

MAINE STATE LEGISLATURE

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2005

Silvicultural Activities Report

including Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2005 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

- 531,883 acres were harvested in 2005, a 4% increase from 511,046 acres in 2004.
- 504,419 acres were "partially harvested" (partial and shelterwood totals) in 2005, 4% increase from 484,057 acres in 2004.
- The number of harvests reported decreased 5% from 5,784 to 5,490 harvests.

Clearcutting:

1. The total area clearcut increased, from 18,797 acres in 2004 to 21,254 acres in 2005. Clearcutting amounts to less than 5% of total harvested acres.
2. Landowners owning more than 100,000 acres in Maine created 89% of all clearcuts (18,840 acres).
3. Average clearcut size in 2005 was 20 acres. Landowners owning more than 100,000 acres had an average clearcut size of 22 acres. Landowners owning less than 100,000 acres had an average clearcut size of 12 acres. One clearcut larger than 75 acres was created in 2005.
4. The primary silvicultural reasons 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 -24% from 8,192 acres in 2004 to 6,210 acres in 2005.

Precommercial Silvicultural Activities

Herbicide Use:

- For site preparation increased 212%, from 268 acres in 2004 to 837 acres in 2005.
- To release crop trees from competing vegetation decreased -12%, from 13,152 acres in 2004 to 11,530 acres in 2005.

Timber Stand Improvement (TSI):

- Precommercial thinning of young stands with spacing saws decreased -28%, from 19,928 acres in 2004 to 14,358 acres in 2005.
91% of this activity was done by landowners owning more than 100,000 acres.

Planting:

- Tree planting did not significantly change, from 7,573 acres in 2004 to 7,546 acres in 2005.
90% of the planting was by landowners owning more than 100,000 acres.

Professional Assistance

- In 2005, licensed foresters supervised harvesting on 369,746 acres, compared to 329,475 acres in 2004.
70% of all harvest acres in 2005 had a licensed forester involved, compared to 64% of all harvests in 2004.
Licensed Forester supervision on small woodlots (≤ 100 acres) remained steady at 24% between 2004 and 2005.

2005 Harvesting and Land Use Changes

| Commercial Harvest Information by Landowner Size and Type | | <u>Acres</u> | | | | | | |
|---|------------------------|------------------|-------------------------------|-------------|-------------------|----------|-----------------|---------------|
| | | 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 | 1,048 | 7 | 278 | 285 | 0 | 118 | 1,451 |
| | 101 to 1,000 acres | 2,082 | 166 | 1 | 167 | 0 | 18 | 2,267 |
| | 1,001 to 100,000 acres | 12,993 | 2,783 | 5,198 | 7,981 | 718 | 89 | 21,781 |
| | 100,000 + acres | 28,677 | 15,902 | 24,305 | 40,207 | 9,132 | 0 | 78,016 |
| | SubTotal | 44,800 | 18,858 | 29,782 | 48,640 | 9,850 | 225 | 103,515 |
| Investor Timberlands | 1 to 100 acres | 34 | 0 | 0 | 0 | 0 | 7 | 41 |
| | 101 to 1,000 acres | 32 | 28 | 0 | 28 | 10 | 0 | 70 |
| | 1,001 to 100,000 acres | 3,751 | 152 | 4,120 | 4,272 | 50 | 0 | 8,073 |
| | 100,000 + acres | 20,761 | 54,589 | 33,826 | 88,415 | 9,457 | 0 | 118,633 |
| | SubTotal | 24,578 | 54,769 | 37,946 | 92,715 | 9,517 | 7 | 126,817 |
| Non-Industrial Land | 1 to 100 acres | 48,477 | 2,453 | 2,106 | 4,559 | 562 | 3,615 | 57,213 |
| | 101 to 1,000 acres | 67,493 | 4,617 | 4,593 | 9,210 | 450 | 1,463 | 78,616 |
| | 1,001 to 100,000 acres | 50,423 | 7,246 | 35,332 | 42,578 | 558 | 670 | 94,229 |
| | 100,000 + acres | 35,184 | 6,384 | 15,918 | 22,302 | 251 | 0 | 57,737 |
| | SubTotal | 201,577 | 20,700 | 57,949 | 78,649 | 1,821 | 5,748 | 287,795 |
| Other woodlands (Govt, etc.) | 1 to 100 acres | 298 | 14 | 0 | 14 | 16 | 69 | 397 |
| | 101 to 1,000 acres | 1,607 | 69 | 2 | 71 | 0 | 133 | 1,811 |
| | 1,001 to 100,000 acres | 2,780 | 881 | 288 | 1,169 | 50 | 17 | 4,016 |
| | 100,000 + acres | 6,793 | 94 | 634 | 728 | 0 | 11 | 7,532 |
| | SubTotal | 11,478 | 1,058 | 924 | 1,982 | 66 | 230 | 13,756 |
| 2005 Totals: | | 282,433 | 95,385 | 126,601 | 221,986 | 21,254 | 6,210 | 531,883 |
| Percent of 2005 Harvest: | | 53.10% | 17.93% | 23.80% | 41.74% | 4.00% | 1.17% | 100.00% |
| 2004 Totals: | | 301,479 | 85,727 | 96,851 | 182,578 | 18,797 | 8,192 | 511,046 |
| Percent Change from 2004 to 2005: | | -6% | 11% | 31% | 22% | 13% | -24% | 4% |

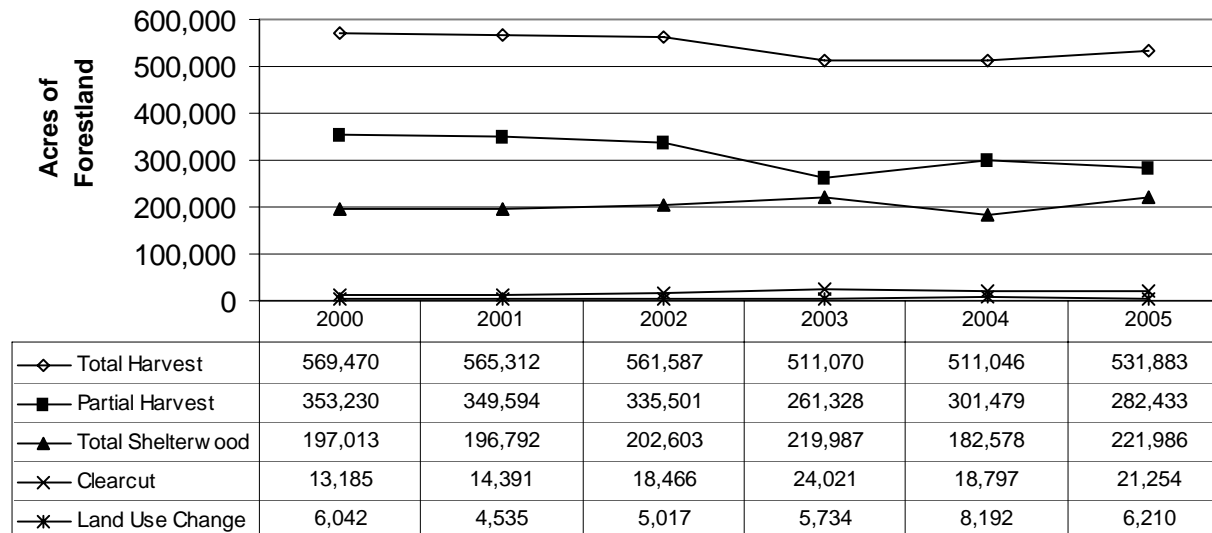
2005 Precommercial Activities and Professional Assistance

| OwnershipTypeOwnership 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 | 30 | 3 | 89 |
| | 101 to 1,000 acres | 0 | 0 | 0 | 5 | 38 | 7 | 554 |
| | 1,001 to 100,000 acres | 0 | 0 | 6 | 0 | 64 | 41 | 14,431 |
| | 100,000 + acres | 0 | 7,264 | 5,739 | 4,679 | 140 | 111 | 42,225 |
| | Subtotal | 0 | 7,264 | 5,745 | 4,684 | 272 | 162 | 57,299 |
| Investor Timberlands | 1 to 100 acres | 0 | 0 | 0 | 0 | 5 | 1 | 7 |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 4 | 0 | 0 |
| | 1,001 to 100,000 acres | 0 | 0 | 231 | 80 | 22 | 21 | 8,048 |
| | 100,000 + acres | 0 | 2,624 | 2,190 | 2,146 | 258 | 239 | 113,479 |
| | Subtotal | 0 | 2,624 | 2,421 | 2,226 | 289 | 261 | 121,534 |
| Non-Industrial Land | 1 to 100 acres | 10 | 0 | 224 | 497 | 2,584 | 578 | 13,840 |
| | 101 to 1,000 acres | 7 | 14 | 423 | 90 | 1,585 | 581 | 32,920 |
| | 1,001 to 100,000 acres | 820 | 1,090 | 457 | 47 | 456 | 315 | 78,474 |
| | 100,000 + acres | 0 | 538 | 4,824 | 0 | 162 | 146 | 52,812 |
| | Subtotal | 837 | 1,642 | 5,928 | 634 | 4,787 | 1,620 | 178,046 |
| Other woodlands (Govt, etc.) | 1 to 100 acres | 0 | 0 | 0 | 0 | 19 | 8 | 169 |
| | 101 to 1,000 acres | 0 | 0 | 5 | 2 | 29 | 19 | 1,375 |
| | 1,001 to 100,000 acres | 0 | 0 | 12 | 0 | 44 | 36 | 3,801 |
| | 100,000 + acres | 0 | 0 | 247 | 0 | 50 | 48 | 7,522 |
| | Subtotal | 0 | 0 | 264 | 2 | 142 | 111 | 12,867 |
| 2005 Totals: | | 837 | 11,530 | 14,358 | 7,546 | 5,490 | 2,154 | 369,746 |
| 2004 Totals: | | 268 | 13,152 | 19,928 | 7,573 | 5,784 | 2,026 | 329,475 |
| Change from 2004 to 2005: | | 212% | -12% | -28% | 0% | -5% | 6% | 12% |

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 2000-2005



2005 Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2005 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) | | | | | | <u>Acres</u> | | | | |
| | <u>Acres</u> | | # | Acres | 1 | 2 | 3 | 4 | Sub Total | Avg. Size | TSI | Planted | Clearcut | | <u>Acres</u> Clearcut |
| | TSI | Planted | | | | | | | | | | | Sub Total | Avg. Size | |
| Androscoggin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 8 | 0 | 34 | 9 | 34 |
| Aroostook | 7,517 | 4,353 | 0 | 0 | 8,552 | 0 | 36 | 0 | 8,588 | 25 | 116 | 92 | 307 | 13 | 8,895 |
| Cumberland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 | 3 | 64 | 9 | 64 |
| Franklin | 434 | 146 | 0 | 0 | 371 | 0 | 0 | 0 | 371 | 37 | 30 | 6 | 262 | 13 | 633 |
| Hancock | 0 | 152 | 0 | 0 | 60 | 0 | 6 | 0 | 66 | 66 | 59 | 27 | 170 | 13 | 236 |
| Kennebec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 31 | 1 | 35 | 12 | 35 |
| Knox | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 50 | 1 | 13 | 13 | 13 |
| Lincoln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 15 | 4 | 15 |
| Oxford | 839 | 532 | 0 | 0 | 99 | 0 | 443 | 0 | 542 | 17 | 305 | 46 | 152 | 12 | 694 |
| Penobscot | 397 | 651 | 0 | 0 | 0 | 0 | 74 | 0 | 74 | 15 | 122 | 9 | 141 | 11 | 215 |
| Piscataquis | 1,920 | 421 | 0 | 0 | 1,335 | 0 | 1,823 | 0 | 3,158 | 16 | 32 | 38 | 341 | 17 | 3,499 |
| Sagadahoc | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 65 | 333 | 5 | 5 | 5 |
| Somerset | 1,339 | 503 | 1 | 87 | 5,391 | 0 | 512 | 7 | 5,910 | 22 | 283 | 137 | 169 | 11 | 6,079 |
| Waldo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 14 | 149 | 14 | 149 |
| Washington | 554 | 67 | 0 | 0 | 0 | 0 | 31 | 100 | 131 | 13 | 213 | 14 | 458 | 12 | 589 |
| York | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 99 | 12 | 99 |
| State Total: | 13,000 | 6,825 | 1 | 87 | 15,808 | 0 | 2,925 | 107 | 18,840 | 22 | 1,358 | 721 | 2,414 | 12 | 21,254 |

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

2005 Clearcut as
percent of statewide
ownership

of Landowners

Clearcut Acres

0% - 0.001%

15

306

0.001%-0.25%

8

10,467

0.26%-0.75%

3

8,067

0.76%-1.00%

0

0