**Conserved Lands**

**Question**

How much of the land in the 52 communities that make up the Piscataqua Region is permanently conserved or considered public lands?

**Goal**

Conserve 20% of the total land area in the Piscataqua Region Watershed.

**Short Answer**

As of April 2022, 151,978 acres have been conserved (18.1% of the total land area in the region) representing an increase of 2.6% in new land area coming under conservation (21,676 acres) since 2017. An additional 16,024 acres must be conserved in the watershed to meet the PREP goal of 20% of the total land area conserved.

**Why We Track this Indicator**

Our region is under pressure from population growth and associated development. Conserving a network of natural lands across the region is the most effective action we can take to ensure clean water and healthy and abundant wildlife populations, minimize flood damages, and provide a diversity of quality, recreational opportunities.

**Explanation**

As of April 2022, 151,978 acres have been conserved, which amounts to 18.1% of the total land area in the region. This represents an increase of 2.6% in new land area coming under conservation (21,676 acres) since the last report in 2017. Of all the acres considered conserved, 86% of them are under permanent protection. For the 22 coastal communities in the region, a total of 56,907 acres of land have been conserved. This represents 22.3% of the total land area in those 22 towns.

The percentage of conserved land area protected in each town is shown on the map in Figure 1. In 2017, 28 communities were at >15% conserved lands. As of 2022, six additional communities have increased conservation acreage and are now in the greater-than 15% category (two darker greens) for a new total of 34. Of this number, 26 communities have met or exceeded the PREP goal of 20% of total acreage conserved. Overall, conservation lands have increased across most of the region, but there are areas that remain where conservation lands, as a total percentage of the municipality’s land cover, is below 5% (yellow). At the sub-watershed level (HUC-12 analysis; Figure 2), areas where conservation efforts have been high (>30% of total land area) include Branch River, Exeter-Squamscott, Great Bay, Lamprey River, Oyster River, Pawtuckaway Pond and Scamen Brook-Little River. Conversely, areas where conserved lands are lower include Bauneg Beg Pond-Great Works River, Bog Brook-Little River, Middle Cocheco River, and Middle Salmon Falls River.

Although land protection continues to progress, there is more work to do to reach the PREP goal of conserving 20% of the land area. While land protection for the 22 coastal communities in the aggregate has exceeded 20%, an additional 16,024 acres must be conserved to meet the 20% level for the entire watershed.

**Figures**

![Diagram, map

Description automatically generated]()

Figure 1. Land conservation for each Piscataqua Region community.

![Map

Description automatically generated]()

Figure 2. Land conservation by % of total area for each HUC-12 (sub-watershed level).

**Acknowledgements** Chris Phaneuf (NH GRANIT)

**Methods**

The Maine and New Hampshire databases were queried to identify the conservation lands within the Piscataqua Region watershed (HUC8 01060003). The total acres of public and private conservation lands in the watershed, and the 22 coastal communities in the watershed, were calculated by summing the land area of individual conservation polygons (Table CG-1).

The land area was calculated by subtracting the areas of surface waters from the town boundary polygons. To determine the area of surface waters, GRANIT combined the relevant National Hydrography Dataset Waterbody features (with FType = 390 “LakePond,” 436 “Reservoir,” and 493 “Estuary”) and Area features (with FType = 336 “CanalDitch,” 364 “Foreshore,” 403 “Inundation Area,” 431 “Rapids,” 445 “SeaOcean,” 455 “Spillway,” and 460 “StreamRiver.”) The percentage of the Piscataqua Region watershed that is conserved was calculated by dividing the total acres of conservation land by the total land area of the watershed. The same method was used to determine the percent of conservation lands in the 22 coastal communities.

Conservation lands were grouped into “permanent,” “unofficial,” and “unknown” categories using the protection level fields in each state database (Table CG-2). Permanent conservation lands are protected from development through legally enforceable mechanisms, such as conservation easements, deed restrictions or ownership by an organization or agency whose mission emphasizes land protection. Unofficial conservation lands are not permanently protected; rather, they are owned by a public agency or private organization with the stated intent of protecting the land. The “unknown” designation is self-explanatory.

**Data Sources**

The most recent dataset of conservation lands from the Maine Office of GIS for the Maine towns and NH GRANIT for the New Hampshire towns were the primary data sources for this indicator.

**Tables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Town Name** | **Conservation Lands 2022 (acres)** | **Town Area (acres)** | **Percent Conservation 2022** |
| Barrington, NH | 6,446.1 | 29,719.0 | 21.7% |
| Brentwood, NH | 3,246.7 | 10,726.0 | 30.3% |
| Brookfield, NH | 3,845.4 | 14,593.0 | 26.4% |
| Candia, NH | 2,708.8 | 19,328.9 | 14.0% |
| Chester, NH | 3,084.1 | 16,606.2 | 18.6% |
| Danville, NH | 747.4 | 7,438.7 | 10.0% |
| Deerfield, NH | 7,205.6 | 32,575.7 | 22.1% |
| Dover, NH\* | 3,643.1 | 17,036.9 | 21.4% |
| Durham, NH\* | 6,713.0 | 14,251.1 | 47.1% |
| East Kingston, NH | 1,066.6 | 6,318.0 | 16.9% |
| Epping, NH | 4,918.4 | 16,476.6 | 29.9% |
| Exeter, NH\* | 4,151.6 | 12,540.6 | 33.1% |
| Farmington, NH | 2,804.8 | 23,213.0 | 12.1% |
| Fremont, NH | 1,489.8 | 11,033.1 | 13.5% |
| Greenland, NH\* | 1,488.2 | 6,722.5 | 22.1% |
| Hampton, NH\* | 829.7 | 8,287.3 | 10.0% |
| Hampton Falls, NH\* | 1,195.3 | 7,719.6 | 15.5% |
| Kensington, NH | 2,155.6 | 7,616.4 | 28.3% |
| Kingston, NH | 2,665.9 | 12,494.3 | 21.3% |
| Lee, NH | 3,336.8 | 12,685.0 | 26.3% |
| Madbury, NH\* | 2,110.1 | 7,383.6 | 28.6% |
| Middleton, NH | 2,545.2 | 11,559.0 | 22.0% |
| Milton, NH | 5,271.7 | 21,088.6 | 25.0% |
| New Castle, NH\* | 110.1 | 506.2 | 21.7% |
| New Durham, NH | 4,258.3 | 26,337.9 | 16.2% |
| Newfields, NH\* | 1,324.0 | 4,540.8 | 29.2% |
| Newington, NH\* | 1,487.5 | 5,214.5 | 28.5% |
| Newmarket, NH\* | 2,184.3 | 8,034.5 | 27.2% |
| North Hampton, NH\* | 2,016.1 | 8,861.8 | 22.8% |
| Northwood, NH | 3,141.6 | 17,965.0 | 17.5% |
| Nottingham, NH | 9,942.9 | 29,839.7 | 33.3% |
| Portsmouth, NH\* | 1,491.4 | 9,995.0 | 14.9% |
| Raymond, NH | 2,358.4 | 18,438.3 | 12.8% |
| Rochester, NH | 2,458.4 | 28,329.2 | 8.7% |
| Rollinsford, NH\* | 919.2 | 4,681.3 | 19.6% |
| Rye, NH\* | 1,940.7 | 8,042.4 | 24.1% |
| Sandown, NH | 1,138.5 | 8,888.5 | 12.8% |
| Seabrook, NH\* | 537.6 | 5,664.7 | 9.5% |
| Somersworth, NH | 729.1 | 6,219.2 | 11.7% |
| Strafford, NH | 8,669.4 | 31,151.8 | 27.8% |
| Stratham, NH\* | 1,928.5 | 9,655.1 | 20.0% |
| Wakefield, NH | 1,414.7 | 25,264.0 | 5.6% |
| Acton, ME | 834.3 | 24,216.3 | 3.4% |
| Berwick, ME | 1,663.9 | 23,775.4 | 7.0% |
| Eliot, ME\* | 900.3 | 12,576.4 | 7.2% |
| Kittery, ME\* | 2,050.8 | 11,377.9 | 18.0% |
| Lebanon, ME | 1,068.7 | 34,955.9 | 3.1% |
| North Berwick, ME | 1,200.5 | 24,249.9 | 5.0% |
| Sanford, ME | 2,653.0 | 30,289.8 | 8.8% |
| South Berwick, ME\* | 4,431.0 | 20,446.9 | 21.7% |
| Wells, ME\* | 5,968.7 | 36,427.3 | 16.4% |
| York, ME\* | 9,486.1 | 34,901.9 | 27.2% |
| **TOTAL:** | **151,978.0** | **838,260.8** | **18.1%** |
| **Coastal Community TOTAL:** | **56,907.4** | **254,868.3** | **22.3%** |

Table CG-1. Conserved land in the Piscataqua Region communities (municipalities).

**\* =** Coastal Community

All reported acreages refer to land area only; surface water areas not included.

Acreages are reported for entire town; several towns are only partially within the Piscataqua Region watershed.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Protection Type** | **New Hampshire** | **Maine** | **Total** | **% of Total** |
| Permanent | 102,677.0 | 27,794.5 | 130,471.5 | 85.9% |
| Unofficial | 18,017.7 | 1,954.8 | 19,972.5 | 13.1% |
| Unknown | 1,030.3 | 508.9 | 1,539.2 | 1.0% |
| Total | 121,725.0 | 30,258.2 | 151,983.2 | 100% |
| % of Total | 80.1% | 19.9% | 100% |  |

Table CG-2. Conservation lands in the Piscataqua Region 2022.