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2004 Silvicultural Activities Report

Maine Forest Service
Forest Policy and Management Division

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2004

Silvicultural Activities Report

including Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2004 Landowner Reports and other survey instruments.
Data collected under the provisions of Title 12 MRSA §8885 and §8878-A

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Report Highlights

Harvesting and Land Use Changes

- 507,899 acres were harvested in 2004, a 1% decrease from 511,416 acres in 2003.
- 481,153 acres were partially harvested in 2004, no significant change from 481,661 acres in 2003.
- The number of harvests reported increased 20% from 4,756 to 5,713 harvests.

Clearcutting:

1. The total area clearcut decreased, from 24,021 acres in 2003 to 18,779 acres in 2004. Clearcutting amounts to less than 5% of total harvested acres.
2. Landowners owning more than 100,000 acres in Maine created 90% of all clearcuts (16,963 acres).
3. Average clearcut size in 2004 was 20 acres. Landowners owning more than 100,000 acres had an average clearcut size of 27 acres. Landowners owning less than 100,000 acres had an average clearcut size of 13 acres. Three clearcuts larger than 75 acres were created in 2004.
4. The primary silvicultural reasons for clearcutting reported by large landowners were: (a) 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; and (b) For areas where the retention of the residual overstory trees were at high risk of windthrow.

Land Use Changes:

- Harvesting to convert land from forest management to some other land use increased 39% from 5,734 acres in 2003 to 7,967 acres in 2004.

Precommercial Silvicultural Activities

Herbicide Use:

- For site preparation decreased 75%, from 1,093 acres in 2003 to 268 acres in 2004.
- To release crop trees from competing vegetation decreased 30%, from 18,663 acres in 2003 to 13,152 acres in 2004.

Timber Stand Improvement (TSI):

- Precommercial thinning of young stands with spacing saws decreased 26%, from 26,894 acres in 2003 to 19,871 acres in 2004.
95% of this activity was done by landowners owning more than 100,000 acres.

Planting:

- Tree planting decreased 30%, from 10,746 acres in 2003 to 7,573 acres in 2004.
96% of the planting was by landowners owning more than 100,000 acres. The predominant species planted were mixed softwoods.

Professional Assistance

- The harvest acres supervised by licensed foresters declined slightly.
65% of all harvest acres in 2004 had a licensed forester involved, compared to 70% of all harvests in 2003.
Licensed Forester supervision on small woodlots (<= 100 acres) increased slightly from 26% in 2003 to 27% in 2004.

2004 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	Sub-Total Shelterwood			
Ownership Type	Ownership Size							
Forest Industry woodlands	1 to 100 acres	345	2	16	18	25	141	529
	101 to 1,000 acres	1,561	25	8	33	0	14	1,608
	1,001 to 100,000 acres	22,848	1,724	4,408	6,132	603	50	29,633
	100,000 + acres	43,491	26,739	35,457	62,196	7,067	0	112,754
	SubTotal	68,245	28,490	39,889	68,379	7,695	205	144,524
Investor Timberlands	1 to 100 acres	18	0	0	0	0	15	33
	101 to 1,000 acres	0	0	0	0	0	20	20
	1,001 to 100,000 acres	1,203	30	550	580	404	0	2,187
	100,000 + acres	18,008	36,715	22,469	59,184	9,543	0	86,735
	SubTotal	19,229	36,745	23,019	59,764	9,947	35	88,975
Non-Industrial Land	1 to 100 acres	50,987	2,652	2,549	5,201	211	3,137	59,536
	101 to 1,000 acres	69,660	4,877	4,474	9,351	229	2,851	82,091
	1,001 to 100,000 acres	65,872	5,224	18,283	23,507	246	1,502	91,127
	100,000 + acres	10,144	6,454	6,683	13,137	353	10	23,644
	SubTotal	196,663	19,207	31,989	51,196	1,039	7,500	256,398
Other woodlands (Govt, etc.)	1 to 100 acres	396	40	40	80	0	166	642
	101 to 1,000 acres	2,529	56	131	187	5	15	2,736
	1,001 to 100,000 acres	2,618	675	672	1,347	93	23	4,081
	100,000 + acres	9,253	379	888	1,267	0	23	10,543
	SubTotal	14,796	1,150	1,731	2,881	98	227	18,002
2004 Totals:		298,933	85,592	96,628	182,220	18,779	7,967	507,899
Percent of 2004 Harvest:		58.86%	16.85%	19.03%	35.88%	3.70%	1.57%	100.00%
2003 Totals:		261,674	117,988	101,999	219,987	24,021	5,734	511,416
Percent Change from 2003 to 2004:		14%	-27%	-5%	-17%	-22%	39%	-1%

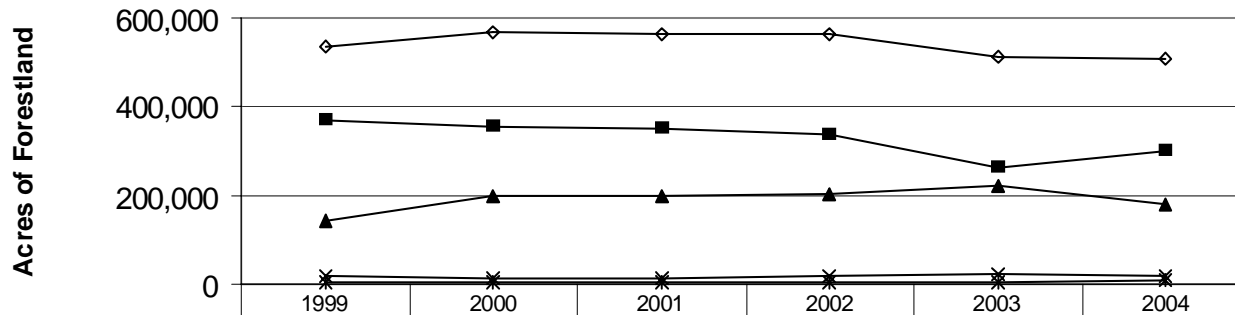
2004 Precommercial Activities and Professional Assistance

OwnershipType	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	73	6	0	23	4	50
	101 to 1,000 acres	0	0	0	0	22	5	412
	1,001 to 100,000 acres	0	0	0	0	71	29	10,795
	100,000 + acres	176	10,395	16,080	6,274	270	151	78,337
	Subtotal	176	10,468	16,086	6,274	386	189	89,594
Investor Timberlands	1 to 100 acres	0	0	0	0	2	2	33
	101 to 1,000 acres	0	0	0	0	1	0	0
	1,001 to 100,000 acres	0	0	400	100	18	18	2,187
	100,000 + acres	0	2,628	2,427	1,003	172	158	81,165
	Subtotal	0	2,628	2,827	1,103	193	178	83,385
Non-Industrial Land	1 to 100 acres	77	21	71	63	2,645	584	16,233
	101 to 1,000 acres	15	20	246	82	1,741	535	30,632
	1,001 to 100,000 acres	0	0	269	47	489	305	69,602
	100,000 + acres	0	0	362	0	89	85	23,369
	Subtotal	92	41	948	192	4,964	1,509	139,836
Other woodlands (Govt, etc.)	1 to 100 acres	0	0	0	0	24	8	229
	101 to 1,000 acres	0	10	10	3	53	37	1,769
	1,001 to 100,000 acres	0	5	0	0	40	34	3,299
	100,000 + acres	0	0	0	0	53	51	10,469
	Subtotal	0	15	10	3	170	130	15,766
2004 Totals:		268	13,152	19,871	7,573	5,713	2,006	328,581
2003 Totals:		1,093	18,663	26,894	10,746	4,756	1,856	358,611
Change from 2003 to 2004:		-75%	-30%	-26%	-30%	20%	8%	-8%

Definitions:

- Ownership Type**
- Forest Industry Land:** Woodlands owned by a forest products industry; usually most of the wood harvested is used by that industry.
 - Institutional 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 Practices Act, Maine Forest Service Rules Chapter 20 for additional information.
 - Change of Land Use:** Harvest conducted to convert forestland to another land use such as house lots, farm pastures, etc.

Harvesting Trends in Maine 1999-2004



◆ Total Harvest	537,333	569,470	565,312	561,587	511,070	507,899
■ Partial Harvest	368,355	353,230	349,594	335,501	261,328	298,933
▲ Total Shelterwood	144,857	197,013	196,792	202,603	219,987	182,220
× Clearcut	18,754	13,185	14,391	18,466	24,021	18,779
* Land Use Change	5,367	6,042	4,535	5,017	5,734	7,967

2004 Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2004 Landowner Reports and other survey instruments. Data collected under the provisions of the Forest Resources Assessment Program, 12 MRSA § 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	0	0	0	25	25	25	
Aroostook	11,398	3,624	0	0	2,071	0	374	0	2,445	29	62	42	299	15	2,744		
Cumberland	0	0	0	0	0	0	0	0	0	0	4	0	30	6	30		
Franklin	661	434	0	0	917	0	366	0	1,283	32	1	0	173	16	1,456		
Hancock	599	541	2	397	511	40	0	397	948	40	13	17	73	10	1,021		
Kennebec	0	0	0	0	0	0	0	0	0	0	40	1	0	0	0		
Knox	0	0	0	0	0	0	0	0	0	0	2	1	5	5	5		
Lincoln	0	0	0	0	0	0	0	0	0	0	2	0	34	17	34		
Oxford	798	205	0	0	550	0	0	0	550	50	261	47	50	17	600		
Penobscot	348	1,233	0	0	588	0	0	0	588	24	41	3	104	7	692		
Piscataquis	2,514	382	1	154	974	0	2,931	0	3,905	15	127	9	263	16	4,168		
Sagadahoc	0	0	0	0	0	0	0	0	0	0	0	0	10	10	10		
Somerset	1,948	716	0	0	3,938	0	3,206	23	7,167	19	413	128	527	16	7,694		
Waldo	0	0	0	0	0	0	0	0	0	0	9	42	102	15	102		
Washington	603	142	0	0	77	0	0	0	77	15	24	6	106	6	183		
York	0	0	0	0	0	0	0	0	0	0	3	0	15	8	15		
State Total:	18,869	7,277	3	551	9,626	40	6,877	420	16,963	27	1,002	296	1,816	13	18,779		

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.

Frequency Distribution of Clearcutting

for Large Landowners who own more than 100,000 acres

2004 Clearcut as percent of statewide ownership

of Landowners

Clearcut Acres

0% - 0.001%	15	24
0.001%-0.25%	7	3,963
0.26%-0.75%	4	12,976
0.76%-1.00%	0	0