



Glossary

activity day—The number of days per year that an individual (or a collective group of individuals) participates for any period of time in a particular activity. This metric is commonly used to measure recreational activities. Multiple recreation activities (such as hiking, photographing nature, and fishing) could be recorded for one person on the same day.

afforestation—Planting trees to establish a forest in an area where the prior land use was not forest (as in planting trees on former agricultural land).

annual growth—The average annual net increase in the volume of trees during the period between inventories. Components include the increment in net volume of trees at the beginning of the specific year surviving to its end, plus the net volume of trees reaching the minimum size class during the year, minus the volume of trees that died during the year, and minus the net volume of trees that became cull trees during the year.

anaerobic—Occurring in the absence of free oxygen.

biomass—The living or dead weight of organic matter in a tree, stand, or forest measured in units such as weight of live and dead material, green or dry weight, or weight of components such as boles, bark, tops, and roots (Helms 1998).

carbon emissions—Quantity (typically tons or metric tons) of carbon emitted to the atmosphere from combustion of fuels, decomposition of organic matter, and other activities. Often expressed as quantity of carbon dioxide (CO₂) with the mass of oxygen molecules included. Sometimes expressed as carbon dioxide equivalent (CO_{2e}) where the quantity of greenhouse gasses other than carbon dioxide (for example methane) are included in the total by converting those gasses to the amount of carbon dioxide expected to have a comparable greenhouse effect.

carbon sequestration (in forests)—The quantity of carbon (or CO₂ equivalent) held in plant tissues and soils in a forest ecosystem. The amount of sequestered carbon is often estimated by components (including live trees, dead trees, above ground tree parts, below ground tree parts, soil, or forest floor).

climate change—Long term trends or fluctuations in temperature, precipitation, wind, and other climate variables. In contemporary usage the term climate change often is used to indicate changes and fluctuations associated with increased atmospheric carbon dioxide and other greenhouse gasses (Helms 1998).

community land—Places that have geopolitical boundaries (such as cities, towns, or unincorporated named places) that may include all, some, or no urban land within their boundaries.

composite products—Wood products comprised of a resin matrix in combination with a wood fiber reinforcement. Composite wood pertains to, but is not limited to, particleboard, plywood, medium density fiberboard, composite veneer, and oriented strandboard.

cull tree—A tree at least 5 inches in diameter at breast height (d.b.h.) that is unmerchantable because it is rotten, poorly formed, or of an undesirable species.

d.b.h.—Tree diameter at breast height measured as inches of tree diameter at a height of 4.5 feet above ground level (diameter at breast height).

early successional forest habitat—Young forest (typically no more than 10 years old) that has regenerated on forest land following a large disturbance such as a timber harvest or via planting or natural succession on other open land.

ecological region—See ecoregion.

ecoregion—A contiguous geographic area with relatively uniform macroclimate, altitude, predominant natural vegetation, and/or other features that influence ecosystem function. Ecoregions can be split into finer divisions or aggregated into coarser categories based on macroclimate, landform, geology, hydrology, native vegetation, or other factors that affect plants and animals.

ecosystem services—The benefits people obtain from ecosystems. These include provisioning services such as food and water; regulating services such as flood and disease control; cultural services such as spiritual, recreational, and cultural benefits; and supporting services such as nutrient cycling that maintain the conditions for life on Earth. Ecosystems provide food, clothes, fuels and many of the commodities used to manufacture the products used in daily life. Ecosystems also purify and store water, help clean air, regulate climate, provide protection from natural hazards such as hurricanes, pollinate crops, and regulate pests. They have the ability to process and detoxify wastes. Ecosystems also provide places to play and reflect, and they contribute to our cultural, inspirational, and intellectual well-being by providing a sense of place.

edge—The transition between forest and nonforest land, between mature forest and young forest, or between two other contrasting forest conditions.

employees (number of)—All full-time and part-time employees who are on the payrolls of establishments who worked or received pay for any part of the pay period including the 12th of March, June, September, and December. Included are employees on paid sick leave, paid holidays, and paid vacations; not included are proprietors and partners of unincorporated businesses. Employment data for earlier years represent the average number of production workers for the payroll periods that include the 12th of March, May, August, and November. The “all employees” number is the average number of production workers plus the number of other employees in mid-March.

family forest owners—Families, individuals, trusts, estates, family partnerships, and other unincorporated groups of individuals that own forest land. This group is a subset of nonindustrial private forest owners.

FIA—See Forest Inventory and Analysis.

forest associated birds, mammals, and vascular plants—Birds, mammals, and vascular plants that normally spend part of their lives in a forest habitat.

Forest Inventory and Analysis (FIA)—The U.S. Forest Service research and development group charged with conducting and reporting inventories of forest vegetation, soils, health, and product outputs.

forest land—Land at least 120 feet wide and 1 acre in size with at least 10 percent cover (or equivalent stocking) by live trees of any size, including land that formerly had such tree cover and that will be naturally or artificially regenerated. Forest land includes transition zones, such as areas between forest and nonforest lands that have at least 10 percent cover (or equivalent stocking) with live trees and forest areas adjacent to urban and built-up lands. Roadside, streamside, and shelterbelt strips of trees must have a crown width of at least 120 feet and continuous length of at least 363 feet to qualify as forest land. Unimproved roads and trails, streams, and clearings in forest areas are classified as forest if they are less than 120 feet wide or an acre in size. Tree-covered areas in agricultural production settings, such as fruit orchards, or tree-covered areas in urban settings, such as city parks, are not considered forest land.

forest stand—A contiguous group of trees of similar age structure and size structure. In the North, stands are typically 5 to 40 acres in extent.

forest stewardship plan—A forest management plan that addresses the management objectives of the forest owner while maintaining the forest in a healthy condition for future generations.

forest type—A classification of forest land based on the tree species that presently form the plurality of live tree stocking (for example oak-hickory forest type or red pine forest type).

forest type-group—A group of forest types with similar tree species and/or habitat requirements.

fragmentation (forest)—The process of breaking up contiguous forest cover with various nonforest land uses.

fuelwood—Wood used for conversion to some form of energy.

growing stock—A classification of timber inventory that includes live trees of commercial species meeting specified standards of quality or vigor. Cull trees are excluded. When measured as cubic foot volume, it includes only trees 5.0 inches d.b.h. and larger.

habitat restoration—Returning forest species composition, size structure and/or ecosystem processes to a range of conditions representative of a former period of time (for example prior to European settlement).

hardwood—Trees belonging to the botanical group Angiospermae. These broad-leaved trees typically drop their leaves in autumn. Examples include oaks, maples, elms, cottonwood, aspen, and birch. The wood of hardwoods may be physically hard or soft relative to softwoods.

indicator—Qualitative or quantitative variable that functions as a signal to relay complex ecological information in a simple and useful manner. Effective indicator variables must be indicative of a larger ecological process, easily measured, cost-effective, and repeatable.

interior—Locations within mature forest cover that are removed by some minimum distance (e.g., 50 yards) from a forest edge.

invasive plants and animals—See invasive species.

invasive species—A species whose introduction does, or is likely to cause economic or environmental harm or harm to human health. Only a small proportion of nonnative species are invasive.

IUCN protected status—See protected area.

national forest—An ownership class of Federal lands, designated by Executive Order or statute as National Forests or purchase units, and other lands under the administration of the U.S. Forest Service.

net annual forest growth—See annual growth.

nonindustrial private forest—See private noncorporate owners.

nontimber forest products—These products are not commonly listed as outputs of the forest products industry, but are important in the herbal medicine, culinary, crafts, and floral industries. They include edible products such as fruits, nuts, mushrooms, ramps, and maple syrup; medicinal type products such as ginseng and bloodroot; ornamental products such as pine cones, boughs, and grapevines; landscape products such as native plants; specialty woods such as burl and crotch wood for fine crafts; and wild-grown Christmas trees. As used here they also include post, poles, or residential fuelwood sold in small quantities.

old-growth forest—A subjective term describing forests that are relatively old for their forest cover type and relatively undisturbed by humans. Old-growth forests are characterized by the presence of large trees of late-successional (climax) species, multiple age cohorts, decadent trees, large snags, down wood in multiple stages of decay, and down trees of large diameter.

other Federal—An ownership class of Federal lands other than those administered by the Forest Service or the Bureau of Land Management. This category includes the National Park Service, Fish and Wildlife Service, Department of Defense, Department of Energy, and other miscellaneous Federal ownerships.

parcelization—The division of parcels (individual ownerships) of land into smaller parcels split among multiple owners.

primary forest—See old-growth forest.

private forest—Forest owned by private individuals, corporations, or other nongovernmental entities.

private forest owners—Owners other than federal, State, county, or municipal government. This category includes private corporate (wood using industry and other incorporated) and private noncorporate.

private noncorporate owners—An ownership class of private lands that are not owned by corporate interests. This category includes land owned by individuals, Native American lands, unincorporated partnerships, clubs, and lands leased by corporate interests.

protected area—An area of land and/or sea especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means (see also reserved forest). Although all protected areas meet the general purposes contained in this definition, in practice the precise purposes for which protected areas are managed differ greatly. The International Union for Conservation of Nature (IUCN) has defined a series of six protected area management categories, based on primary management objective (DellaSalla et al. 2001; Dudley 2008; International Union for Conservation of Nature 1994, 2004):

Category I: An area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring or a large area of unmodified or

slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition. Strict nature reserves (Ia) are distinguished from wilderness areas (Ib).

Category II: A natural area of land and/or sea, designated to (1) protect the ecological integrity of one or more ecosystems for present and future generations, (2) exclude exploitation or occupation inimical to the purposes of designation of the area, and (3) provide a foundation for spiritual, educational, recreational, and visitor opportunities, all of which must be environmentally and culturally comparable.

Category III: An area of land and/or sea containing one or more specific natural or natural/cultural features which are of outstanding or unique value because of their inherent rarity, representative or esthetic qualities, or cultural significance.

Category IV: An area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

Category V: An area of land with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant esthetic, ecological, and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance, and evolution of such an area.

Category VI: An area of land and/or sea containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

protected forest—See protected area.

public forest land—Forest owned by federal, State, county, municipal, or other governmental entities.

pulpwood—Roundwood, whole-tree chips, or wood residues that are used for the production of wood pulp. Composite products are often made from similar material.

removals—The net volume of growing-stock trees removed from the inventory by harvesting, cultural operations such as timber stand improvement, or land clearing during a specified period of time (usually expressed as an annual average for a specified period of time).

reserved forest land—Forest land withdrawn from timber utilization through statute, administrative regulation, or designation without regard to productive status. This is usually public forest land. See also protected area.

roundwood products—Logs, bolts, and other round timber generated from harvesting trees for industrial or consumer use.

softwood—Trees belonging to the botanical group Gymnospermae. These needle-bearing trees typically produce seeds in cones. Examples include pines, spruces, firs, hemlocks, and cedars. The wood of softwoods may be physically soft or hard relative to hardwoods.

soil horizon—A specific layer in the land area that is parallel to the soil surface and possesses different physical characteristics from the layers above and beneath.

spatial scale—The degree of aggregation or disaggregation that one chooses to examine an issue. Spatial scales are hierarchical, and each scale can be split into finer units or combined into coarser units. Examples of spatial scale include national > State > county > township > section > woodlot (about 20 acres) < all woodlots along same south-facing ridge (about 100 to 500 acres) < small landscape (about 1,000 acres) < cluster of landscapes (up to 10,000 acres). Other relevant spatial scales might include the area around an individual tree, a forest stand, a group of forest stands, the typical home range of a wildlife species, an ecoregion, a watershed, a community, or an urban area.

stand—See forest stand.

stewardship—The administration of land and associated resources in a manner that enables their passing on to future generations in a healthy condition.

stewardship plan—See forest stewardship plan.

susceptibility—The potential for introduction and establishment, over a 15 year period, of a forest pest within a tree species or tree species group.

timberland—Forest land that is producing or is capable of producing crops of industrial wood and not withdrawn from timber utilization by statute or administrative regulation. Areas qualifying as timberland are capable of producing in excess of 20 cubic feet per acre per year of industrial wood in natural stands. Currently inaccessible and inoperable areas are included.

total wages—The annual payroll or gross earnings paid in each calendar year to employees at the establishment. It includes all forms of compensation, such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, and compensation in kind, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of corporations; it excludes payments to proprietors or partners of unincorporated concerns. Also excluded are payments to members of Armed Forces and pensioners carried on the active payrolls of manufacturing establishments. This term also includes fringe benefits for employees, including the employer's costs for social security taxes, unemployment taxes, workmen's compensation insurance, State disability insurance pension plans, stock purchase plans, union-negotiated benefits, life insurance premiums, and insurance premiums on hospital and medical plans for employees. Also included are the employer's costs for benefits to individual employees such as stock purchase plans, deferred profit-sharing plans, and defined benefit and defined contribution retirement plans. They exclude such items as company-operated cafeterias, in-plant medical services, free parking lots, discounts on employee purchases, and uniforms and work clothing for employees.

urban or community land—Urban land is all territory, population, and housing units located within urbanized areas or urban clusters, which are based on population density (areas with core population density of 1,000 people per square mile, but includes surrounding areas with lesser population density). Community lands are places that have geo-political boundaries (for example, cities, towns, or unincorporated named places) that may include all, some, or no urban land within their boundaries. As urban land reveals the more heavily populated areas (population density-based definition) and community land indicates both urban and rural (i.e., nonurban) communities that are recognized by their geopolitical boundaries (political definition), both definitions provide information related to human settlements and the forest resources within those settlements. As some urban land exists beyond community boundaries and not all community land is urban (communities are often a mix of urban and rural land), the category of "urban or community" was created to understand forest attributes accumulated by the union of these two definitions (U.S. Census Bureau 2007).

urban or community population—Total population within a region that resides within urban or community land.

urban land—All the territory, population, and housing units located within urbanized areas or urban clusters, each with a core population density of 1,000 people per square mile and with surrounding areas that have lower population densities (U.S. Census Bureau 2007).

vulnerability—The potential for experiencing mortality of a tree species, over a 15 year period, if a forest pest were to become established.

volume of timber—The gross volume in cubic feet of wood for standing trees or for cut trees less deductions for rot, roughness, and poor form. Volume is computed for the central stem from a 1-foot stump to a minimum 4.0-inch top diameter outside bark, or to the point where the central stem breaks into limbs.

watershed—Defined in nature by topography, a watershed is the land area that drains to a waterbody and affects its flow, water level, loadings of pollutants, and other processes. In both a real and figurative sense, a lake or river is a reflection of its watershed. The U.S. Geological Survey has developed a Hydrologic Unit Classification (HUC) System of watersheds at various scales and mapped these watersheds. The HUC's depicted in the figures are at the "eight-digit scale" (USGS 2011).

wildland-urban interface—Where houses meet or intermingle with wildland vegetation. The wildland-urban interface is composed of both interface and intermix communities. In both interface and intermix communities, housing must meet or exceed a minimum density of one structure per 40 acres. Intermix communities are places where housing and vegetation intermingle. In intermix, wildland vegetation is continuous, more than 50 percent vegetation, in areas with more than 1 house per 16 ha (39.54 acres). Interface communities are areas with housing in the vicinity of contiguous vegetation. Interface areas have more than 1 house per 40 acres, have less than 50 percent vegetation, and are within 1.5 mi of an area (made up of one or more contiguous Census blocks) over 1,325 acres (500 ha) that is more than 75 percent vegetated. The minimum size limit ensures that areas surrounding small urban parks are not classified as interface.