

2020

Silvicultural Activities Report

including Annual Report on Clearcutting and Precommercial Activities

Compiled from 2020 Landowner Reports and other survey instruments.
Data collected under the provisions of 12 MRS §8885

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Department of Agriculture, Conservation and Forestry

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Report Highlights

Harvesting and Land Use Changes

- 348,706 acres were harvested in 2020, an increase of 8% from 322,399 acres in 2019.
- 318,085 acres were partially harvested (partial and shelterwood totals) in 2020, a 7% increase from 298,105 acres in 2019.
- The number of harvests reported decreased from 4,577 to 4,281.

Clearcutting:

1. The total area clearcut increased 28% from 21,449 acres in 2019 to 27,434 acres in 2020. Clearcutting amounted to 7.9% of total harvested acres.
2. Landowners owning more than 100,000 acres in Maine created 94% of all clearcut acreage (25,822 acres).
3. Average clearcut size in 2020 was 28 acres. Landowners owning more than 100,000 acres had an average clearcut size of 29 acres. Landowners owning less than 100,000 acres had an average clearcut size of 16 acres. 61 clearcuts larger than 75 acres were created in 2020.
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 increased 12% from 2,845 acres in 2019 to 3,187 acres in 2020.

Precommercial Silvicultural Activities

Herbicide Use:

- Site preparation decreased 30%, from 4,750 acres in 2019 to 3,312 acres in 2020.
- To release crop trees from competing vegetation increased 59%, from 10,127 acres in 2019 to 16,137 acres in 2020.

Timber Stand Improvement (TSI):

- Precommercial thinning of young stands with spacing saws decreased 6%, from 9,003 acres in 2019 to 8,462 acres in 2020.
96% of the acreage was done by landowners owning more than 100,000 acres (8,140 acres).

Planting:

- Tree planting increased 5%, from 5,593 acres in 2019 to 5,895 acres in 2020.
96% of the planting acreage was by landowners owning more than 100,000 acres (5,635 acres).

Forester Involvement

- In 2020, licensed foresters supervised harvesting on 262,397 acres, compared to 223,728 acres in 2019.
75% of all harvest acres in 2020 had a licensed forester involved; an increase from 2019 (69% involvement).
Licensed Forester supervision occurred on 31% (632 out of 2,037 harvests) of the harvests on family woodlands (<= 100 acres) in 2020; compared to 30% in 2019 (672 out of 2,248 harvests).

2020 Harvesting Activities

| 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 | | | |
| Ownership Type | Ownership Size | | | | | | | |
| Forest Industry Woodlands | 1 to 100 acres | 150 | 10 | 12 | 22 | 9 | 46 | 227 |
| | 101 to 1,000 acres | 38 | 0 | 0 | 0 | 5 | 0 | 43 |
| | 1,001 to 100,000 acres | 5,693 | 636 | 1,649 | 2,285 | 169 | 12 | 8,159 |
| | 100,000 + acres | 10,112 | 10,228 | 17,535 | 27,763 | 10,288 | 0 | 48,163 |
| | SubTotal | 15,993 | 10,874 | 19,196 | 30,070 | 10,471 | 58 | 56,592 |
| Investor Timberlands | 1 to 100 acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| | 101 to 1,000 acres | 35 | 0 | 0 | 0 | 0 | 0 | 35 |
| | 1,001 to 100,000 acres | 153 | 0 | 0 | 0 | 0 | 4 | 157 |
| | 100,000 + acres | 15,775 | 7,046 | 20,901 | 27,947 | 4,768 | 0 | 48,490 |
| | SubTotal | 15,963 | 7,046 | 20,901 | 27,947 | 4,768 | 4 | 48,682 |
| Non-Industrial Land | 1 to 100 acres | 35,977 | 1,828 | 3,326 | 5,154 | 631 | 1,794 | 43,556 |
| | 101 to 1,000 acres | 44,003 | 4,065 | 4,070 | 8,135 | 355 | 889 | 53,382 |
| | 1,001 to 100,000 acres | 28,193 | 5,712 | 8,041 | 13,753 | 330 | 82 | 42,358 |
| | 100,000 + acres | 14,064 | 12,168 | 54,879 | 67,047 | 10,740 | 95 | 91,946 |
| | SubTotal | 122,237 | 23,773 | 70,316 | 94,089 | 12,056 | 2,860 | 231,242 |
| Other Woodlands (Govt, etc.) | 1 to 100 acres | 337 | 0 | 0 | 0 | 19 | 62 | 418 |
| | 101 to 1,000 acres | 1,077 | 145 | 30 | 175 | 36 | 52 | 1,340 |
| | 1,001 to 100,000 acres | 1,214 | 754 | 465 | 1,219 | 58 | 93 | 2,584 |
| | 100,000 + acres | 5,619 | 1,331 | 814 | 2,145 | 26 | 58 | 7,848 |
| | SubTotal | 8,247 | 2,230 | 1,309 | 3,539 | 139 | 265 | 12,190 |
| 2020 Totals: | | 162,440 | 43,923 | 111,722 | 155,645 | 27,434 | 3,187 | 348,706 |
| Percent of 2020 Harvest: | | 46.58% | 12.60% | 32.04% | 44.64% | 7.87% | 0.91% | 100.00% |
| 2019 Totals: | | 171,091 | 43,153 | 83,861 | 127,014 | 21,449 | 2,845 | 322,399 |
| Percent Change from 2019 to 2020: | | -5% | 2% | 33% | 23% | 28% | 12% | 8% |

2020 Precommercial Activities and Professional Assistance

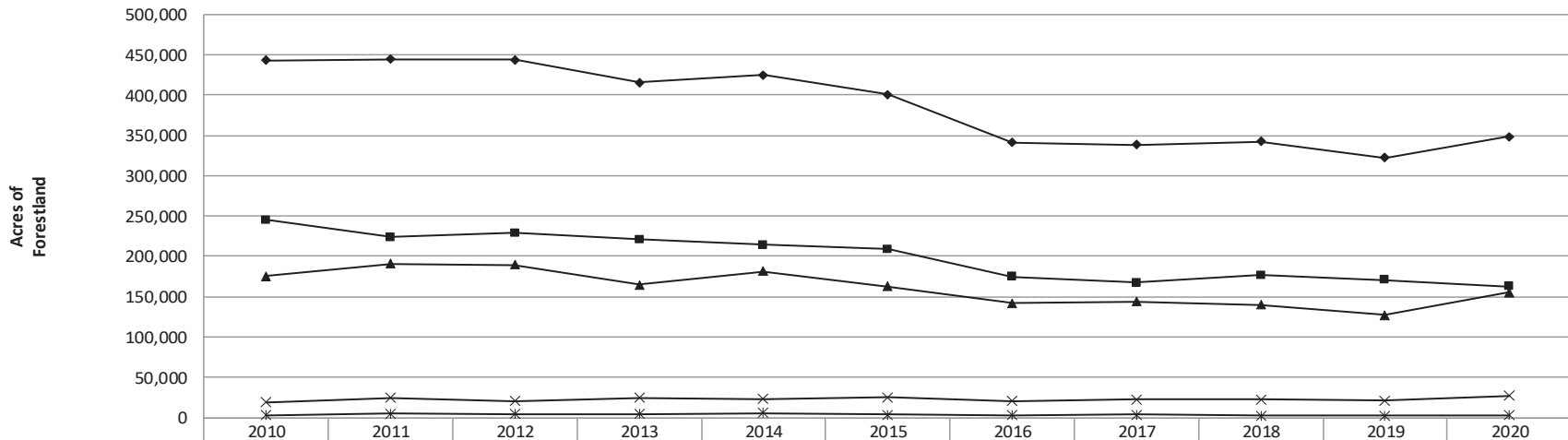
| Ownership Type | Ownership Size | Precommercial Activities by Landowner Size and Type | | | | Number of Reported Harvests | Licensed Forester Involvement by Landowner Size and Type | | |
|----------------------------------|------------------------|--|---------------|--------------|------------------|--------------------------------------|--|----------------|----------------|
| | | 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 | 7 | 2 | 84 | |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 3 | 1 | 18 | |
| | 1,001 to 100,000 acres | 0 | 0 | 0 | 0 | 22 | 12 | 4,829 | |
| | 100,000 + acres | 2,423 | 13,607 | 5,526 | 3,560 | 126 | 124 | 47,466 | |
| | Subtotal | 2,423 | 13,607 | 5,526 | 3,560 | 158 | 139 | 52,397 | |
| Investor Timberlands | 1 to 100 acres | 0 | 0 | 0 | 0 | 0 | 0 | 0 | |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 1 | 1 | 35 | |
| | 1,001 to 100,000 acres | 0 | 0 | 0 | 0 | 4 | 3 | 153 | |
| | 100,000 + acres | 0 | 215 | 222 | 481 | 152 | 150 | 47,910 | |
| | Subtotal | 0 | 215 | 222 | 481 | 157 | 154 | 48,098 | |
| Non-Industrial Land | 1 to 100 acres | 13 | 0 | 103 | 144 | 2,037 | 632 | 17,813 | |
| | 101 to 1,000 acres | 117 | 4 | 193 | 20 | 1,240 | 486 | 26,191 | |
| | 1,001 to 100,000 acres | 0 | 0 | 16 | 96 | 292 | 195 | 22,266 | |
| | 100,000 + acres | 758 | 2,302 | 2,392 | 1,594 | 267 | 215 | 84,120 | |
| | Subtotal | 888 | 2,306 | 2,704 | 1,854 | 3,836 | 1,528 | 150,390 | |
| Other Woodlands (Govt, etc.) | 1 to 100 acres | 0 | 0 | 0 | 0 | 16 | 6 | 305 | |
| | 101 to 1,000 acres | 0 | 0 | 0 | 0 | 30 | 24 | 1,195 | |
| | 1,001 to 100,000 acres | 0 | 8 | 10 | 0 | 39 | 29 | 2,407 | |
| | 100,000 + acres | 1 | 1 | 0 | 0 | 45 | 41 | 7,605 | |
| | Subtotal | 1 | 9 | 10 | 0 | 130 | 100 | 11,512 | |
| 2020 Totals: | | 3,312 | 16,137 | 8,462 | 5,895 | 4,281 | 1,921 | 262,397 | 348,706 |
| 2019 Totals: | | 4,750 | 10,127 | 9,003 | 5,593 | 4,577 | 1,988 | 223,728 | 322,399 |
| Change from 2019 to 2020: | | -30% | 59% | -6% | 5% | -6% | -3% | 17% | |

*Statewide Total Harvest
acres from previous page*

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.

Harvesting Trends in Maine 2010-2020



| | | | | | | | | | | | |
|---------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| ◆ Total Harvest | 443,169 | 444,410 | 443,714 | 415,255 | 424,453 | 400,832 | 341,318 | 338,088 | 342,462 | 322,399 | 348,706 |
| ■ Partial Harvest | 245,088 | 223,826 | 229,319 | 220,967 | 214,220 | 209,028 | 175,057 | 167,543 | 176,593 | 171,091 | 162,440 |
| ▲ Total Shelterwood | 175,601 | 190,881 | 189,356 | 164,817 | 181,207 | 162,978 | 141,833 | 144,012 | 140,062 | 127,014 | 155,645 |
| ✕ Clearcut | 19,301 | 24,494 | 20,461 | 25,055 | 23,366 | 25,082 | 20,971 | 22,741 | 23,033 | 21,449 | 27,434 |
| ✕ Land Use Change | 3,179 | 5,209 | 4,578 | 4,416 | 5,660 | 3,744 | 3,457 | 3,791 | 2,774 | 2,845 | 3,187 |

2020 Annual Report on Clearcutting and Precommercial Activities

Compiled from the 2020 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 Clearcut |
| | Acres | | # | Acres | Acres | | | | | | TSI | Planted | Clearcut | | |
| | TSI | Planted | | | 1 | 2 | 3 | 4 | Sub Total | Avg. Size | | | Sub Total | Avg. Size | |
| Androscoggin | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 98 | 98 | 98 |
| Aroostook | 4,782 | 3,126 | 25 | 2,908 | 8,885 | 0 | 829 | 0 | 9,714 | 25 | 60 | 146 | 358 | 16 | 10,072 |
| Cumberland | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 6 | 32 | 32 | 32 |
| Franklin | 0 | 69 | 8 | 1,102 | 2,382 | 0 | 189 | 7 | 2,578 | 34 | 11 | 1 | 231 | 19 | 2,809 |
| Hancock | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 50 | 98 | 12 | 98 |
| Kennebec | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 12 | 0 | 11 | 6 | 11 |
| Knox | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 60 | 30 | 60 |
| Lincoln | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 41 | 14 | 41 |
| Oxford | 0 | 135 | 15 | 2,568 | 1,961 | 0 | 540 | 0 | 2,501 | 76 | 51 | 1 | 168 | 24 | 2,669 |
| Penobscot | 236 | 291 | 0 | 0 | 182 | 0 | 104 | 168 | 454 | 16 | 21 | 29 | 176 | 13 | 630 |
| Piscataquis | 1,470 | 391 | 6 | 875 | 2,547 | 0 | 695 | 515 | 3,757 | 31 | 23 | 1 | 64 | 8 | 3,821 |
| Sagadahoc | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 41 | 14 | 41 |
| Somerset | 380 | 1,172 | 7 | 934 | 2,780 | 114 | 85 | 3,376 | 6,355 | 30 | 86 | 18 | 169 | 14 | 6,524 |
| Waldo | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 22 | 0 | 35 | 12 | 35 |
| Washington | 1,272 | 451 | 0 | 0 | 434 | 0 | 29 | 0 | 463 | 19 | 16 | 0 | 10 | 5 | 473 |
| York | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 20 | 10 | 20 |
| State Total: | 8,140 | 5,635 | 61 | 8,387 | 19,171 | 114 | 2,471 | 4,066 | 25,822 | 29 | 322 | 260 | 1,612 | 16 | 27,434 |

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.

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