11,993	18,052	286	620	43,393
	100,000 + acres	30,325	20,552	47,767	68,319	6,609	277	105,530
	SubTotal	161,364	34,848	70,535	105,383	7,747	3,418	277,912
Other Woodlands (Govt, etc.)	1 to 100 acres	177	0	0	0	0	10	187
	101 to 1,000 acres	1,770	479	74	553	0	35	2,358
	1,001 to 100,000 acres	1,521	833	339	1,172	17	116	2,826
	100,000 + acres	10,282	804	915	1,719	14	26	12,041
	SubTotal	13,750	2,116	1,328	3,444	31	187	17,412
2015 Totals:		209,028	53,096	109,882	162,978	25,082	3,744	400,832
Percent of 2015 Harvest		52.15%	13.25%	27.41%	40.66%	6.26%	0.93%	100.00%
2014 Totals:		214,971	63,537	117,741	181,277	23,374	5,678	425,301
Percent Change from 2014 to 2015:		-3%	-16%	-7%	-10%	7%	-34%	-6%

2015 Precommercial Activities and Professional Assistance

Ownership Type	Ownership Size	Precommercial Activities by Landowner Size and Type				Number of Reported Harvests	Licensed Forester Involvement by Landowner Size and Type	
		Acres					Number of Harvests	Total Acres
		Herbicide Use		TSI	Tree Planting			
Site Prep	Release							
Forest Industry Woodlands	1 to 100 acres	0	0	0	0	1	0	0
	101 to 1,000 acres	0	0	0	0	1	0	0
	1,001 to 100,000 acres	0	0	0	0	56	21	5,187
	100,000 + acres	0	6,222	7,022	4,875	63	61	31,772
	Subtotal	0	6,222	7,022	4,875	121	82	36,959
Investor Timberlands	1 to 100 acres	0	0	0	0	2	1	40
	101 to 1,000 acres	15	0	0	15	1	0	0
	1,001 to 100,000 acres	0	0	0	0	14	14	3,696
	100,000 + acres	0	473	0	197	145	142	55,490
	Subtotal	15	473	0	212	162	157	59,226
Non-Industrial Land	1 to 100 acres	4	61	247	70	2,650	843	23,103
	101 to 1,000 acres	44	33	173	53	1,590	585	32,192
	1,001 to 100,000 acres	0	0	69	21	428	294	32,872
	100,000 + acres	1,894	3,284	4,693	1,589	340	312	98,333
	Subtotal	1,942	3,378	5,182	1,733	5,008	2,034	186,500
Other Woodlands (Govt, etc.)	1 to 100 acres	0	0	0	0	11	5	156
	101 to 1,000 acres	0	10	0	0	34	26	1,944
	1,001 to 100,000 acres	0	0	8	0	31	24	2,711
	100,000 + acres	0	190	0	0	53	52	11,922
	Subtotal	0	200	8	0	129	107	16,733
2015 Totals:		1,957	10,273	12,212	6,820	5,420	2,380	299,418
2014 Totals:		1,355	3,966	16,781	5,223	5,953	2,443	299,567
Change from 2014 to 2015:		44%	159%	-27%	31%	-9%	-3%	0%

Definitions:

Ownership Type *Forest Industry Land:* Woodlands owned by a forest products industry; usually most of the wood harvested is used by that industry.

Investor Timberlands: Woodlands owned by organizations, including Timberland Investment Management Organizations (TIMOs) and Real Estate Investment Trusts (REITs) that hold timberland assets as fiduciaries for the benefit of others.

Non-Industrial Land: Woodlands privately owned but NOT by a forest industry. These include private individuals and other non-forest product industries.

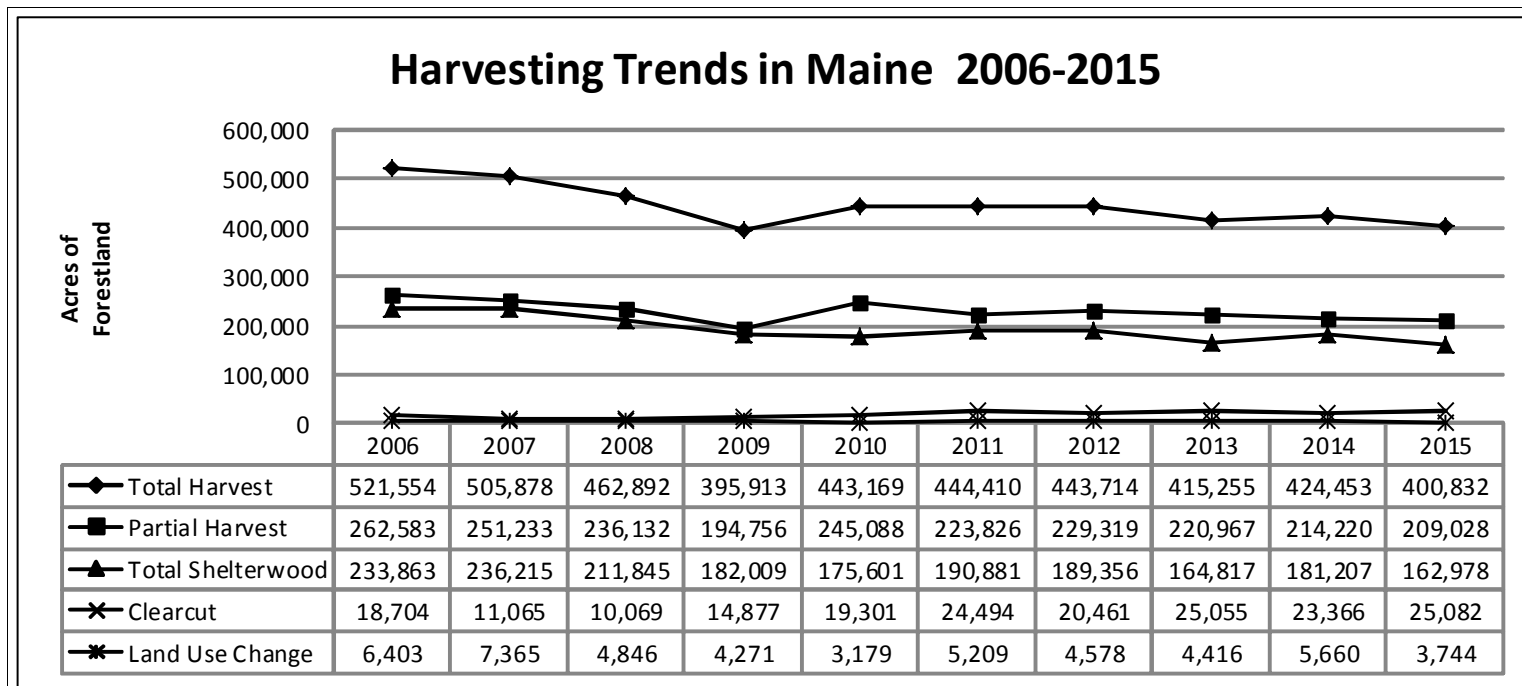
Other woodlands: Woodlands owned by other entities not listed above -- including local, state, federal, or tribal governments.

Types of Harvests *Partial Harvest:* Harvest where trees are removed individually or in small (<5 acre) patches.

Shelterwood: Harvest of mature trees from a forest site in two or more stages. The first stage removes only a portion of the trees to allow establishment of regeneration before the remaining trees are removed in subsequent harvest.

Clearcut: Harvest on a site larger than 5 acres that results in a residual basal area of acceptable growing stock trees >4.5" DBH of less than 30 square feet per acre, unless after harvesting the site has a well-distributed stand of acceptable growing stock 3 feet tall for softwood and 5 feet for hardwoods (Overstory Removal). Refer to the latest copy of the Maine Forest Service Rules Chapter 20 for additional information. It can be found on the Maine Forest Service website at http://www.state.me.us/doc/mfs/rules_regs/index.htm

Change of Land Use: Harvest conducted to convert forestland to another land use such as house lots, farm pastures, etc.



2015 Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2015 Landowner Reports and other survey instruments. Data collected under the provisions of the Forest Resources Assessment Program, 12 MRS § 8878-A

County	Large Landowners (own >100,000 acres)										All Other Landowners				All Landowners	
	Precommercial Activities		Clearcuts > 75 acres in size		Purpose for Clearcut (see explanation below)						Acres					
	Acres		#	Acres	Acres							TSI	Planted	Clearcut		Acres
	TSI	Planted			1	2	3	4	Sub Total	Avg. Size	Sub Total			Avg. Size	Clearcut	
Androscoggin	0	0	0	0	0	0	0	0	0	0	10	1	40	10	40	
Aroostook	7,463	4,875	25	2,738	7,524	0	42	344	7,910	198	9	47	91	9	8,001	
Cumberland	0	0	0	0	0	0	0	0	0	0	3	1	15	5	15	
Franklin	318	45	7	1,268	1,327	0	1,692	0	3,019	28	37	4	41	20	3,060	
Hancock	0	0	0	0	213	0	0	0	213	53	23	0	290	21	503	
Kennebec	0	0	0	0	0	0	0	0	0	0	101	22	99	12	99	
Knox	0	0	0	0	0	0	0	0	0	0	0	0	46	15	46	
Lincoln	0	0	0	0	0	0	0	0	0	0	55	0	0	0	0	
Oxford	0	0	5	965	659	27	3,736	0	4,422	25	135	2	64	8	4,486	
Penobscot	818	197	1	94	299	0	18	0	317	21	8	52	57	10	374	
Piscataquis	604	1,014	0	0	729	29	354	68	1,180	19	86	2	152	12	1,332	
Sagadahoc	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	
Somerset	2,365	530	3	416	5,187	52	589	361	6,189	21	17	28	148	16	6,337	
Waldo	0	0	0	0	0	0	0	0	0	0	5	0	92	15	92	
Washington	147	0	1	178	209	13	149	21	392	39	1	0	109	10	501	
York	0	0	0	0	0	0	0	0	0	0	0	0	196	11	196	
State Total:	11,715	6,661	42	5,659	16,147	121	6,580	794	23,642	36	497	159	1,440	14	25,082	

Purposes for creating clearcut:

1. Removal of poor quality, intolerant, under stocked, short lived or mature overstories where the retention of the residual overstory trees is not justified for further increase in value, as a source of seed, or for protection of the new stand.
2. Ecologically appropriate improvement or creation of wildlife habitat.
3. Removal of stands that, if partially harvested according to accepted silvicultural practice, are at high risk for windthrow due to factors such as soils, rooting depth, crown ratio or stem quality.
4. Harvesting of an existing plantation or other forest stand established by or previously treated with precommercial silvicultural activities.

**Conversion Table
Cord/Weight Equivalents
for various Maine Commercial Tree Species**

These conversions are used by the Maine Forest Service.

Users of this report may wish to confirm the conversion rate(s) used by individual mills and/or contractors who purchase wood.

These conversions factors are handy for making estimates and for forest inventory purposes, but are advisory only. The weight of a particular volume of wood varies greatly by species, time of year and other factors.

It is illegal in Maine to convert from one system of measurement to another for the basis of payment (e.g. convert a mill payment for pulpwood in dollars per ton to a landowner payment in dollars per cord).

<u>Species</u>	<u>Cords</u>	<u>Tons</u>	<u>Pounds</u>
Spruce Fir	1	2.1	4,200
White Pine	1	2.15	4,300
Red Pine	1	2.15	4,300
Hemlock	1	2.4	4,800
Cedar	1	1.7	3,400
Tamarack (Larch)	1	2.4	4,800
Beech	1	2.25	4,500
White Birch	1	2.25	4,500
Yellow Birch	1	2.7	5,400
Sugar Maple	1	2.7	5,400
Red Maple	1	2.25	4,500
White Oak	1	2.7	5,400
Red Oak	1	2.7	5,400
Ash	1	2.25	4,500
Aspen/Poplar	1	2.15	4,300
Softwood	1	2.3	4,600
Hardwood	1	2.7	5,400
Mixed Wood	1	2.3	4,600

For purposes of comparing volumes, a rough conversion of 1 MBF = 2 cords is commonly used.



Maine Forest Service District Foresters

Oliver Markewicz

2281 Alfred Road
Lyman, ME 04002
Phone: (207) 441-3712
E-mail: oliver.c.markewicz@maine.gov

Morten Moesswilde

536 Waldoboro Road
Jefferson, ME 04348
Phone: (207) 441-2895
E-mail: morten.moesswilde@maine.gov

Sandy Walczyk

P.O. Box 130
Jonesboro, ME 04468
Phone: (207) 441-4924
E-mail: sandra.l.walczyk@maine.gov

Terri Coolong

P.O. Box 415
Old Town, ME 04468
Phone: (207) 215-0679
E-mail: terri.r.coolong@maine.gov

Dan Jacobs

2 Forestry Road
Island Falls, ME 04747
Phone: (207) 441-4128
E-mail: dan.jacobs@maine.gov

Shane Duigan

356 Shaker Road
Gray, ME 04039
Phone: (207) 592-1251
E-mail: shane.p.duigan@maine.gov

Patty Cormier

PO Box 416
Norridgewock, ME 04957
Phone: (207) 592-2238
E-mail: patty.cormier@maine.gov

Vacant

P.O. Box 1107
Greenville, ME 04441
Phone: (207) 592-2239
E-mail:

Merle Ring

131 Bethel Road
West Paris, ME 04289
Phone: (207) 441-3276
E-mail: merle.ring@maine.gov

Randy Lagasse

45 Radar Road
Ashland, ME 04732
Phone: (207) 557-1086
E-mail: randy.lagasse@maine.gov

Maine Forest Service - Main Office - Augusta 1-800-367-0223 (instate) or 207-287-2791
email: forestinfo@maine.gov