



## WHAT IS THE STATE OF GREAT LAKES FORESTS?

Total forest area in the Great Lakes region has increased in recent decades and now covers 51 percent of the region's land area. However, urbanization, vacation or second home construction, landowner practices and actions that adversely affect resource sustainability, and increased recreational use are key pressures currently impacting forest resources.

### *The Issues*

- Total forest area has increased across the Great Lakes basin in recent decades. Expanding forest area is associated with positive impacts on water quality and quantity.
- The forest products industry contribution to the economy of Great Lakes states in 2002 included employment of more than 503,000 persons, an annual payroll exceeding \$18.5 billion, and production of goods valued at more than \$71.4 billion.
- There is uncertainty about how much land in the basin should be forested and the amount of land that should be covered by each forest type.



Isle Royale National Park, Lake Superior. Photo: U.S. EPA Great Lakes National Program Office.

### *The Indicators*

Three indicators assess the extent, composition, and structure of forests in the Great Lakes region. These indicators measure the rate and ability of forests to perform the essential ecological functions required to protect the integrity of the watershed.

One indicator assesses extent of area by forest type

relative to total forest area in the Great Lakes basin, as extent and diversity of forest cover are indicators of basin health. A second indicator summarizes the structure of forests based on age class and inferred vegetative structures (diameter and height of vegetation), as many ecological processes and wildlife species are associated with vegetative structures. A third indicator summarizes the extent of forest by type in a protected area category, as defined by the International Union for Conservation of Nature or other classification system. Protected status ensures that specified tracts of land in the public domain remain under forest cover, and is indicative of the value a society places on forest conservation.

### *The Assessment*

Forests cover 27.8 million hectares, or about half (51 percent) of the land in the Great Lakes basin. The U.S. portion of the basin contains 14.8 million hectares of forests (47 percent of the U.S. basin), while the Canadian portion contains 13.0 million hectares (57 percent of the Canadian basin).

Maple-beech-birch is the most extensive forest type, representing 7.6 million hectares, or 27 percent of total forest area in the basin. Aspen-birch forests constitute the second-largest forest type, covering 6.5 million hectares, or 23 percent of the total. Other major types include spruce-fir forests (5.0 million hectares, or 18 percent of total forest area) and white-red-jack pine forests (2.7 million hectares, or 10 percent of total forest area). Basinwide, the 41-60 and 61-80 year age-classes are dominant and together represent 53 percent of total forest area. Forests under 40 years of age constitute a further 23 percent, while forests in the 100+ year age-classes constitute 9 percent of total forest area.

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In the U.S. portion of the basin, 3.5 percent of forested land, comprising 517,000 hectares, is in a protected area category. Among major forest types, 5.4 percent of maple-beech-birch (308,000 hectares), 2.7 percent of aspen-birch (73,000 hectares), 4.4 percent of spruce-fir (79,000 hectares) and 0.6 percent of white-red-jack pine forests (7,000 hectares) are considered to have protected status. The “other softwoods” category has the highest protection rate, with 7.7 percent, or 12,000 of its 157,000 hectares, protected from harvest.

In the Canadian portion of the basin, 10.8 percent of forest area, or 1.4 million hectares, are protected. Protection rates range from 9.2 percent for maple-beech-birch (172,000 hectares) and 10.7 percent for spruce-fir forests (340,000 hectares), to 12.7 percent for white-red-jack pine (191,000 hectares) and 13.0 percent for aspen-birch forests (490,000 hectares). The oak-pine category has the highest protection rate, with 22.5 percent, or 20,000 of its 90,000 hectares, under protected status.

### Current Actions

The Great Lakes basin contains a mixture of public and private lands. Various management guidelines exist through tribal, state, provincial, and federal forest management plans. The USDA Forest Service State and Private Forestry programs promote stewardship on private lands, as does the certification

of corporate and non-industrial ownerships.

Forest lands within the basin can be enrolled in sustainable forestry certification programs such as the Sustainable Forestry Initiative (SFI), the Forest Stewardship Council, and the Canadian Standards Association. There are more than 14 million acres in the United States and more than eight million acres in Canada enrolled in the SFI program. SFI is a comprehensive system of principles, objectives, and performance measures developed by foresters, conservationists, and scientists that combines the perpetual growing and harvesting of some trees with the protection of wildlife, plants, soil, and water quality. The program requires participants to manage the quality and distribution of wildlife habitats and contribute to the conservation of biological diversity by implementing stand- and landscape-level measures that promote habitat diversity and the conservation of forest plants and animals, including aquatic fauna.

### Actions Needed

Urbanization, seasonal home construction and increased recreational use - driven in part by the desire of an aging and more affluent population to spend time near natural settings - are among the general demands being placed on forest resources nationwide. Stakeholder discussion will be critical in identifying pressures and management implications that are specific to Great Lakes basin forests, and in helping to develop strategies for sustainable forest management.

### For More Information

For further information related to Great Lakes forests, refer the *State of the Great Lakes 2005* report which, along with other Great Lakes references, can be accessed at [www.epa.gov/glnpo/solec](http://www.epa.gov/glnpo/solec).

Land cover type and distribution in the Great Lakes Basin, 1990s. Source: *State of the Great Lakes 2005* report.

