

Appendix L - Glossary

Activity Fuels – Fuels and/or slash which have been directly generated or altered by management action.

Adaptive Management – A type of natural resource management in which decision-making is an on-going process. Monitoring the results of actions will provide a flow of information that may indicate the need to change a course of action. Scientific findings and the needs of society may also indicate the need to adapt resource management.

Age Class – Grouping of trees originating from a single natural event or regeneration activity. Age classes are grouped by an interval of 10 or 20 years, for example 1-10 years, 11-20 years, 21-30 years, etc.

Aggregate Road – See “Road Types.”

Allelopathy – The production and release of chemical substances by one species that inhibit the growth of other species of plants

Allowable Sale Quantity – The quantity of timber that may be sold from the area of suitable land covered by the Forest Plan for a time period specified by the plan. This allowable sale quantity is usually expressed on an annual basis as the “average annual allowable sale quantity” (FSM 1900). For timber resource planning purposes, the allowable sale quantity applies to each decade over the planning horizon and includes only chargeable volume. Consistent with the definition of timber production, does not include fuelwood or other non-industrial wood.

All-terrain Vehicle – All-terrain vehicles are motorized flotation-tired vehicles with at least three, but no more than six low pressure tires, with an engine displacement of less than 800 cubic centimeters and total dry weight less than 900 pounds.

Alluvium – All sediment deposits resulting directly or indirectly from sediment transport within streams deposited in riverbeds, floodplains, lakes, fans, and estuaries.

Alternative – One of the several policies, plans, or projects proposed for the decision-making process.

Analysis – Methods used to determine or separate inventory and resource mapping information into important components and examine them critically (Webster).

Analysis Area – One site or a combination of sites delineated for the purpose of analysis in formulating alternatives and estimating various impacts and effects.

Analysis of Management Situation – A determination of the ability of the planning area to supply goods and services in response to society's demand for those goods and services.

Animal Unit Month – The quantity of forage required by one mature cow (1,000 pounds) or the equivalent for 1 month.

Aquatic – Pertaining to standing or running water in streams, rivers, lakes and reservoirs.

Aquatic Ecosystems – Aquatic systems are those that contain plants and animals that predominantly depend on a significant amount of water to be present for at least part of the year.

Arterial Road – See “Road Types.”

Aspen/Birch Vegetative Type – Includes forest types such as quaking and bigtooth aspen, paper birch, balsam poplar, and aspen-white spruce-balsam fir mix.

Atmospheric Deposition – the addition of elements or substances found in the air to the surface of the earth.

Background – See “Visual Distance Zones.”

Barren – A fire dependant vegetative community characterized by widely spaced, open-grown trees in the overstory. The understory is characteristically dominated by various assemblages of fire tolerant, shade intolerant, grasses, sedges, shrubs, and forbs. The community is generally located on droughty, infertile, sandy soils of outwash plains and sandy lake plains. The specific vegetative composition of the community is dependant on its physiographic and geographic position.

Basal Area – Measurement of how much of a site is occupied by trees. It is determined by estimating the cross-section area of all the trees in an area at breast height (4.5 feet).

Base Sale Schedule – A schedule in which the planned sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade of the Planning period, and this planning sale and harvest for any decade is not larger than the long-term, sustained-yield capacity. (This definition expresses the principle of nondeclining flow.)

Benchmark – A reference point that shows the limits of the resource outputs that a National Forest can provide.

Benefit (Value) – Inclusive term used to quantify the results of a proposed activity, project, or program expressed in monetary or non-monetary terms.

Benefit/Cost Ratio – The total discounted benefits of an activity divided by the total discounted costs.

Best Management Practices – Practices (individual or in combination) that prevent non-point source of pollution or ensure that the amount is kept to a level compatible with state water quality and wetland protection goals.

Big Game – The large species of animals that are hunted, such as deer, bear, and moose.

Biodiversity – Variety of life and its ecological processes; the variety of organisms considered at all levels, from genetic variants belonging to the same species, through arrays of genera, families, and still higher taxonomic levels. Includes the variety of ecosystems, which comprise both the communities of organisms within particular habitats, and the physical conditions under which they live. The Forest Service Manual has direction on habitat planning and evaluation, including specific forest planning direction for meeting biological diversity requirements: A forest plan must address biological diversity through consideration of the distribution and abundance of plant and animal species and communities to meet overall multiple-use objectives (FSM 2622.01).

Bioengineering – Combining structural, biological, and ecological concepts to construct living structures for erosion, sediment, or flood control.

Biological Potential – The maximum production of a selected organism that can be obtained under optimum management.

Biomass – As used in this document, the total weight, or quantity of a tree or trees.

Biome – An area of land with a characteristic combination of plants and animals that pass through a sequence of stages in development and that tend to reach a point of approximate equilibrium with its environment that differs from the equilibrium reached in another biome.

Biota – Pertaining to any aspect of life, especially to characteristics of entire populations of organisms, including animals, plants, fungi, and microorganisms, found in a given ecosystem.

Blowdown – Downed trees and slash from a windstorm.

Board Foot – A measure of sawn material; an amount of wood equivalent to a piece 12 inches x 12 inches x 1 inch. Multiply the number of board feet by 0.167 to convert to cubic feet of raw material.

Bog – Wetland ecosystems made up of accumulations of peat derived from decomposed sedges and mosses. Bog water is acidic and vegetation includes mostly shrubs, sedges, and mosses, stunted black spruce, tamarack, balsam fir and cedar.

Boreal Forest – A circumpolar, tundra forest type consisting primarily of black spruce and white spruce with balsam fir, birch, and aspen. It is the most extensive forest type in the world.

Broadcast Seeding – The scattering of seed as evenly as possible over an area.

Brush Raking – The uprooting and piling of brush with a tractor or bulldozer to reduce competition between the brush and the favored species.

Burning Prescription – Written direction stipulating fire environment conditions,

techniques, and administrative constraints necessary to achieve specified resource management objectives by use of fire on a given area of land.

Calcareous (soil) – Soil containing sufficient calcium carbonate (CaCO_3), often with magnesium carbonate (MgCO_3), to effervesce visibly when treated with cold diluted hydrochloric acid (HCl).

Cambium – A layer of living cells between the wood and the innermost bark of a tree. In each growing season, divisions of these cells adds a new layer of cells on the wood already formed as well as a layer of inner bark on the outer face of the cambium.

Canopy – The part of any stand of trees represented by the tree crowns. It usually refers to the uppermost layer of foliage, but it can be used to describe lower layers in a multi-storied forest.

Capital Investment – Includes all the activities initially required to produce a measurable and complete output. It has identifiable starting and ending dates. It reflects the cost of developed structures, facilities, or improvements in natural resources used to produce outputs, generally over a number of years.

Carrying Capacity – The level and types of recreational use a natural or developed area can provide without deterioration of the quality of the recreational experience or the resource.

Cavity – A hole in a tree often used by wildlife species, usually birds, for nesting, roosting, and reproduction.

Channel Morphology – The shape, structure, or form of stream channels usually as it relates to actions of flowing water or response to management.

Clearcutting – A regeneration method used to establish even-aged stands whereby all trees are removed in one harvest.

Climax Vegetation – The culminating stage in plant succession for a given environment, the vegetation being conceived as having reached a highly stable condition.

CMAI – See “Culmination of Mean Annual Increment.”

Coarse Filter Management – Land management that addresses the needs of all species, communities, environments, and ecological processes in a land area (compare to *fine filter management*). It is the concept of managing an array of representative ecosystems across the landscape, assuming that such representation will provide habitat for the majority of species.

Cold Water – Aquatic habitat that predominately supports fish species that have temperature tolerances up to about 70° F, and exhibit their greatest reproductive success at temperatures below 65° F (18.3° C). Salmon, trout, whitefish, and grayling are examples.

Collaborative Planning – Forest Service employees working with the public, state and local agencies, tribal governments, regulatory agencies, other federal agencies and others to assure the most efficient and effective conservation and sustainable multiple use management possible.

Collector Road – See “Road Types.”

Commercial Forest Land – Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils, productivity, or watershed conditions; and (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvesting.

Commodity Resources – Market driven resources such as timber, boughs, minerals and wildlife fish and game that can be bought and sold.

Common Class – See “Variety Class.”

Competitive Use of Off-Road Vehicles – Off-road vehicle use involving two or more persons that are organized for the purpose of contest, match, or other trial of skill, ability, or machine.

Composition – As used in ecology, the mix of species present on a site or landscape or population and the species’ relative abundance.

Concession Permit – A permit that authorizes private individuals or corporations to operate Forest Service-owned facilities as a commercial, profit-making venture.

Concessionaire – See “Concession Permit.”

Condition Class – A classification of the amount of departure from the natural fire regime.

Conifer – A wide range of the tree species within the order *Gymnospermae*, typically evergreen, bearing cones, and having needle or scale-like leaves, such as pine and spruce.

Connectivity – The linkage of similar but separated vegetation stands by patches, corridors, or “stepping stones” of like vegetation. This term can also refer to the degree to which similar habitats are linked.

Conservation (of species) – The terms “conserve,” “conserving” and “conservation” mean the use of all methods and procedures which are necessary to bring any endangered or threatened species to the point at which the measures provided pursuant to [the] Act are no longer necessary. [ESA § 3(3)]

Constant Road – See “Road Types.”

Constrained Maximum Level Alternative – The highest level of a particular output that could be produced over time, subject to the production of minimum acceptable levels for all other outputs.

Controlled Burn – See “Prescribed Fire.”

Cool Water (Intermediate) – Aquatic habitat that is intermediate between cold and warm waters and supports fish species that have the greatest reproductive success in temperatures ranging from 60° F to 75° F (15° C to 24° C). Usually included in this group are such species as smallmouth bass, northern pike, walleye, muskellunge, and sturgeon.

Cord – A unit of gross volume measurement for stacked round or split wood. A standard cord is 4 feet x 4 feet x 8 feet or 128 cubic feet. A standard cord may contain 60 to 100 solid cubic feet of wood depending on the size of the pieces and the compactness of the stacks.

Corridor (wildlife) – A defined tract of land connecting two or more areas of similar habitat type through which wildlife species can travel.

Corridor Road – See “Road Types.”

Cost Coefficients – Values that relate an acre of land to particular dollar cost in a specific period of time.

Cost Efficiency – The usefulness of specified inputs (costs) to produce specified outputs (benefits). In measuring cost efficiency, some outputs (such as environmental, economic, or social impacts) are not assigned monetary values but are achieved at specified levels in a least costly manner.

Cover Type (Forest Cover Type) – Stands of particular vegetation type that are composed of similar tree species.

Critical Habitat – Critical habitat is a term used in the Endangered Species Act of 1973, as amended. It refers to specific geographic areas that are essential for the conservation of a threatened or endangered species and that may require special management consideration or protection. These areas do not necessarily have to be occupied by the species at the time of designation. This means that areas must be identified that will allow for the protection of the current population, and any population increases that may be required to achieve recovery (allowing the species to be removed from the endangered species list)

CRM – Cultural Resource Management.

Cubic Foot – Common unit of measure for volumes of raw wood that is equivalent to a 12-inch cube. Multiply number of cubic feet by 6.0 to convert to board feet of sawn material.

Culmination of Mean Annual Increment – Age at which the mean annual growth is at its maximum and begins to decline.

Cultural Resources – The physical remains of past human cultural systems in places or sites of importance in human history or prehistory.

DEIS – Draft Environmental Impact Statement. See “Environmental Impact Statement.”

Demand Trends – The expected future need or desire for outputs, services, and uses.

Den tree – Any tree with hollow areas within branches or trunk that can be used for shelter by wildlife species.

Dense Hardwood Vegetative Type – This category includes all hardwoods except aspen and birch; including northern hardwoods and high- and low-site oaks.

Departure – A sale schedule that deviates from the principle of nondeclining flow by exhibiting a planned decrease in the timber sale and harvest schedule at any time in the future. A departure can be characterized as a temporary increase, usually in the beginning decade(s) of the Planning period, over the base sale schedule that would otherwise be established without impairing the future attainment of the Forests' long-term, sustained-yield capacity.

Desired Condition – Description of land and resource conditions if all long-term goals are achieved.

Desired Non-native Species – Those species of plants or animals that are not indigenous to an area but wanted for their contribution to high social, economic or cultural value.

Developed Recreation – Recreation that requires facilities resulting in concentrated use of an area. Examples are campgrounds and ski areas. Facilities might include roads, parking lots, picnic tables, toilets, drinking water, ski lifts, and buildings. See “Dispersed Recreation”.

Diameter at Breast Height – The diameter of a tree 4.5 feet above ground level.

Dispersed Recreation – Recreation opportunities or use occurring away from developed recreation sites, providing very little or no contact with Forest Service or volunteer staff. There may be minor facilities associated with dispersed recreation areas, such as parking areas, bulletin board at a trailhead or no facilities for activities such as hunting or camping. See “*Developed Recreation*”.

Distinctive Class – See “Variety Class.”

Distribution System – An arrangement of transmission lines, pipelines, utility lines, and/or roads to distribute energy or resources throughout an area.

Disturbance – Any event, either natural or human induced, that alters the structure,

composition, or functions of an ecosystem. Examples include forest fires, insect infestations, and timber harvesting.

Diversity – The distribution and abundance of different plant and animal communities and species within the area covered by a land and resource management plan (36 CFR 219.3). See also *biodiversity*.

Duff – The fermentation and humus layer of the forest floor material lying below the litter and above mineral soil; it consists of partially decomposed organic matter whose origins can still be visually determined as well as the fully decomposed humus layer. This layer does not include the freshly cast material in the litter layer. See “Litter.”

Early Successional Forest – The forest community that develops immediately following a removal or destruction of vegetation in an area. For instance, grasses may be the first plants to grow in an area that was burned.

Eastern Region – The portion of the Forest Service also referred to as Region 9, which includes the National Forests and Grasslands in New England, the Mid Atlantic, the Mid-west, and the Lake States.

Ecological Approach – An approach to natural resource management that considers the relationships among all organisms, including humans and their environment.

Ecological Integrity –In general, ecological integrity refers to the degree to which the elements of biodiversity and the processes that link them together and sustain the entire system are complete and capable of performing desired functions. Exact definitions of integrity are relative and may differ depending on the type of ecosystem being described.

ELT (Ecological Landtype) – An area of land with a distinct combination of natural, physical, chemical, and biological properties that cause it to respond in a predictable and relatively uniform manner to the application of given management practices. In a relatively undisturbed state and/or at a given stage (sere) of plant succession, an Ecological Landtype usually is occupied by a predictable and relatively uniform plant community. Typical size generally ranges from about 10 to a few hundred acres.

Ecological Units – Delimit areas of different biological and physical potentials.

Ecology – The interrelationships of living things to one another and to their environment, or the study of these interrelationships.

Ecosystem – A community of living plants, animals, and other organisms interacting with each other and with their physical environment.

Ecosystem Management – An ecological approach to natural resource management to assure productive, healthy ecosystems by blending social, economic, physical and biological needs and values.

Edge – The margin where two or more vegetation patches meet, such as a meadow opening next to a mature forest stand, a red pine stand next to an aspen stand, or a clearcut stand next to a well-stocked stand.

Emergent vegetation – Herbaceous plants that grow in water or saturated soil, with portions that stand up out of the water.

Endangered Species – Species listed as nationally in danger of extinction throughout all or a significant part of their ranges by the State of Michigan Endangered and Threatened Species list of February 8, 1983, and 50 CFR Part 17, July 27, 1983.

Environmental Analysis – The process associated with the preparation of an environmental assessment or Environmental Impact Statement and the decision whether to prepare an environmental assessment or Environmental Impact Statement. It is an analysis of alternative actions and their predictable short-term and long-term environmental effects, which include physical, biological, economic, and social factors and their interactions.

Environmental Assessment – A concise public document that serves to (a) briefly provide sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement or Finding of No Significant Impact and (b) aid in an agency's compliance with the National Environmental Policy Act when no Environmental Impact Statement is necessary (40 CFR 1508.9a).

Environmental Effect – Net change (good or bad) in the physical, biological, social, or economic components of the environment resulting from human actions. Effects and impacts as used in this document are synonymous.

Environmental Impact Statement – A statement of environmental effects required for major federal actions under Section 102 of the National Environmental Policy Act, and released to the public and other agencies for comment and review. It is a formal document that must follow the requirements of the National Environmental Policy Act, the Council on Environmental Quality guidelines, and directives of the agency responsible for the project proposal.

Erosion – The wearing away of the land's surface by running water, wind, ice, and other geological agents. It includes detachment and movement of soil or rock fragments by water, wind, ice, or gravity.

Eutrophication – The process by which a body of water becomes, either naturally or by pollution, rich in dissolved nutrients such as phosphorus.

Even-Aged – The condition of a forest or stand composed of trees having no or relatively small differences in age.

Even-Aged Timber Management – The combination of actions that result in the creation of stands in which trees of essentially the same age grow together.

Even-Flow – Continuous supply of products over a given time period.

Existing Visual Condition – The present state of visual alteration, which is measured in six degrees (untouched, unnoticed, minor disturbance, disturbed, major disturbance, drastic disturbance) of deviation from the natural-appearing landscape.

Exotic Species – See Non-native Invasive Species

Experimental Forest – A forest area set aside for research, administered by the Research branch of the Forest Service.

Extended Rotation – Management at rotation ages that are a minimum of 1.5 times the Culmination of Mean Annual Increment.

Extirpated Species – Species that formerly occurred regularly in an area but have disappeared and are not expected to recur without human assistance.

Fall Swarming Period – Period of time in the fall that bats forage, roost, and conduct mating activities near their hibernaculum before they hibernate, generally considered to be from September 1 through October 20 on the Huron-Manistee National Forests.

FEAST - Economic effects of the Forest Plan to local counties were estimated using an economic input-output model developed with IMPLAN Professional 2.0 (IMPLAN). Economic relationships generated within IMPLAN were extracted and used in the Forest Economic Analysis Spreadsheet Tool (FEAST) models. The model IMPLAN utilizing FEAST was used to help analyze the economic variation of forest management based on each alternative’s proposed management emphasis. (See IMPLAN®).

Federal Energy Regulatory Commission License – Licensed hydro-electric projects on the Huron-Manistee National Forests include six hydro-electric power producing dams on the Au Sable River– Mio, Alcona, Loud, Five Channels, Cooke and Foote, and two power producing dams on the Manistee River– Hodenpyl and Tippy. The Federal Energy Regulatory Commission license term is June 30, 2034.

FEIS – Final Environmental Impact Statement. See “Environmental Impact Statement.”

Fen – Wetlands that receive nutrients from direct contact with mineral enriched groundwater. A fen that has very low concentrations of plant nutrients and floristically resembles a bog is termed a “poor” fen. A "rich" fen has relatively high concentrations of nutrients, but is still characterized by the accumulation of peat (though this is likely to be primarily from the remains of plants other than sphagnum mosses, such as sedges and brown mosses).

Fine Filter Management – The concept of managing individual species through individual conservation measures. Individual nests, colonies, and habitats are emphasized. Management that focuses on the welfare of a single or only a few species rather than the broader habitat or ecosystem (compare to *coarse filter management*).

Fire Management – All activities required for the protection of resources and values from fire, and the use of fire to meet land management goals and objectives.

Fire Management Area – One or more parcels of land with clearly defined boundaries and with established fire management direction that is responsive to land and resource management goals and objectives.

Fire Management Effectiveness Index – The index value that measures effectiveness of annual fire management operational programs and serves as a planning attainment, analysis, and evaluation tool for both annual and long-term programs. Measured in dollars per 1,000 acres protected, the objective is to minimize the index value.

Fire Regime – A generalized description of the role fire plays in an ecosystem. It is characterized by fire frequency, seasonality, intensity, duration and scale (patch size), as well as regularity or variability.

Fire Rotation – The interval of time between wildland fire occurrences in a specific geographic area.

Fire Use – The combination of Wildland Fire Use and prescribed fire application to meet resource objectives.

Fiscal Year – The fiscal year is the government’s accounting period. It begins on October 1, ends on September 30, and is designated by the calendar year in which it ends.

Flood Plain – Lowland and relatively flat areas joining inland and coastal waters, including debris cones and flood-prone areas of offshore islands. The minimum area included is subject to a 1 percent (100-year recurrence) or greater chance of flooding in any given year.

Floodprone Area – Land and water which lies below the elevation equivalent to two times the maximum depth at bankfull stage of a stream.

Flora – The plants of a given region or period.

Flowline – Pipe through which oil or gas flows to processing equipment or storage.

Flow Regime – The prevailing water flow pattern of a stream and is determined by geology, topography, climate and vegetation.

Forage – All non-woody plants (grass, grass-like plants, and forbs) and portions of woody plants (browse) available to domestic livestock and wildlife for food. Only a portion of a plant is available for forage if the plant is to remain healthy.

Forage Management – Development of the range resource to its reasonably attainable potential, and management on a sustained-yield basis in a manner, which will enhance productive harmony between humans and their environment. Forage management in the Eastern

Region will be done to the extent necessary to support combined livestock and wildlife targets while protecting and enhancing the biological and physical intensities of range ecosystems.

Forage Utilization – (1) The portion of current year's forage production by weight that is consumed or destroyed by grazing animals. It is synonymous with degree of use. Expressed in percent of current year's growth utilized by grazing animals on an average over time based on a system of range management. The key to forage utilization is to maintain the key forage species while achieving other management objectives such as the maintenance of watersheds, wildlife habitat, recreational values, and the protection of regenerating plants. (2) The percent expressed in the “Management Prescription” is the estimated average forage utilization allowable to meet the objectives of that prescription under sustained-yield management.

Forb – Any herbaceous plant other than grass or grass-like plants.

Foreground – See “Visual Distance Zones.”

Forest and Rangeland Renewable Resources Planning Act of 1974, National Assessment – A document compiled by the Secretary of Agriculture every 10 years that contains facts and analyses to develop and guide public and private forest and rangeland policies and programs.

Forest and Rangeland Renewable Resources Planning Act of 1974, National Program – A document compiled by the Secretary of Agriculture every 5 years that outlines Forest Service programs for National Forest System management, cooperative assistance to states and private landowners, and research.

Forest Cover Type (Forest Type) – See “Cover Type.”

Forest Floor – Distinctive feature of forest soils that designates all organic matter, including litter and decomposing organic layers resting on the mineral soil surfaces but not mixed with mineral soil material. There are layers to the forest floor: “litter layer” of unaltered dead remains of plants and animals; a layer of fragmented partly decomposed organic materials still discernible to the naked eye, and a layer of well-decomposed organic material. The forest floor provides food to micro-fauna and micro-flora provides a fund of nutrients for higher plants, insulates the surface from extremes in temperature and moisture, and improves water infiltration See “Duff..”

Forest Health – A forest condition that has overall structure, function, and characteristics that enable it to be resilient to disturbance, meet human needs, and to maintain normal rates of change commensurate with its stage of development.

Forest Highway – See “Road Types.”

Forest Land – Land at least 10 percent occupied by forest trees of any size or formerly having had such tree cover and not currently developed for nonforest use.

- **(Forest Land) Not Appropriate** – Land not selected for timber production in the Forests' Plan alternative due to (a) the multiple-use objectives for the alternative preclude timber production, (b) other management objectives for the alternative limit timber production activities to the point where management requirements set forth in 36 CFR 219.27 cannot be met, and (c) the land is not cost efficient over the Planning horizon in meeting Forests' objectives that include timber production. Land not appropriate for timber production shall be designated as unsuitable in the preferred alternative and Forests' Plan.
- **(Forest Land) Suitable** – Land that is to be managed for timber production on a regulated basis.
- **(Forest Land) Tentatively Suitable** – Forest land that is producing or is capable of producing crops of industrial wood and (a) has not been withdrawn by Congress, the Secretary, or the Chief; (b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils, productivity, or watershed conditions; (c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that adequate restocking can be attained within 5 years after final harvest; and (d) adequate information is available to project responses to timber management activities.
- **(Forest Land) Unsuitable** – Forest land that is not managed for timber production because (a) the land has been withdrawn by Congress, the Secretary, or the Chief; (b) the land is not producing or capable of producing crops of industrial wood; (c) technology is not available to prevent irreversible damage to soils, productivity, or watershed conditions; (d) there is no reasonable assurance that lands can be adequately restocked within 5 years after final harvest, based on existing technology and knowledge as reflected in current research and experience; (e) there is, at present, a lack of adequate information to respond to timber management activities; or (f) timber management is inconsistent with or not cost efficient in meeting the management requirements and multiple-use objectives specified in the Forests' Plan.

Forest Plan – (Short for the Land and Resource Management Plan.) A long-range plan for management of a designated area of National Forest System lands. This plan will provide direction for all management programs and practices, resource uses, and resource protection measures on these lands.

Forest Plan Revision – A formal modification of an existing forest plan to address changes in the natural, social, and economic environment, new information about resources on and off National Forests, and new scientific knowledge that sheds new light on the assumptions of the existing plan and make the predicted impacts of the existing plan less accurate and/or less acceptable. Federal planning regulations require the Forest Service to revise a forest plan every 10 to 15 years.

Forest Products – Goods and services resulting from use of the forest. These may

include timber, wildlife, water, forage, recreation, and minerals. Also included, are recreational experiences, scenic and spiritual values, etc.

Forest Supervisor – The official responsible for administering National Forest System lands on an administrative unit, usually one or more National Forests. The Forest Supervisor reports to the Regional Forester.

Forest Type – A descriptive term used to group stands of similar character of development and species composition, due to given ecological factors, by which they may be differentiated from other groups of stands (see Cover Type).

Forest-Wide Management Requirements – A set of statements, which define or indicate acceptable norms, specifications or quality that must be met when accomplishing an activity or practice under a given set of conditions on the Forests.

Fragmentation – The process by which a landscape is broken into smaller islands of forest within a mosaic of other forms of land use or ownership. Fragmentation is a concern because of the effect of noncontiguous forest cover on connectivity and the movement and dispersal of animals in the landscape.

Fuel Management – The practice of planning and executing treatment or control of any vegetative material, which adversely affects meeting fire management direction, based upon resource management goals and objectives.

Fuel Treatment – A rearrangement or disposal of natural or activity fuels to reduce the fire hazard.

Fuelbreak – A strategically located strip of land, normally 100 to 400 feet wide, where fuels have been reduced or modified; used as a safe location from which fire fighters can attack and control a fire.

Fuels – Plants and woody vegetation, both living and dead, that are capable of burning.

Gabion – A wire mesh basket filled with rocks and used to protect erodible streambanks, or to create dams, deflectors, or other instream structures.

Game Species – Wild animals hunted for sport or food.

Gathering Pipeline – A pipeline used to move oil or gas from the field to a main pipeline.

Gauging Station – Continuous-streamflow measuring station usually operated by the U.S. Geological Survey.

Genotype – The genetic makeup of an organism.

Girdling – To make more or less continuous incisions around a living tree stem, through at least both bark and cambium, generally with the object of killing the tree; kinds of girdling include the following:

- **Chemical girdling** – Making a girdle and further, using an herbicide to kill the tree.
- **Fill girdling** – Making a series of downward, more or less overlapping incisions generally for the introduction of an herbicide.
- **Mechanical girdling** – Removing a broad band of bark, from several inches to several feet wide, all round a living bole, with some sapwood or without, so as to kill, or at least weaken the tree.

Goal – A concise statement that describes a desired future condition normally expressed in broad, general terms that are timeless, in that there is no specific date by which the goal is to be achieved.

Goods and Services – The various outputs, including on-site uses, produced by forest and rangeland resources.

Graded and Drained Road – See “Road Types.”

Grassland – A large openland community in which the characteristic plants are grasses.

- **Grassland (Dry)** – Covers a wide variety of grassland biotypes with relatively dry and nutrient-poor soils. Dry grasslands are enriched by structural elements such as bushes and trees, which provide valuable habitats for rare species of wildlife.
- **Grassland (Mesic)** – Characterized by, or adapted to, loamy, or silty soil types.

Group Selection Harvest – A cutting method in which trees are removed periodically in small groups. This silvicultural treatment results in small openings that form mosaics of age-class groups and leads to the formation of an uneven-aged stand.

Growing Stock Level (GSL) – Expressed either in stems per acre or square feet of basal area of timber growing on any area.

Guidelines – Guidelines are preferable limits to management actions that may be followed to achieve desired conditions. Guidelines are generally expected to be carried out. They help the Forest to reach the desired conditions and objectives in a way that permits operational flexibility to respond to variations over time. Deviations from guidelines must be analyzed during project-level analysis and documented in a project decision document, but deviations do not require a Forest Plan amendment.

Habitat – An area or environment where an organism or ecological community normally lives or occurs. In wildlife management, the major components of habitat are considered to be

food, water, cover, and living space. **Breeding habitat:** The habitat type or types upon which a wildlife species depends for reproduction. **Foraging habitat:** The habitat type or types within which a wildlife species finds the food it needs. **Wintering habitat:** Areas where migratory, and particularly airborne (e.g., birds, bats) species find shelter or warmer weather during the winter or non-breeding season.

Hardwood – A broad-leaved flowering tree, as distinguished from a conifer. Trees belonging to the botanical group of angiospermae.

Harvest (Timber Harvest) – Cutting and removing trees from the forest for utilization.

Hazardous Fuel – Combustible vegetation (live or dead), such as grass, leaves, ground litter, plants, shrubs, and trees, that contribute to the threat of ignition and high fire intensity and/or high rate of spread.

Herbivore – An animal that feeds on plant substances.

Herbivory – The consumption of plants by animals.

Heritage Resources – The remains of sites, structures, or objects used by people in the past; this can be historical or pre-historic (also see cultural resources).

High Quality Hardwoods – Hardwood trees or stands that will yield high value timber products such as veneer, knot-free lumber, furniture or specialty product stock, and flooring.

High-Site Oak – Oaks where site index greater than 55. Includes white pine-northern red oak-white ash, oak-aspen, black oak, white oak, northern red oak, yellow poplar-white oak-northern red oak, mixed oak, and black locust.

Hydro-Electric Licenses – See Federal Energy Regulatory Commission Licenses

Hydrologic Characteristics – Features of a watershed relating to the flow of water, such as infiltration, evapotranspiration, runoff, water yield, peak flows, and normal annual peak flow.

Hydrological Regime – The sum total of water that occurs in an area on average during a given period, i.e., the quantity, timing, location, and quality of available surface water, soil water, and groundwater. Hydrological regime is defined in terms of both single events and long-term patterns. The single-event perspective describes the flood that results from a rainstorm of some intensity, duration, and frequency that falls in a drainage basin with moisture already in the soils. The water that does not infiltrate the soil or evaporate into the atmosphere flows to and through the stream channel. If the volume of water exceeds the capacity of the channel to carry it, a flood results.

IMPLAN® – Acronym for Impact Analysis for PLANNing. IMPLAN® is an economic impact assessment modeling system. IMPLAN allows the development of economic models to estimate the impacts of economic changes in states, counties, or communities. IMPLAN® is a

computer model developed by the Forest Service in cooperation with the Federal Emergency Management Agency and the USDI Bureau of Land Management to assist the Forest Service in land and resource management planning. (See “Input-Output Analysis Model”).

Implementation – Those activities necessary to initiate the actions in the approved land and resource management plan.

Implementing Regulations – Regulations generated by an agency to implement acts of Congress. For example, 36 CFR 219 contains regulations to implement the Forest and Rangeland Renewable Resource Planning Act and the National Forest Management Act.

Improved Road – See “Road Types.”

Indicator Species – See “Management Indicator Species.”

Indigenous (Species) – Any species native to land or water.

Individual Tree Selection Harvest – A cutting method where individual trees are removed from certain size and age classes over an entire stand area. Regeneration is usually natural, and an uneven-aged stand is maintained.

Infiltration – The rate of movement of water from the atmosphere into the soil; that portion of rainfall or surface runoff that moves downward into the subsurface rock and soil; the entry of water from precipitation, irrigation, or runoff into the soil profile.

Informed Public Consent – Attaining substantial effective agreement on a course of action through various public information and involvement projects.

Input-Output Analysis Model – Quantitative study of the interdependency of a group of activities based on the relationship between inputs and outputs of the activities. The basic tool of analysis is a square input-output table or interaction model for a given period that simultaneously shows the value of inputs and outputs for each activity, as well as the value of transactions within each activity. It has been applied to the economy and the industries into which the economy can be divided.

Insecticide – An agent used to control insect populations.

Instream Flow – Usually used in defining the minimum flow necessary for all the uses of water while it is flowing through streams. Some of those uses are fisheries, channel stability, maintenance, riparian habitat maintenance, and aesthetics.

Intangible Values (Intangible Outputs) – Goods, services, uses, and conditions which are believed to have values to society but which have neither market values nor assigned values. (See “Nonmarket Values”).

Integrated Pest Management – An ecologically based process for selecting strategies to

regulate forest pests to achieve resource management objectives. It includes planned and systematic detection, evaluation, and monitoring techniques and all appropriate silvicultural, biological, chemical, genetic and mechanical tactics needed to prevent or reduce pest caused damage and losses to levels that are economically, environmentally, and aesthetically acceptable. (FSH 2109.14-94-1)

Integrated Resource Management Approach – All resources are planned in the same area and scheduled over the next decade using an interdisciplinary approach. All further Forest Plan implementation actions are united and coordinated to achieve the Forest Plan goals and objectives.

Integrity (heritage resources) – In terms of heritage resources, it is evidence of the authenticity of a property’s historical character, as indicated by the survival of physical characteristics that existed during the property’s historical or pre-historical period of use (see “Ecological Integrity”).

Interdisciplinary – The combination of two or more academic disciplines or fields of study.

Interdisciplinary Team – A group of individuals with skills from different resources. An Interdisciplinary Team is assembled because no single scientific discipline is sufficient to adequately identify and resolve issues and problems. Team member interaction provides necessary insight to all stages of the process.

Interior Forest – A large contiguous forest with a closed or partially open canopy of relatively mature trees.

Intermediate Harvest – Any removal of trees from an even-aged stand between the time of its formation and the regeneration cutting.

Intermittent Road – See “Road Types.”

Intermittent Stream – A stream that flows only at certain times of the year as when it receives water from springs, rainfall or run-off from some surface source, such as melting snow.

Interpretive Site – A developed site at which a broad range of natural or cultural history is interpreted or described for the enjoyment of the public.

Intolerant Species – Those plant species that do not grow well in shade.

Introduced Pest – Any insect or disease not native to a particular region.

Intrusive – Rocks formed from solidification of fluid flowing into or between other rocks. Solidification occurs before surface contacts.

Invasive Species – See non-native invasive species.

Inversion – A reversal of the normal atmospheric temperature gradient; cool air layer trapped beneath a layer of warm air.

Isolated Find – An historic or prehistoric archaeological object found unassociated with other archaeological objects.

Issue – A subject or question of widespread public discussion or interest regarding management of National Forest System lands.

Kirtland's Warbler Recovery Plan – A joint Forest Service, State, and USDI-Fish and Wildlife Service management plan that provides for the essential habitat of the Kirtland's warbler.

K-V Funds – The Knutson-Vandenberg Act of 1930, as amended by the National Forest Management Act, authorizes the collection of funds (K-V funds) for improvement activities within a timber sale area, such as reforestation, timber stand improvement work, wildlife and fisheries projects, and other resource activities.

Lacustrine Nesting Habitat – Nesting region that is associated with lakes.

Land Allocation – The decision to use land for various resource management objectives to best satisfy the issues, concerns, and opportunities.

Land and Resource Management Plan – See Forest Plan.

Land Exchange – A discretionary, voluntary transaction involving mutual transfers of land or interests in land between the Secretary of Agriculture acting by or through the Forest Service and a non-federal entity.

Landscape – A relatively large land area composed of interacting ecosystems that are repeated due to factors such as geology, soils, climate, and human impacts. Landscapes are often used for coarse filter analysis.

Landscape Ecosystem – The land and vegetation systems that occur naturally on the landscape. Landscape Ecosystems are one or more Landtype Associations grouped together.

Landscape Scale – Forest or area-wide planning, and watershed analysis scale; polygons representing 1,000's to 10,000's of acres. 1:250,000 to 1:60,000 range scale. Land unit scale – project and management area planning and analysis scale; polygons representing 10's to 1,000's of acres. 1:24,000 to 1:60,000 range scale. Legacy Data: Data (tabular or spatial) in which the Forest Service has already invested considerable time and money, but which has not yet been migrated into a corporate database.

Landtype Association – An ecological unit based on similar geologic landform, soils, climate, and vegetation that is part of the “National Hierarchical Framework of Ecological Units.” Landtype associations are smaller than subsections and larger than landtypes.

Large Wood – Large pieces of wood in stream channels or on the ground, includes logs, pieces of logs, and large chunks of wood; provides streambed stability and/or structural habitat diversity. Also called down wood or coarse wood. Previously referred to as large woody debris.

Late Successional Forest – The stage of forest succession in which most of the trees are mature or overmature.

Lateral Migration – Channel migration, the movement of a river or stream channel across its valley bottom.

Leadership Team – Decision-making group consisting of the Forest Supervisor, Deputy Forest Supervisor, Staff Officers, and District Rangers.

Leaching - A process of soil nutrient removal through the erosive movement and chemical action of water.

Leasable Minerals – Coal, oil, gas, phosphate, sodium, potassium, oil shale, and geothermal steam.

Legal Administrative Status – Identifier to show specific legal or administrative requirements that may restrict management options on an area.

Linear Program Model – A mathematical method, expressed in the form of equations, used to determine the best use of resources to achieve a desired result and limitations on available resources.

Linear Programming – A mathematical technique for determining the effects of alternative resource allocations.

Litter (Forest Litter) – The top layer of the forest floor directly above the duff layer, which includes freshly fallen or only slightly decomposed plant material, including leaves, needles, bark flakes, cone scales, fruits (including acorns and cones), dead matted grass and other vegetative parts that are little altered in structure by decomposition. See “Duff.”

Local Road – See “Road Types.”

Long-lived Conifer Vegetative Type – Consisting of red pine, white pine, white pine-hemlock, hemlock, Norway spruce, white spruce, white spruce-balsam fir-Norway spruce, black spruce (upland), and northern white cedar (upland).

Long-lived Tree Species – Trees species, including red pine, white pine, white spruce, black spruce, oak, balsam fir, tamarack, northern white cedar, northern hardwoods, and lowland hardwoods.

Long-Term – Action governed by the Forest Plan generally taking place over a period of 10 years or more from the present.

Long-Term Sustained-Yield Capacity – The highest uniform wood yield from lands being managed for timber production that may be sustained, under specified management intensity, consistent with multiple-use objectives.

Lowland Conifer Vegetative Type – Consists of black spruce, northern white cedar, tamarack, mixed swamp conifers, and cedar-aspen-paper birch mix.

Lowland Hardwood Vegetative Type – Consists of black ash-elm-red maple, red maple (wet), and mixed lowland hardwoods.

Low-Site Oak Vegetative Type – Consists of oak and mixed oak forest types with site index less than 55, and includes jack pine-oak, red pine-oak, white pine-northern red oak-white ash, black oak, white oak, northern red oak, mixed oak and black locust.

Management Area – A portion of a landscape with similar management objectives and a common management prescription. The Forests are divided into management areas with specific direction for each management area described through desired conditions, objectives, Standards and Guidelines.

Management Concern – A matter of importance to the management of National Forest System lands, which is identified internally by the agency.

Management Direction – A statement of multiple-use and other goals, objectives, management prescriptions, and Standards and Guidelines for attaining those objectives and desired conditions.

Management Goal – A concise statement that describes a desired condition of the land to be achieved some time in the future.

Management Indicator Species and Habitats – Management indicator species and habitats are “...plant and animal species, communities, or special habitats selected for their emphasis in planning, and which are monitored during forest plan implementation in order to assess the effects of management activities on their populations and the populations of other species with similar habitat needs which they may represent” (Forest Service Manual 2620.5, Washington Office amendment 2600- 91-5). Management indicators provide a means of monitoring and evaluating the effects of actions on biotic resources, including specific species, communities, habitats, and interrelationships among organisms. As part of the planning process, the Forest Service is directed to “...select management indicators that best represent the issues, concerns, and opportunities to support recovery of federally-listed species, provide continued viability of sensitive species, and enhance management of wildlife and fish for commercial, recreational, scientific, subsistence, or aesthetic values or uses. Management indicators representing overall objectives for wildlife, fish, and plants may include species, groups of species with similar habitat relationships, or habitats that are of high concern.” (Forest Service Manual 2621.1) Management indicators are also selected to meet 1982 planning regulations 36 CFR Sec. 219.19 (a) (1) that require the Forest Service to consider the use of management indicator species. See Appendix G of the Environmental Impact Statement for more information.

Management Intensity – The management practice or combination of management practices and their associated costs designed to obtain different levels of goods and services.

Management Opportunity – A statement of general actions, measures, or treatments that address the public issue or management concern in a favorable way.

Management Practices – A specific activity, course of action, or treatment that is designed to move the forest toward desired conditions.

Management Prescription – Management practices selected and scheduled for application in a specific area to attain multiple use and other goals and objectives. At the forest level for a management area, a Management Prescription includes (a) the management practices selected and scheduled, (b) a description of the desired future condition of the land, and (c) the Standards and Guidelines necessary to control the management practices and achieve and maintain the desired future conditions. See Plan chapter IV for a further discussion of this term.

Management Problem – A major problem of long-range significance, derived from public issues and management concerns, to be addressed when formulating Forests' Plan alternatives.

Marginal Analysis – A type of analysis in which only the costs and benefits considered are those about which decisions can be made. Fixed benefits and costs are not considered.

Market Value (Market Output) – Goods, services, and uses which commonly are bought and sold and which are priced or valued directly from existing markets.

Marshes – Wetlands dominated by grasses and grass-like plants, including sedges and rushes.

Mast tree – Any tree producing fruit that is used for food by wildlife species.

Mass Movement – Downslope unit movement of a portion of the land's surface, such as a single landslide or the gradual, simultaneous downhill movement of a whole mass of loose earth material on a slope face.

Mature Tree or Stand – A tree or stand that has attained full development, particularly in height, and is in full seed production.

Maximum Modification – See “Visual Quality Objective.”

Mean Annual Increment of Growth – The total increase in size or volume of individual trees; or, it can refer to the increase in size and volume of a stand of trees at a particular age, divided by that age in years (also see culmination mean annual increment).

Memorandum of Understanding – The instrument used for a written plan between the Forest Service and other parties for carrying out their separate activities in a coordinated and

mutually beneficial manner and for documenting a framework for cooperation.

Mesic – Sites or habitats characterized by intermediate moisture conditions, i.e., neither decidedly wet or dry.

Mesotrophic – A water body or wetland containing moderate quantities of nutrients and are moderately productive in terms of aquatic animal and plant life.

Metapopulation – A subpopulation of a species linked to other subpopulations by more or less restricted migration.

Middle Ground– See “Visual Distance Zones.”

Mineral Development – The inventory and extraction of mineral materials.

Mineral Exploration – A search for mineral materials.

Mineral Material – Includes the common varieties of sand, gravel, stone, and similar materials.

Mineral Soil – Soil that consists mainly of inorganic material, such as weathered rock, rather than organic matter.

Minimal Class – See “Variety Class.”

Minimum Level Management – The management strategy that would meet only the basic statutory requirements of administering unavoidable nondiscretionary land uses, preventing damage to adjoining lands of other ownerships, and protecting the life, health, and safety of incidental users.

Minimum Viable Population – The minimum numbers and distribution of reproductive individuals required to ensure a continued existence.

Mitigation – Action taken for the purpose of eliminating, reducing, or minimizing negative impacts of management activities on the environment.

Modification – See “Visual Quality Objective.”

Monitoring – A systematic process of collecting information to evaluate changes in actions, conditions, and relationships over time and space relative to a pre-determined standard or expected norm.

Monitoring and Evaluation (Forest Plan) – The periodic evaluation of Forest Plan management activities to determine how well objectives are met, and how closely management Standards and Guidelines have been applied.

Moraine (glacial) – A distinct accumulation of unsorted, unstratified glacial drift, predominantly till, with an initial topographic modifier related to its deposition as a direct action of glacial ice. Includes the following:

- **End Moraine** – Hilly ridges that characterize a deposit produced at the front of the ice mass any time it was stationary long enough to permit an accumulation of debris.
- **Ground Moraine** – A thinner, more level till deposited as ice retreated rapidly.
- **Lateral Moraine** – Stony ridges deposited along the outer edges of the ice mass and parallel to the direction of its movement.
- **Terminal Moraine** – An end moraine that marks the farthest advance or maximum extent of the glacier (often used as synonym of end moraine).

Mosaic – Areas with a variety of plant communities over a landscape, such as areas with trees and areas without trees occurring over a landscape.

Motorized Use – Land use requiring or largely dependent on motor vehicles and roads.

Multiple-Use – The management of all various resources of the National Forests so that they are used in the combination that will best meet the needs of the American people. The management makes the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions. Some land would be used for less than all of the resources in a harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land. Consideration is given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output.

National Environmental Policy Act – Public law that outlines specific procedures for integrating environmental considerations into agency planning. Congress passed NEPA in 1969 to encourage productive and enjoyable harmony between people and their environment. One of the major tenets of NEPA is its emphasis on public disclosure of possible environmental effects of any major action on public land. The Act requires a statement of possible environmental effects to be released to the public and other agencies for review and comment.

National Forest Management Act – Public Law of 1976 that provides for planning and management of National Forests, and requires the preparation of forest plans.

National Forest System – All of the management units, national forests, and national grasslands that the Forest Service manages.

National Forest System Land – Federal lands that have been designated by Executive order or statute as National Forests, National Grasslands, National Tallgrass Prairie, or other

lands under the administration of the Forest Service.

National Forest System Road – Classified forest roads under Forest Service jurisdiction being wholly or partly, or adjacent to, and serving the National Forest System and necessary for the protection, administration, and use of the National Forest System and the use and development of its resources. The term “National Forest System Road” is synonymous with the term “forest development road.”

National Forest Visit – The entry of one person upon a National Forest to participate in recreation activities for an unspecified period of time. A National Forest visit can be composed of multiple site visits.

National Register of Historic Places – A list maintained by the National Park Service of areas which have been designated as being of historic significance.

National Wild and Scenic River System – Rivers with outstanding scenic, recreational, geological, fish and wildlife, historic, cultural, or other similar values designated by Congress under the Wild and Scenic Rivers Act for preservation of their free-flowing condition (also see Wild, Scenic, and Recreational Rivers Act).

National Wilderness Preservation System – All lands covered by the Wilderness Act and subsequent wilderness designations, irrespective of the department or agency having jurisdiction.

Native Species – With respect to a particular ecosystem, a species that historically occurred in that ecosystem. Native species do not include species introduced by humans.

Natural – Existing and/or formed by nature; not artificial.

Natural appearing – The existing natural character of the landscape is integrated into management activities, such as harvesting. The landscape shows few signs of forest management activities; however, the effects of naturally occurring disturbances (fire or windstorm) may be noticeable.

Natural Disturbance – Disruption of existing conditions by wind, fire, flooding, drought, insects, and disease at a scale from one tree to hundreds of thousands of acres.

Natural Opening – Area of forest whose vegetation is predominantly contained in the ground-layer or mid-layer, e.g. grasses, forbs, shrubs, or saplings, with minor representation in the canopy-layer, e.g. mature trees. Such areas typically are the product of natural stand replacing disturbance processes, e.g. fire, wind, or ice storms, and typically will return to a forested state dominated by canopy-layer and shrub-layer vegetation. Depending upon eco-type, natural openings can vary in size from less than one acre to hundreds or thousands of acres.

Natural Processes/Conditions – Plant and animal communities where people have not directly impacted either of those communities or their soils by such activities as logging, fire

suppression, grazing, or cultivation.

Nectar Plant – A species of flowering plant that provides a sugary liquid (nectar) as a food/energy source. Invertebrates, such as butterflies, are the primary users of nectar-providing plants. The invertebrate species may use a suite of plant species as nectar sources.

Net Value Change (Also Net Resource Value Change) – The sum of the changes resulting from increases (benefits) and decreases (damages) in the value of outputs from the land area affected as the consequences of fire.

Nitrogen Fixation – the conversion of elemental nitrogen from the atmosphere to organic combinations or to forms readily utilizable in biological processes.

No Action Alternative – The most likely condition expected to exist in the future if current management direction continues unchanged.

Nondeclining Yield – A level of timber production planned so that the planned sale and harvest for any future decade is equal to or greater than the planned sale and harvest for the preceding decade.

Non-Forest Land – Land never having or incapable of having 10 percent or more of the area occupied by forest trees, or land previously having such cover and currently developed for non-forest uses.

Non-Forest Vegetative Type – Noncommercial forestland (for example, shrubs, forbs, and grasses in wildlife openings).

Non-Game Species – Animal species that are not usually hunted in this State. This classification is determined by the State Legislators.

Non-indigenous Species – A species that is not naturally present in an ecosystem within its historical range or naturally expanded from its historical range, in the state. See “Non-native invasive species.”

Nonmarket Values (Nonmarket Outputs) – Goods, services, and uses which are not commonly bought or sold in existing markets; assigned dollar values for some have been derived from willingness-to-pay analyses for use in comparing alternatives. See “Intangible values”.

Nonmotorized Use – Land uses requiring or largely dependent on isolation from motor vehicles and/or roads.

Non-native Invasive Species – Non-native species are any species that occupy an ecosystem outside its historical range. Invasive species are any non-native species whose introduction does or is likely to cause economic or environmental harm or harm to human health. Invasive species are those species that spread from their original native habitat, to one that is not their native habitat. Non-native Invasive Species explode in population because they are not in

their original ecosystem where they were kept in check by many factors, such as parasites and predation. Frequently these species are aggressive and difficult to manage. Non-native Invasive Species differ from noxious weeds in that Non-native Invasive Species can be animals or plants, and they are strictly non-native species.

Non-point Source Water Pollutants – Pollutants contributed to runoff and seepage from land areas, often resulting from multiple, difficult to define, points of origin. Agricultural and urban runoff, runoff from construction activities and runoff from forestry practices are example sources of non-point pollutants. The following forest management activities are potential nonpoint sources of pollution: prescribed burning, pest and fire control, surface drainage, and road construction and maintenance from which there is natural runoff.

Nonstocked Vegetative Type – Potential commercial forestland that is open or not presently stocked with trees (for example, abandoned agricultural field).

Nonstructural Range Improvement – A modification of existing vegetation to improve the grazing resource. Examples are spraying or plowing sagebrush and seeding to grass.

Northern Hardwood Vegetative Type – Forests containing the following cover types: northern hardwoods-hemlock, mixed northern hardwoods, sugar maple-beech-yellow birch, sugar maple-basswood, black cherry-white ash-yellow poplar, red maple (dry site) sugar maple, beech and mixed upland hardwoods.

Nutrient Cycling – Circulation or exchange of elements such as nitrogen and carbon between non-living and living portions of the environment. Includes all mineral and nutrient cycles involving mammals and vegetation.

Oak Barren – A fire dependant vegetative community characterized by widely spaced, open-grown oaks (commonly white, bur, or Hill’s oak) in the overstory. Various assemblages of fire tolerant, shade intolerant, grasses, sedges, shrubs, and forbs characteristically dominate the understory. The community is generally located on droughty, infertile, sandy soils of outwash plains and sandy lake plains. The specific vegetative composition of the community is dependant on its physiographic and geographic position.

Oak-Pine Barren – A fire dependant vegetative community characterized by a combination of oaks and pines in the overstory. Various assemblages of fire tolerant, shade intolerant, grasses, sedges, shrubs, and forbs characteristically dominate the understory. The community is generally located on droughty, infertile, sandy soils of outwash plains and sandy lake plains. The specific vegetative composition of the community is dependant on its physiographic and geographic position.

Objective – A concise, time-specific statement of measurable and planned results that respond to pre-established desired condition. An objective forms the basis for further planning by defining both the precise steps to be taken and the resources to be used in achieving identified desired conditions. Objectives are action oriented and specifically describe measurable results.

Obliteration – The returning of the land occupied by a road or trail to vegetative cover.

Occupancy Trespass – The illegal occupancy or possession of National Forest land.

Off-Highway Vehicle (OHV): Any motor vehicle designed for or capable of cross-country travel on or immediately over land, water, sand, snow, ice, marsh, swampland or other natural terrain.

Old Forest – An age class older than the mature age class.

Old Growth – Ecosystems where natural biological processes predominate and are characterized by older, larger trees; native species and minimal human disturbance. Old growth structural diversity includes multi-layered canopies, canopy gaps, tip-up mounds, and an accumulation of dead woody material. Old growth tracts vary from small isolated forested areas to larger landscape complexes that may include ecologically important non-forested openings, younger patches produced by natural disturbances, wetland and water bodies.

Open to Public Travel – A road open to the general public for use with a standard passenger automobile. Such roads may be closed during scheduled periods, extreme weather conditions, or emergencies. They do not have restrictive gates, signs labeled “prohibited,” regulations except those needed for general traffic control, or restrictions based on size, weight, or class of vehicle registration.

Opportunity Costs – The value of benefits foregone or given up due to the effect of choosing another management alternative that either impacts existing outputs or shifts resources away from other activities so that they are no longer produced and their benefits are lost.

Organic Matter – Plant and animal residues, or substances made by living organisms. All are based upon carbon.

Organization Camp – This designation includes camps of a public or semipublic nature that are developed by the special use authorization holder, by the federal government, or jointly by both. Normally, only nonprofit organizations or governmental agencies qualify for special use authorizations in this category. (Forest Service Manual 2721.13)

Outcomes – The impact on a resource or landscape of program activities, for example water quality changes and improved habitat condition.

Output Coefficient – Value, which relates an acre of land to a particular quantity of output in a specific period of time.

Outputs – The goods, end products, or services that are purchased, consumed, or used directly by people.

Outwash (glacial) – Stratified sand and gravel, sorted, and deposited by water that originated mainly from melting of glacial ice; may occur as valley fill (valley trains or outwash

terraces) or as widespread level outwash plains.

Overstory – Relative to even-aged stands, the mature trees that overtop younger trees.

Partial Cut/Harvest – A harvesting system that leaves at least 30 ft² basal area and up to 80 ft² basal area. This harvest method facilitates reaching a desired stand conditions in terms of structure and age while at the same time producing timber volume. Partial cuts with a smaller retention are like shelterwood systems, while partial cuts with more retention are considered multiple-aged management. Partial cuts can be used with all forest types.

Patch Size – A group of forest stands of similar aged forests that may be made up of different forest cover types.

Perennial Stream – A stream that maintains water in its channel throughout the year.

Permit – A special-use authorization that provides permission, without conveying an interest in land, to occupy and use National Forest System lands or facilities for specific purposes, and which is both revocable and terminable.

Pests – Insects, diseases, or animals that interfere with objectives for management of forests.

Physiographic Province – Region of similar structure and climate that has had a unified landform history.

Pine Barren – A fire dependant vegetative community characterized by widely spaced, open-grown jack pine and, to a lesser extent, red pine in the overstory. The understory is characteristically dominated by various assemblages of fire tolerant, shade intolerant, grasses, sedges, shrubs, and forbs. The community is generally located on droughty, infertile, sandy soils of outwash plains and sandy lake plains. The specific vegetative composition of the community is dependant on its physiographic and geographic position.

Pioneer – By extension, any new arrival in the early stages of succession, generally with particular reference to certain species whose presence appears to promote the establishment of more exacting species.

Planned Ignition – A fire started by a deliberate management action.

Planning Area – The area of the National Forest System controlled by a decision document.

Planning Criteria – Criteria prepared to guide the Planning process and management direction.

Planning Horizon – The 50-year time frame for which goods, services, and effects were projected in the development of the Forest Plan.

Planning Period – Decade 1 (2005-2015). The time interval within the planning horizon that is used to show incremental changes in yields, costs, effects, and benefits.

Plant Communities – An assemblage of plants that, in general, occur together on similar site conditions.

Plantation – A forest crop or stand raised artificially, by either seeding or planting of young trees.

Play (geology) – The extent of a petroleum-bearing formation.

Pole – A tree of a size between a sapling and a mature tree.

Pole Timber – As used in timber surveys, a size class definition for trees 5.0 to 8.9 inches at DBH. As used in logging operations, trees from which pole products are produced, such as telephone poles and pilings.

Porosity – The volume of pores in a soil sample (non-solid volume) divided by the bulk volume of the sample.

Post Market – The market of trees to be used as fence posts. They normally are 4 to 10 inches in diameter and 6 to 10 feet long.

Prairie – A grass dominated vegetative community characterized by rich fertile soils and very few to no trees. The suite of associated grasses, shrubs, and forbs are somewhat predictable and diagnostic of the community.

Precision – Degree of accuracy; generally refers to the number of significant digits of information to the right of the decimal point. Statistical, the degree of variation about the mean.

Pre-Euro-American – The time period before European settlement, approximately mid-to late-1800s (previously referred to as pre-settlement).

Preferred Alternative – The alternative favored for implementation by the Forest Service based on relative merits including physical, biological, social, and economic considerations and the agency's statutory missions.

Preparatory Cut – See “Shelterwood Cutting.”

Prescribed Fire/Prescribed Burning/Management Ignited Fire – The intentional use of fire to accomplish specific resource objectives under prescribed conditions and circumstances. Prescribed fire is used to accomplish specific resource objectives such as preparing sites for natural regeneration of trees, reducing fuels, or controlling unwanted vegetation.

Prescription (Fire or Silvicultural) – A planned series of treatments designed to change current stand structure to one that meets management goals.

Present Net Value – The difference between the discounted benefits of all outputs to which monetary values or established market prices are assigned and the total discounted costs.

Preservation – See “Visual Quality Objective.”

Pre-settlement – See pre-Euro-American.

Primary Constituent Elements – Physical or biological habitat features needed for life and successful reproduction of the species. These features are known as primary constituent elements and include, but are not limited to:

- space for individual and population growth and for normal behavior;
- food, water, air, light, minerals, or other nutritional or physiological requirements;
- cover or shelter;
- sites for breeding and rearing of offspring; and
- habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

Areas containing these elements of the habitat are identified in the landscape. By law, the Forest Service is required to identify sufficient areas containing these characteristics to ensure conservation of a listed species.

Primitive – See “Recreation Opportunity Spectrum.”

Primitive Road – See “Road Types.”

Primitive Recreation Opportunity Spectrum Class – Part of the Recreation Opportunity Spectrum. Area is characterized by an essentially unmodified natural environment of fairly large size. Interaction between users is very low and evidence of other users is minimal. The area is managed to be essentially free from evidence of human-induced restrictions and controls. Motorized use within the area is not permitted.

Project – An organized effort to achieve an objective identified by location, activities, outputs, effects, and time period and responsibilities for execution.

Protection Zones – An area protected from activities that would be detrimental to a species or its habitat.

Protective Element (Fire) – The support element, such as fire suppression, that provides protection to the Forests' resources and uses.

Psychological Fencing – Fencing used in concert with predator exclosures to prevent people from approaching piping plover exclosures out of curiosity. Fencing is usually bailing twine with piping plover closed area signs.

Public Issue – A subject or question of widespread public discussion or interest

regarding management of National Forest System lands and identified through public participation.

Puddling – A severe alteration of soil structure that greatly reduces gas exchange and infiltration of water into the soil. Associated with fine-textured soils with high water content. Puddling may or may not result in an increase in soil density and with rutting, compaction often occurs. Puddling may occur at the bottom of a rut. Detrimental puddling results from an alteration of soil structure severe enough to reduce the permeability and infiltration of the soil and is caused by depressions in the soil surface caused by an animal, foot, or mechanical traffic.

Pulpwood – Trees that yield logs of suitable size and quality for production of pulp.

Range of Natural Variability – The variation of physical and biological conditions within an area due to natural processes with all of the elements present and functioning.

Rangeland – Land on which the natural plant cover is composed principally of native grasses, forbs, or shrubs valuable for forage

Rare Natural Resources – These are plants, animals, and natural communities that are defined as threatened, endangered, sensitive, special concern, or very uncommon.

Reclamation – Returning disturbed lands to a form and productivity level that will be ecologically balanced and in conformity with the predetermined Land and Resource Management Plan.

Record of Decision – The official documentation of the decision on an action evaluated in an environmental impact statement.

Recovery (of federally listed species) – Improvement in the status of listed species to the point at which listing is no longer appropriate under the criteria set out in the Endangered Species act.

Recreation Experience Levels –

- **Primitive** – At this level, recreational opportunities attempt to satisfy basic needs by requiring a high degree of basic outdoor skills. It provides opportunities for extreme isolation and a feeling of being a part of both nature and a wilderness heritage. Primitive areas occur in the natural environment, although some areas may be modified for resource protection. There is no motorized access at this level. No facilities are provided except those needed for resource protection. Native materials are utilized where possible. There is natural weathering of surfaces.
- **Level 1** – At this level, recreational opportunities attempt to satisfy basic needs to a near-maximum extent. Feeling of physical achievement at reaching opportunities without mechanized access is important to the user. There is a feeling of being nearly primitive and closely associated with nature. It occurs in an essentially

unmodified natural environment. Modifications for comfort and convenience are minimal. Spacing is informal and dispersed to minimize contacts with other individuals or groups. There is no motorized access at this level. There are only essential facilities for resource protection with on-site materials used whenever possible. Facilities appear inconspicuous, substantial, and harmonious.

- **Level 2** – At this level, recreational opportunities attempt to satisfy basic needs to an extent tempered by motorized access. Opportunities to socialize with others are important although less so than at more developed experience levels. It occurs in a slightly modified environment. Rustic or rudimentary facilities for comfort and convenience of users are provided. Improvements are mostly for the protection of the resources. Motorized access is provided or permitted. Primary access is provided over primitive roads or trails or by experienced boat or aircraft users. Facilities are more for resource protection than for the comfort of users. Architecture is functional and historic in nature. Color schemes blend into local environment with little contrast.
- **Level 3 (Intermediate)** – At this level, recreational opportunities require moderate outdoor skills. Opportunities to socialize with others are equally as important as isolation while providing a feeling of being close to nature. Natural environment dominates but there are some modifications for comfort and convenience of users. Facilities are about equal for protection of resources and comfort/safety of users. There are hard surface roads and trails built mostly with native materials at this level. Primary access is over well-traveled roads or by capable boat or aircraft operators. Visitor information services (VIS) are informal. Facilities harmonize with the environment in form and color and are constructed primarily of wood and masonry.
- **Level 4** – At this level, recreational opportunities require only a moderate degree of basic activity skills. Regimentation and fairly obvious controls are important. User is aware of the opportunity to meet and be with other people - this level is obviously not isolated. Some opportunity to use contemporary skills such as snow and water skiing are important. The environment is substantially modified. Facilities are primarily for comfort and convenience of users but luxury facilities may be provided. Traffic controls are present. Visitor information services are frequently available. Facilities generally harmonize with surrounding environment but may contain focal points or trim of contrasting color, texture, or form.
- **Level 5 (Modern)** – At this level, recreational opportunities require few basic outdoor skills. There is abundant opportunity to develop and use contemporary outdoor skills such as snow and water skiing. A feeling of being “next to nature” rather than closely associated with it exists. There is a high degree of environmental modification in these areas. Many facilities provide for comfort and convenience of users - modern sanitation and electrical systems and hookups, showers, and laundry facilities, equipment rental, and sales and services. Overstory, ground vegetation, and landforms are graded or modified as necessary. Plant materials may be exotic

or native. Privacy often is provided by walls, structures, and screening. There is obvious control of users for security and resource protection. This level has a somewhat urbanized environment surrounded by and interspersed with a natural environment. Formal visitor information services usually are available.

Recreation Opportunity Spectrum – A system of classifying the range of recreational experiences, opportunities, and settings available on a given area of land. Classifications include:

- **Primitive** – Characterized by essentially unmodified environment where trails may be present but structures are rare. Probability of isolation from the sights and sounds of humans is extremely high.
- **Semiprimitive Nonmotorized** – Characterized by few and/or subtle human modifications and with a large probability of isolation from the sights and sounds of others.
- **Semiprimitive Motorized** – Characterized by moderately dominant human alterations with strong evidence of permanent roads and/or trails.
- **Roaded Natural** – Characterized by a predominately-natural environment with evidence of moderately permanent alternate resources and resource utilization. Evidence of the sights and sounds of humans is moderate but in harmony with the natural environment. Opportunities exist for both social interaction and moderate isolation from sights and sounds of others.
- **Rural** – Characterized by an area on which the sights and sounds of humans are frequent and the landscape has been considerably altered by humans.
- **Urban** – Characterized by a natural setting that is dominated by structures built by humans; the sights and sounds of humans predominate.

Recreation Residence Site – House or cabin permitted on National Forest System lands for the recreational use of the owner but not as a primary residence.

Recreation Visitor Day – Recreational use of National Forest System land totals 12 hours. It may consist of one person for 12 hours, two people for 6 hours, or any combination that totals 12 hours.

Recreational River – Wild and Scenic Rivers Act Usage - Those rivers or sections of rivers that are readily accessible by road or railroad, that may have some development along their shorelines, and that may have undergone some impoundment or diversion in the past.

Reforestation – The natural or artificial restocking of an area with forest trees.

Reforestation Backlog – Areas that need to have trees reestablished. This can be done by planting, seeding, or preparing the site for natural regeneration.

Regeneration – (1) The actual seedlings and saplings existing in a stand. (2) The act of establishing young trees naturally or artificially.

Regeneration Cut – Removal of trees with the intention of establishing a new crop of seedlings.

Regulated – Forestland managed for timber production under sustained-yield principles.

Removal Cut – See “Shelterwood Cutting.”

Research Natural Area – Land areas classified by order of the Chief of the Forest Service containing natural plant communities that have not been modified by humans and are protected and studied to obtain more information about the ecosystem.

Resilient, Resiliency – The ability of a system to respond to disturbances. Resiliency is one of the properties that enable the system to persist in many different states of successional stages. In human communities, refers to the ability of a community to respond to externally induced changes such as larger economic or social forces.

Resource Management Prescription – Written direction on the resource management practices selected and scheduled for application on a specific area to attain goals and objectives.

Responsible Line Official – The Forest Service employee who has the authority to select and/or carry out a specific planning action.

Restoration (of ecosystems) – Actions taken to alter an ecosystem to achieve a healthy and functioning condition.

Revegetation – The reestablishment of a plant cover. This may take place naturally through the reproductive process of existing flora or artificially through the direct action of humans.

Right of Eminent Domain – The taking of property for necessary public use, with reasonable compensation being made to the property owner. See “Condemnation.”

Right-of-way – Land authorized to be used or occupied for the construction, operation, maintenance, and termination of a project or facility passing over, upon, under, or through such land.

Riparian Areas – Riparian areas include aquatic ecosystems, riparian ecosystems, and wetlands. They are three-dimensional: Longitudinal (extending up and down streams and along the shores); lateral (to the estimated boundary of land with direct land-water interactions); and vertical (from below the water table to above the canopy).

Riparian Corridor - The riparian corridor includes the riparian area along all perennial and intermittent streams with defined, recognizable channels. It also includes areas around

ponds, lakeshores, wetlands, springs, and seeps (Environmental Impact Statement, Figure III-3). Where necessary, the riparian corridor also includes any adjacent terrestrial areas needed to protect or restore riparian function.

Riparian Ecosystems – Areas that are adjacent to aquatic ecosystems and extend away from the bank or shore to include lands with direct land-water interactions. Interactions may affect abiotic and biotic structure, function, and composition. As a minimum, this will include all lands that are adjacent to surface water and which have hydric soils or distinctive vegetative communities that require free or unbound water.

Riparian Management Zone – A site-specific area with boundaries established to define limits of management activities, and associated standards and guidelines, within riparian areas. Size and placement of riparian management zones will be determined by management objectives for riparian areas and may not include all of the riparian area.

Riprap – Material such as rocks and concrete that are placed along a watercourse to stabilize the banks.

Road – A motor vehicle travelway over 50 inches wide, unless designated or managed as a trail. A road may be classified, unclassified, or temporary.

Road Classification (functional) – Forest system roads are defined on the National Forests by three functional classifications to describe their function within the transportation system: Arterial: Provides service to large land areas, and connects with other arterial routes or public highways. These are usually through-routes. Collector: Serves smaller land areas than arterials, and connects arterials to local roads or terminal facilities. Local: Serves as a single purpose road, and connects terminal facilities with collectors or arterials.

Road Decommissioning – Activities that result in the stabilization and restoration of unneeded roads to a more natural state.

Road Density – The measure of the degree to which road miles occupy a given land area (for example, 1 mile per square mile is 1 mile of road within a given square mile).

Road Maintenance Level – A formally established criterion that prescribes the intensity of maintenance necessary for the planning operation of a road. The five levels are:

- **Maintenance Level 1** – This level is used for intermittent service roads during the period of time that management direction requires the road to be closed or blocked to traffic. Basic custodial maintenance is performed as required to protect the road investment and to see that damage to adjacent lands and resources is minimal. Drainage facilities and runoff patterns are maintained. While being maintained at Level 1, roads will be closed or blocked to traffic.
- **Maintenance Level 2** – This level is used on roads where management direction requires that the road be open for a limited amount of traffic. Traffic normally is

minor, usually consisting of one use or a combination of uses: administrative, permitted, dispersed recreation, or other specialized uses. Level 2 roads are normally characterized as single lane, primitive-type facilities intended for use by high clearance vehicles; passenger car traffic is not a consideration.

- **Maintenance Level 3** – This level is used on roads where management direction requires the road to be open and maintained for safe travel by passenger cars. Traffic volumes are minor to moderate. Level 3 roads normally are characterized as low speed, single lanes with turnouts and spot surfacing. This level normally is used for local or minor collector roads.
- **Maintenance Level 4** – This level is used on roads where management requires the road to provide a moderate degree of user comfort and convenience at moderate travel speeds. Some Level 4 roads may be single lane and some may be paved and/or dust abated. This level normally is used for collector or minor arterial roads.
- **Maintenance Level 5** – This level is used where management direction requires the road to provide a high degree of user comfort and convenience. Level 5 roads normally are characterized as double lane, paved facilities. Some Level 5 roads may be aggregate surfaced and dust abated. This level normally is used for arterial roads.

Road Obliteration – A road decommissioning technique used to eliminate the functional characteristics of a travelway and re-establish the natural resource production capability. The intent is to make the corridor unusable as a road or a trail and stabilize it against soil loss, which can involve re-contouring and restoring natural slopes.

Road Types and Terminology –

- **Aggregate** – Same as “Graded and Drained” but with a surface of gravel instead of native soil.
- **Arterial** – Provides service to large land areas and usually is a public highway connecting with other Forests' arterial roads to form an integrated network of primary travel routes. Its location and standard is often determined by a demand for maximum mobility and travel efficiency rather than specific resource management service. It is usually developed and operated for long-term land and resource management purposes and constant service.
- **Collector** – Usually a county public road and serves smaller land areas than an arterial road, and is usually connected to a public highway. Collects traffic from Forest local roads and/or terminal facilities. Its location and standard is influenced by both long-term, multi-resource service needs and travel efficiency. May be operated by either constant or intermediate service, depending on land use and resource management objectives for the area served by the facility.
- **Constant (Constant Entry Road)** – A road developed and operated for continual

or annual recurrent service.

- **Corridor** – A linear strip of land identified for present or future location of transportation or utility rights-of-way within its boundaries.
- **Forest Development** – A road that has been included in the Forests' development transportation plan.
- **Forest Highway** – A forest road under the jurisdiction of and maintained by a public authority and open to public travel. (Title 23 USC 101, as amended by the Surface Transportation Act of 1978.)
- **Graded and Drained** – A road constructed with the surface graded and crowned, sometimes with ditches. The road surface is native soil. The width is 14 feet or more.
- **Improved** – A road developed by construction or reconstruction and perpetuated by maintenance as contrasted with an “unimproved travelway” developed and perpetuated by use.
- **Intermittent** – A road developed and operated for periodic service and closed for more than 1 year between periods of use.
- **Local** – Connects terminal facilities with collector or arterial roads. Its location and standard usually are controlled by a specific resource activity rather than travel efficiency. A forest local road may be developed and operated for either long-term or short-term service.
- **Primitive** – A low standard road created and perpetuated by use, not constructed. The road surface is native soil partially grass covered. The width is less than 10 feet. Commonly called “two-track.”
- **Short-Term or Temporary Facility** – A facility developed and operated for a limited period of time, which will cease to exist as a transportation facility after the purpose for which it was constructed, is completed and the occupied land is reclaimed and managed for natural resource purposes.
- **Specified Road** – A road specified in a timber sale contract for construction or reconstruction to access timber for harvesting activities.

Roaded Natural Recreation Opportunity Spectrum Class – Part of the Recreation Opportunity Spectrum. Area is characterized by predominantly natural-appearing environments with moderate evidence of the sights and sounds of man. Such evidence usually harmonizes with the natural environment. Interactions between users may be moderate to high, with evidence of other users prevalent. Resource modification and utilization practices are evident, but harmonize

with the natural environment. Conventional motorized use is allowed and incorporated into construction standards and design of facilities.

Roadless Area – An area inventoried in a National Forest that meets specific criteria. Some of the criteria include (1) is approximately 2500 acres, or if smaller, is contiguous to a designated wilderness or primitive area, or lies east of the 100th Meridian, and therefore, under the jurisdiction of the Eastern Wilderness Act; and (2) can include up to ½ miles of improved Forest Service road per 1000 acres; and (3) has been inventoried for further study as a possible inclusion in the Wilderness Preservation System.

Roadless Area Review and Evaluation – A Forest Service analysis of potential wilderness areas.

Rodenticide – An agent that kills, repels or controls rodents.

Roost Tree – A tree used by animals for perching, resting, or raising their young. Bats are one of the more consistent users of roost trees. Depending on the species, they will use exfoliating bark, cavities, cracks, or leaves for roost sites.

Rotation – The number of years required to establish and grow timber crops, to a specified condition of maturity.

Roundwood – Trees that are used without being milled, such as fence posts, telephone poles, and pulpwood.

Route – Used to specify a travelway for uses such as off-highway vehicle, horse, snowmobile, or bike. "Trail" is used when there is a specifically constructed travelway for assigned use/uses. "Route" is used when the travelway uses existing means such as Forest System roads.

Rural Recreational Opportunity Spectrum Class – Part of the Recreation Opportunity Spectrum. An area that is characterized by a natural environment, which has been substantially modified by development of structures, vegetative manipulation, or pastoral agricultural development. Resource modification and utilization practices may be used to enhance specific recreation activities and maintain vegetative cover and soil. Sights and sounds of humans are readily evident, and the interaction between users is often moderate to high. A considerable number of facilities are designed for use by a large number of people. Facilities are often provided for special activities. Moderate user densities are present away from developed sites. Facilities for intensified motorized use and parking are available.

Rutting – Severe rutting is an extreme form of detrimental puddling. Often associated with clay and organic soils. The ruts are molded and typically have well defined berms. They severely disrupt soil structure and porosity, can adversely alter local groundwater hydrology and wetland function and provide conduits for runoff.

Salvage – The removal of dead trees or trees being damaged or dying due to injurious

agents other than competition, to recover value that would otherwise be lost.

Sapling – A young tree more than a few feet tall and between 1.0 to 4.9 inches diameter at breast height that is typically growing vigorously. A young tree larger than a seedling, but smaller than a pole.

Savannah – Grassland regions with scattered trees, grading into either open plains or woodlands.

Sawtimber – As used in timber surveys, a size class definition for trees more than 9 inches at DBH for conifers and 11 inches at DBH for hardwoods.

Scale – 1. The degree of resolution at which ecosystems are observed and measured. 2. The relation between the size of an object on a map and its size in the real world. A large scale represents drawing closer to real world, while a small scale represents a larger unit of measure allowing viewing of more surface/area. Geographic extent; for example, region, sub-regional, or landscape.

Scale, Spatial – The size of area at which different ecological processes occur; for example, photosynthesis occurs at a cellular scale, measured in microns, while tornadoes occur at a landscape scale, measured in tens to thousands of square miles.

Scarification – The loosening of the topsoil in open areas to prepare for regeneration by direct seeding or natural seed fall.

Scenery – General appearance of a place or landscape, and a natural resource of the Forests and composed of existing natural features including vegetation, water, landforms, and geology.

Scenery Management System – Tool incorporated into Forest Plans to determine the relative value and importance of scenery on National Forest System lands. The process involves classifying landscapes, and setting goals and objectives for maintaining, enhancing, restoring, and monitoring scenic integrity.

Scenic Byway – National Scenic Byway usage - the roads or section of roads, which traverses an area, which may have outstanding aesthetic, cultural, historic, or interpretive forest values.

Scenic Class – Scenic classes are the measure of the value of scenery in a National Forest. Scenic classes are determined and mapped by combining scenic attractiveness classes with distance zones and concern levels of landscape visibility. Scenic classes are a product of the inventory process that is used for analysis and planning purposes. Generally, scenic classes 1 and 2 have high public value, classes 3 through 5 have moderate value, and classes 6 and 7 have low value.

Scenic Easement – Relative to the Wild and Scenic Rivers Act (P.L. 93-621) of 1975

and by definition of the Act: the right to control the use of land (including the air space above such land) within the authorized boundaries of the component of the Wild and Scenic River System for the purpose of protecting the natural qualities of a designated wild, scenic, or recreational river area. Such controls shall not affect any regular use exercised prior to the acquisition of the easement without the owner's consent.

Scenic Integrity – The state of naturalness, or conversely, the state of disturbance created by human activities or alteration. It is a measure of the degree to which a landscape is usually perceived to be “complete.” The degrees of deviation are used to describe the existing scenic integrity, proposed scenic integrity levels, and scenic integrity objectives.

Scenic Integrity Objectives – Scenic Integrity Objectives guide the amount, degree, intensity, and distribution of management activities needed to achieve desired scenic conditions. They are:

- **Very High** (unaltered) scenic integrity refers to landscapes where the valued landscape character “is” intact with only minute, if any, deviations. The existing landscape character and sense of place is expressed at the highest possible level.
- **High** (Appears Unaltered) scenic integrity refers to landscapes where the valued landscape character “appears” intact. Deviations may be present but must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such a scale that they are not evident.
- **Moderate** (Slightly Altered) scenic integrity refers to landscapes where the valued landscape character “appears slightly altered.” Noticeable deviations must remain visually subordinate to the landscape character being viewed.
- **Low** (Moderately Altered) scenic integrity refers to landscapes where the valued landscape character “appears moderately altered.” Deviations begin to dominate the valued landscape character being viewed, but they borrow valued attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed, but compatible or complimentary to the character within.
- **Very Low** (Heavily Altered) scenic integrity refers to landscapes where the valued landscape character “appears heavily altered.” Deviations may strongly dominate the valued landscape character. They may not borrow from valued attributes such as size, shape, edge effect, and pattern of natural openings, vegetative type changes, or architectural styles within or outside the landscape being viewed. However, deviations must be shaped and blended with the natural terrain (landforms) so that elements such as unnatural edges, roads, landings, and structures do not dominate the composition.

Scenic River – Wild and Scenic Rivers Act Usage – The rivers or sections of rivers that

are free of impoundments, where shorelines or watersheds are still largely primitive and shorelines largely undeveloped, but accessible by road at places.

Section – Term used to describe an ecological unit. Sections are defined by glacial deposits, topography, distribution of plants and regional climate.

Sediment – Solid materials, both mineral and organic, that are in suspension, are being transported, or have been moved from their site of origin by air, water, gravity, or ice and have come to rest on the earth's surface.

Sediment Yield – Amount of solid waste washed into a watercourse.

Seed Cut – See “Shelterwood Cutting.”

Seed-Tree Cutting Method – A cutting method in which all trees are removed in one cut except for a small number of seed-bearing trees left singly or in small groups. This practice eventually results in an even-aged stand.

Seed Tree Harvest – A cutting method in which the mature timber crop is removed from an area in one cut, except for a certain number of widely dispersed seed-bearing trees.

Seedbed – In natural regeneration, the soil or forest floor in which seed falls. In nursery practices, the prepared area which is seeded.

Seedling – As used in timber surveys, a size class definition for trees less than 1-inch diameter at 4.5 feet.

Seen Area (Leaf Off) – Area along a travelway that is visible during the time when trees are bare.

Selection Harvest Cut – A system, which removes trees individually in a scattered pattern from a large area each year. (1) Individual-tree selection cutting involves the removal of selected trees of all size classes on an individual basis. Regeneration is established under the partial shade of the overstory canopy after each cut. (2) Group selection cutting involves the removal of selected trees of all size classes and groups of a fraction of an acre up to 2 to 3 acres in size. Regeneration occurs in the groups under conditions similar to those found in small clearcuts.

Semiprimitive Motorized – See “Recreation Opportunity Spectrum.”

Semiprimitive Motorized Recreation Opportunity Spectrum Class – Part of the Recreation Opportunity Spectrum. Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Concentration of users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Use of local, primitive, or collector roads with predominantly natural surfaces and trails suitable for motorbikes is permitted.

Semiprimitive Nonmotorized Recreation Opportunity Spectrum Class – Part of the Recreation Opportunity Spectrum. Area is characterized by a predominantly natural or natural-appearing environment of moderate to large size. Interaction between users is low, but there is often evidence of other users. The area is managed in such a way that minimum on-site controls and restrictions may be present, but would be subtle. Motorized recreation use is not permitted, but local roads used for other resource management may be present on a limited basis. Use of such roads is restricted to minimize impacts on recreational experience opportunities.

Sensitive Areas – Areas with high erosion hazards, areas that may be susceptible to compaction, or areas with nonstable slopes.

Sensitive Species – Species designated by the Regional Forester and included on the Eastern Region Sensitive Species list (R-9 Draft Supplement, FSM 2670.3). The list includes species identified by the criteria below that are known, reported, or suspected to occur on or in the immediate vicinity of the planned area in the Eastern Region. The criteria are:

- Species in an officially proposed status by the Federal Register - Proposed Rule Making.
- Species on a Notice of Review List in the Federal Register (such as 47 CFR 58454-58460, December 30, 1982).
- Species placed on Region 9's Sensitive Plant or Animal List at the discretion of the Regional Forester if he/she deems they require special management attention. Examples of situations that may cause such listings include:
 - Species common elsewhere, but a disjunct population of unique, popular, or scientific interest occurs on National Forest System land.
 - Locally endemic population in unique habitats that warrant continued monitoring or special management to assure jeopardy is not occurring and will not occur in the future.

Sensitivity Level – As used in Cultural Resource Management, the degree of cultural resource development potential and/or the degree of conflict with other uses for a given area. As used in Visual Quality Management, a particular degree or measure of viewer interest in the scenic qualities of the landscape. The degrees are: 1-most sensitive, 2-sensitive, and 3-less sensitive.

Seral Stage – The stage of succession of a plant or animal community that is transitional. If left alone, the seral stage will give way to another plant or animal community that represents a further stage of succession (climax).

Serotinous – Pertaining to fruit or cones that remain on a tree without opening for one or more years. For example, jack pine cones open and seeds are shed when heat is provided by fires or hot and dry conditions.

Severance Deed (minerals) – A deed in which mineral interests are retained upon sale of the land through language in the deed of conveyance reserving specified mineral rights to the seller. Ownership of severed minerals has often become very obscure and fractionalized. See “Severed Mineral Rights.”

Severed Mineral Rights – A severance is a separation of the ownership of the minerals from the ownership of the surface of the land.

Severely Burned Conditions (also known as detrimentally burned soil) – Entire forest floor is consumed or reduced to charred material. In addition, fine roots and organic matter are charred in the upper one-half inch of mineral soil. Vaporized substances may condense and form a water repellent layer.

Shade-Tolerant – A tree or other plant species having the capacity to grow without receiving direct sunlight.

Shearing – Using a bladed tractor to clear all vegetation from the land in preparation for planting.

Sheet Erosion – Removal of a fairly uniform layer of soil from the land surface by runoff water without the development of conspicuous water channels.

Shelterwood Cutting – A cutting method used in even-aged management. It is the removal of a stand of trees through a series of cuttings designed to establish a new crop with seed and shade provided by the retained portion of the stand.

Shelterwood Harvest – Method of regenerating an even-aged stand in which trees are removed to establish a new age class beneath the shelter of residual trees.

Short-lived Conifers Vegetative Type – Includes jack pine, scotch pine, conifers, and balsam fir-aspen-paper birch.

Short-Term Road – See “Road Types.”

Silvicultural Prescriptions or Treatment or Practices – Activities prescribed for tending, harvesting, and re-establishing a stand of trees.

Silvicultural System – A process following accepted silvicultural principles whereby forests are tended, harvested, and replaced resulting in a forest of distinctive form.

Silviculture – The art and science of controlling the establishment, growth, composition, health, and quality of forests and woodlands to meet the diverse needs and values of society on a sustainable basis.

Site – An area of suitable habitat or restorable habitat that is separated from other suitable habitat; separation distance will vary depending on the nature of the intervening habitat and the

dispersal capabilities of the species through that habitat type.

Site Index (Forestry) – A numerical expression commonly accepted as an indicator of the quality or timber productivity of a site; an expression of the height-age relationship of the tallest trees (dominants and codominants) in normal stands at some designated age, such as 50 years.

Site Preparation – The general term for removing unwanted vegetation, slash, roots, and stones from a site before reforestation. Naturally occurring wildfire, as well as prescribed fire, can prepare a site for natural regeneration.

Size Class – One of the three intervals of tree stem diameters used to classify timber in the Forest Plan database. The size classes are: Seedling/sapling (less than five inches in diameter); pole timber (five to seven inches in diameter); sawtimber (greater than seven inches in diameter).

Skid Trail – Travelway used to drag or transport cut trees or logs from the stump to the road for collection.

Skidding – Hauling logs by sliding from stump to a collection point.

Slash – The residue left on the ground after timber cutting or after a storm, fire, or other event. Slash includes unused logs, uprooted stumps, broken or uprooted stems, branches, bark, etc.

Snag – A standing dead tree used by birds for nesting, roosting, perching, courting, and/or foraging for food. Many mammals use snags for denning and foraging for food.

Snowmobile – Any self-propelled vehicle designed for travel on snow or ice and steered by skis or runners.

Social Analysis – An analysis of the social (as distinct from the economic and environmental) effects of a given plan or proposal for action. Social analysis includes identification and evaluation of all pertinent desirable and undesirable consequences to all segments of society, stated in some comparable quantitative terms, such as persons or percent of population in each affected social segment. It also includes a subjective analysis of social factors not expressible in quantitative terms.

Softwood – A coniferous tree. Trees belonging to the botanical group gymnospermae.

Soil Compaction – A physical change in soil properties that results in a decrease in porosity and an increase in soil-bulk density and strength. Detrimental compaction is the condition with increased soil density and strength that hampers root growth, reduces aeration, and inhibits soil water movement.

Soil Hydrology – Movement of water into and through the soil.

Soil Nutrient Drain (or Loss) – A process in which more nutrients are removed from an area than are replaced by natural nutrient inputs. The nutrient removal can be natural or human-caused.

Soil Productivity – Soil potential to produce biomass that depends on the interaction of physical, chemical, and climatic characteristics of the site.

Soil Profile – A progression of distinct layers of soil, beginning at the surface, that have been altered by normal soil-forming processes such as leaching, oxidation, or accretion

Soil Quality – The inherent capacity of a specific soil, as determined by its inherent physical, chemical, and biological characteristics, to perform its biologic, hydrologic, and ecological functions (Forest Service Handbook 2509.18, 2002).

Spatial Feasibility – The capacity of a management activity to be practically implemented on the ground.

Special Interest Area – Areas not meeting the criteria for Research Natural Area designation may become Special Interest Areas under USDA Regulations, Title 36, Section 194.1, National Natural Landmarks (U.S. Department of Interior program).

Special Land Use – The occupation or reservation of land or water for a particular use or uses and excluding other land uses.

Special Management Area – Designated area where unique characteristics exist (for example, experimental forests, Research Natural Areas, and Wild and Scenic Rivers).

Special-use Permit – See “Permit.”

Species Viability – A viable species consists of self-sustaining and interacting populations that are well distributed through the species’ range. Self-sustaining populations are those that are sufficiently abundant and have sufficient diversity to display the array of life history strategies and forms to provide for their long-term persistence and adaptability over time. The implementing regulations for the 1982 National Forest Management Act provides specific direction concerning viability: Fish and wildlife habitat shall be managed to maintain viable populations of existing native and desired non-native vertebrate species in the planning area. For planning purposes, a viable population shall be regarded as one that has the estimated numbers and distribution of reproductive individuals to insure its continued existence is well distributed in the planning area. In order to insure that viable populations will be maintained, habitat must be provided to support at least, a minimum number of reproductive individuals, and that habitat must be well distributed so that those individuals can interact with other in the planning area (36 CFR 219.19).

Specified Road – See “Road Types.”

Spectrum – A computer-based analytical tool for building natural resource management

models. Spectrum is a software package that simultaneously analyzes the trade-off between the many goals, constraints, management activities, timing options, and landtypes, which are necessary to manage a large forest.

Spring Staging Period – Period of time when bats stage near their hibernaculum in the spring before moving to their summer habitat, generally considered to be from May 1 to June 15 on the Huron-Manistee National Forests.

Staminate – In plant reproduction terminology, staminate literally means, “bearing stamens.” Staminate plant parts, or stamens are "male": i.e., they produce pollen.

Stand (of trees) – A community of trees or other vegetation sufficiently uniform in composition, constitution, age, spatial arrangement, or condition to be distinguishable from adjacent communities and so form a silvicultural or management entity.

Stand Replacement Disturbance – A disturbance that kills or removes trees and creates a new age class of trees, usually fire, wind, insects, or harvesting.

Standards – Requirements found in a forest plan, which impose limits on natural resource management activities, generally for environmental protection. Standards are required limits to activities. These limitations allow the Forest to reach the desired conditions and objectives. Standards also ensure compliance with laws, regulations, executive orders, and policy direction. Deviations from standards must be analyzed and documented in Forest Plan amendments.

Stemwood – The wood of the stem(s) of a tree, i.e., of its main axis (or axes) as distinct from the branches (branchwood), stump (stumpwood), or roots (rootwood).

Stochastic – Referring to patterns of random effects. Containing elements of probability.

Stocking Level – The number of trees in an area as compared to the desirable number of trees for best results, such as maximum wood production.

Stratigraphic Record (geology) – Is the geological result of layered sedimentary and volcanic rocks. Other rocks can be layered (foliated metamorphic rocks and mineralogically layered igneous rocks) but these, once recognized, are excluded because the layers do not record the passage of time in an obvious way.

Stream Geomorphology – The study of water and earth forces that form stream channels, drainage patterns, floodplains, and explain erosion, transportation, and deposition of sediments moved by water.

Stream Riffle – A shallow area extending across a streambed and causing a “break” in the water surface, usually in the form of a succession of small waves.

Stream Stability – The tendency of streams to persist relatively unchanged through time.

Stable streams have a pattern and profile such that, over time, channel features are maintained and the stream system neither aggrades nor degrades.

Streamside Management Zone (Environmental Impact Statement, Figure III-4)- Often referred to as filter or buffer strips, the streamside management zones in the state Best Management Practices are areas directly adjacent to streams and water. Provisions within the streamside management zones typically contain sediment filter strips, a base shade level, restriction on ground disturbance and protection of stream banks and streambeds.

Structural Diversity – Variation of vegetation at the landscape or site level. At the landscape scale, this might include non-forest and forest areas. At the site level, this refers to the different vegetation heights and characteristics.

Structural Range Improvement – Any type of fabricated range improvement, such as fences and corrals.

Structure – How the parts of ecosystems are arranged, both horizontally and vertically. Structure might reveal a pattern, or mosaic, or total randomness of vegetation.

Stumpage Price – The value of standing timber.

Subpopulation – A self-reproducing population of a species that is associated with a site or patch.

Subsection – Term used to describe an ecological unit. Subsections are defined by glacial forming processes, bedrock formations, local climate, topography, soil groups, and the distribution of plants.

Subsoil – The layer below the soil surface in which roots normally grow.

Subsurface Rights (Mineral Rights) – Ownership of, or right to use, the resources and improvements under the surface of the land which includes the right to use as much of the surface as is necessary to exercise the subsurface rights.

Subsurface Values (Subsurface Resources) – Resources and improvements under the surface of the land only. As used in this document, the term means minerals.

Succession – An orderly process of biotic community development that involves changes in species, structure, and community processes with time; it is reasonably directional and, therefore, predictable.

Successional Stage – A stage of development of a plant community as it moves from bare ground to climax. In the plan revision process, these are generally referred to as early, mid, and late successional stages as follows:

- **Early Successional Species** – Typically colonize sites immediately following

catastrophic disturbances.

- **Mid-Successional Species** – Tolerant of conditions that exist as community moves toward late succession.
- **Late-Successional Species** – Adapted to environmental conditions that exist at steady state equilibrium with respect to natural disturbance regimes.

Suitable Forest Land – Land to be managed for timber production on a regulated basis.

Suitable Habitat – Habitat that is sufficient to support a reproducing subpopulation of a species.

Suitable Range – Range, which is accessible to livestock or wildlife and can be grazed on a sustained-yield basis without damage to other resources.

Suitable Timber Lands – Lands that include timber harvesting as an identified and scheduled management practice.

Summer Maternity Habitat – Habitat used by female bats during the period of May through August for raising their young. Generally includes a number of potential roost trees, water sources, and foraging habitat.

Surface Fire – A fire that burns surface litter, debris, and small vegetation.

Surface Rights – Ownership of the surface of the land only; right to use the surface of the land on a regulated basis.

Survey – An exercise in which a set of qualitative or quantitative observations are made, usually by means of a standardized procedure and within a restricted period of time, but without any preconception of what the findings ought to be.

Sustainable (ecological) – The ability of an ecosystem to maintain ecological processes and functions, biological diversity, and productivity over time.

Sustainable (human) – Each generation acts in a manner allowing every future generation the option of being as well off as its predecessors.

Sustained Yield – The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the National Forest without impairment of the productivity of the land.

Swamps – Wetlands dominated by woody plants, including trees and shrubs.

System Roads – See National Forest System roads.

Targets – A National Forest’s annual goals for accomplishment for natural resource programs. Targets represent the commitment the Forest Service has with Congress to accomplish the work Congress has funded. Targets are often used as a measure of the agency’s performance. Targets are not the same as objectives.

Temporary Openings – Areas of grass/forbs and shrubs usually resulting from timber harvest that will be replaced by tree saplings over a period of a few years: in contrast to permanent nonforested openings.

Temporary Roads – Roads authorized by contract, permit, lease, other written authorization, or emergency operation that are not intended to be a part of the forest transportation system, and not necessary for long-term resource management. These roads are not included on the National Forest System road inventory and are decommissioned after use.

Tentatively Suitable Forest Land – Forest land that is producing or is capable of producing crops of industrial wood; and a) has not been withdrawn by Congress, the Secretary, or the Chief; b) existing technology and knowledge is available to ensure timber production without irreversible damage to soils productivity, or watershed conditions; c) existing technology and knowledge, as reflected in current research and experience, provides reasonable assurance that it is possible to restock adequately within five years after final harvest; and d) adequate information is available to project responses to timber management activities.

Terrestrial Ecological Unit Inventory – An inventory of the national hierarchical classification system based on biotic and environmental factors. At the Ecoregion scale, ecological map units are domain—division—province (global or national); at the Subregional scale, map units are sections and subsections (statewide, multi-forest, multi agency); at the Landscape scale, map units are landtype associations (Forest or area-wide); and at the Land unit scale, map units are (ecological) landtypes, and landtype phases (project and management area).

Thermal Cover – Vegetative cover used by animals against weather.

Thinning – Silvicultural treatment where trees are removed to provide improved growing conditions for remaining trees. This method is used in immature stands to reduce stand density of trees primarily to improve growth and/or form, enhance forest health, or recover potential mortality.

Threatened Species – Species listed as nationally threatened, or according to the State of Michigan Endangered and Threatened Species list of February 8, 1983, and 50 CFR Part 17, July 27, 1983. Also, official designation by US Fish and Wildlife Service applied to any species, which is likely to become endangered throughout all, or a significant portion of its range within the foreseeable future.

Tiering – Incorporating information contained in an Environmental Impact Statement, such as the Forest Plan Environmental Impact Statement, by reference in subsequent environmental documents.

Till (glaciation) – Unstratified glacial drift deposited directly by ice and consisting of clay, sand, gravel, and boulders intermingled in any proportion.

Timber Production – The purposeful growing, tending, harvesting, and regeneration of regulated crops of trees for cutting into logs, bolts, or other round sections for industrial or consumer use. For purposes of forest planning, timber production does not include fuelwood or harvests from unsuitable lands (Forest Service Manual 1900).

Timber Stand Improvement – Usually related to activities conducted in young stands of timber to improve growth rate and form of the remaining trees. Examples are thinning, pruning, fertilization, and control of undesirable vegetation.

Topsoil – The original or present dark-colored upper soil that ranges from a fraction of an inch to several feet deep.

Total Maximum Daily Load – The maximum amount of a pollutant that a water body can receive and still meet water quality standards. Also refers to the process of allocating pollutant loadings among point and non-point sources. Also refers to a written plan and analysis of an impaired water body established to ensure that the water quality standards will be attained and maintained throughout the water body in the event of reasonably foreseeable increases in pollutant loads.

Trail – An existing one-track path or way capable of travel by a pedestrian or a motorized vehicle less than 50 inches wide.

Trailhead – The parking, signing, or other facilities available at the beginning of a trail.

Trail Maintenance Priorities –

- Priority 1 – Maintenance activities that would correct an unsafe condition relative to management objectives.
- Priority 2 – Maintenance activities that minimize unacceptable resource and trail damage.
- Priority 3 – Maintenance activities that fully restore the trail to the planned design standard.

Trails - National Forest System Trails – As defined in 36 CFR 212.1 and 261.2, those trails wholly or partly within or adjacent to and serving, the National Forests and other areas administered by the Forest Service that have been included in the Forest Transportation Atlas. These trails are part of the National Forest Trail Systems and are included in the corporate level Infrastructure databases.

Transmission Pipeline – A pipeline that carries gas or liquid from a producing field or central collection facility to a storage or consumption facility, usually over long distances.

Travel Ways – Travel ways represent linear concentrations of public viewing, including but not limited to highways, Operational Maintenance Level 3, 4, and 5 roads, trails, and waterways.

Treatment (Vegetation) – Any activities undertaken to modify or maintain the existing condition of the vegetation (Vegetative management).

Treaty Rights – Rights related to hunting, gathering, and fishing retained by Native American tribal members.

Tree Species Suitable for the Site – Tree species that a given site is capable of growing based on natural conditions of soil, microclimate, and topography. For application to management on the Huron-Manistee National Forests, also refers to cover types or tree components that are characteristic of one or more vegetative growth stages of the landscape ecosystem of the site in question.

Tribal Sovereignty – The inherent governmental power from which specific political powers are derived. Indian governmental powers, with some exceptions, are not powers granted by Congress, but are inherent powers of a limited sovereignty that have never been extinguished. Congress has the authority to limit or abolish tribal powers. However, without congressional action, a tribe retains the inherent right to self-government and no state may impose its laws on a reservation.

Tribe – Term used to designate a federally recognized group of American Indians and their governing body. Tribes may comprise more than one band.

Tributary River Segments – Tributary River segments include unclassified rivers and streams. These segments are not navigable by watercraft and hold low potential for recreation development. Land ownership is mixed with seasonal residence and some year round residence. Typically, these segments flow into larger creeks, rivers, or lakes. Generally, these segments are not named.

Unclassified Roads – Roads on National Forest System land that are not managed as part of the forest transportation system, such as unplanned roads, abandoned travelways, and off-road vehicle tracks that have not been designated and managed as a trail; and those roads that were once under permit or other authorization and were not decommissioned upon the termination of the authorization.

Unconstrained Maximum – Level of management defined as the highest possible level of a given output along with the costs associated with achieving it.

Understory – All forest vegetation growing beneath the overstory.

Uneven-aged – A term usually used as “uneven-aged stand” or “uneven-aged management,” which identifies a stand containing three or more age classes of trees. A planned sequence of treatments designed to maintain and regenerate a stand with three or more age

classes. Examples are individual tree and group selection harvest.

Unplanned Ignition – A fire started at random by either natural or human causes.

Unregulated (Pre-1980 Terminology) – Forest land that is suitable and available but not organized for timber production under sustained-yield principles; where timber harvest is permissible but is not a goal of management.

Unsuitable Lands or Non-Suitable for Timber Production – National Forest System land that is not managed for timber production, because of policy, ecology, technology, silviculture, or economics.

Upland – Any area that is not a wetland. (See Wetlands)

Urban Recreation Opportunity Spectrum Class – Part of the Recreation Opportunity Spectrum. Area is characterized by a substantially urbanized environment, although the background may have natural-appearing elements. Renewable resource modification and utilization practices are often used to enhance specific recreation activities. Vegetation cover is often exotic and manicured. Sights and sounds of humans are predominant on site. Large numbers of users can be expected, both on site and in nearby areas. Facilities for highly intensified motor use and parking are available with forms of mass transit often available to carry people throughout the site.

User-Developed Recreation Facilities – Trails, campsites, water access sites, or other facilities that have been developed by users or through use and are not maintained as recreation facilities by the Forest Service or other public/private entity.

Utility Corridor / Rights-of-Way – A tract of land of varying width forming a passageway across the Forest through which various commodities such as oil, gas, and electricity are transported.

Variety Class – A particular level of visual variety or diversity of landscape character, described as:

- **Distinctive (Variety Class A)** – Refers to unusual and/or outstanding landscape varieties that stand out from the common features in the character type.
- **Common (Variety Class B)** – Refers to prevalent, usual, or widespread landscape variety within a character type. It also refers to ordinary or undistinguished visual variety.
- **Minimal (Variety Class C)** – Refers to little or no visual variety in the landscape. A monotonous or below-average landscape when compared with the common features in the character type.

Vegetation – The plant cover of an area or region.

Vegetative Community – A grouping of forest types from the forest inventory that is

commonly associated in similar environments. This grouping is used to identify Management Areas with common goals, objectives, and direction.

Vegetative Growth Stages – The combination of successional and developmental stages used to describe a stand (e.g., 80 to 100 years old, multiple-age, aspen-fir).

Vegetative Manipulation – The change of one vegetative type to another by tractor, fire, or chemicals. Usually, this is done to increase forage for livestock and can be a beneficial tool for wildlife.

Vegetative Types – See “Aspen/Birch,” “Dense Hardwood,” “Long-lived Conifer,” “Low-site oak,” “High-site Oak,” “Lowland Conifer,” “Lowland Hardwood,” “Nonforest,” “Nonstocked,” “Short-lived Conifer.”

Vertical Diversity – The diversity in an area that results from the complexity of the above-ground structure of the vegetation; the more tiers of vegetation or the more diverse the species make-up, or both, the higher the degree of vertical diversity.

Viable Population – A population that has the estimated numbers and distribution of reproductive individuals to ensure the continued existence of the species throughout its range in the Planning area. For Forests' Planning purposes, a Planning area is one or more identified National Forest(s).

Viewshed – Total visible area from a single observer’s position or the total visible area from multiple observer positions. Viewsheds are accumulated seen areas from highways, trails, campgrounds, towns, cities, or other view locations. Examples are corridors, feature or basin viewsheds.

Visitor Information Service – A service provided to the public by National Forests in which the public is supplied with information regarding opportunities or activities on National Forest System land; usually, but not always recreational opportunities.

Visual Absorption Capacity – Indicates the relative difficulty or cost of achieving Visual Quality Objectives. It measures the land's capacity to absorb the visual impact of management activities. See “Visual Quality Objective.”

Visual Distance Zones – Areas of landscape denoted by specified distances from the observer. Used as a frame of reference in which to discuss landscape characteristics or activities of man. The three zones are:

- Background – The distant part of a landscape; surroundings, especially those behind something, and providing harmony and contrast; the area located from 3 to 5 miles or more from the viewer.
- Foreground – That part of a scene or landscape nearest the viewer and in which detail is evident, usually 1/2 to 1/4 mile from the viewer.
- Middle Ground – That part of a scene or landscape, which extends from the

foreground zone to 3 to 5 miles from the observer. Textures are discernible at that distance.

Visual Management Program – Also referred to as “Landscape Management” or “Visual Quality Management.” The art and science of planning and administering the use of forestlands in such ways that the visual effects maintain or upgrade visitors' psychological welfare. It is the planning and design of the visual aspects of multiple-use land management.

Visual Resource – A part of the landscape important forest scenic quality. It may include a composite of terrain, geologic features, or vegetation.

Volatilization – Transfer of a chemical from liquid to vapor; evaporation.

Warm Water – Aquatic habitat that supports fish species that have their best reproductive success and summer water temperature tolerance between 75° F and 85° F (23° to 29° C) or about 80° F. The various sunfish species and largemouth bass are examples.

Warm-water Fish – Warm-water fish have preferences for summer water temperatures that are greater than approximately 75° F.

Water Permeability – The state of being penetrable, especially having pores or openings that permit liquids or gases to pass through.

Water Quality Index – A numeric integration of eight weighted water quality parameters to yield a comparative index ranging from 0 to 100, with 100 being the best quality.

Water Yield – The total net amount of water produced on the Forests including streamflow and groundwater recharge.

Watershed – The area from which all surface water drains to a common point, commonly thought of as the area that drains water into a given lake or stream.

Watershed Health – The expression of ecological composition, structure, and function at the scale of the watershed. Same as watershed integrity.

Wetlands – Wetlands are areas that are inundated or saturated by surface or ground water at a frequency sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas and have been identified as palustrine areas by the U.S. Fish and Wildlife Service.

Wheeled Skidder – An internal combustion wheeled vehicle specifically designed to skid logs.

Whole Tree Logging / Removal – Felling and transporting the whole tree with its crown, and sometimes even its roots, for trimming and crosscutting at a landing or mill.

Wild and Scenic River Corridor – See “Wild River” and “Scenic River.”

Wild, Scenic and Recreational Rivers Act –Rivers or sections of rivers designated by Congressional actions under the 1968 Wild and Scenic Rivers Act as wild, scenic or recreational by an act of the legislature of the state or states through which they flow. Rivers may be classified and administered under one or more of the following categories: Wild River: River or section of river that is free of impoundments with watersheds still largely primitive and shorelines largely undeveloped, but accessible in places by roads. Scenic River: River or section of river that is free of impoundments, with watersheds still largely undeveloped, but accessible in places by roads. Recreational River: River or section of river that is readily accessible by road or railroad that may have some development along its shoreline and that may have undergone some impoundment or diversion in the past.

Wilderness –The National Wilderness Preservation Act of 1964 defined a wilderness as an area of undeveloped federal land designated by Congress that has the following characteristics: 1) It is affected primarily by the forces of nature, where people are visitors who do not remain. It may contain ecological, geological, or other features of scientific, educational, scenic, or historical value. 2) It possesses outstanding opportunities for solitude, or a primitive and unconfined type of recreation. 3) It is an area large enough so that continued use will not change its unspoiled natural condition.

Wilderness Area – A Congressionally designated tract of Federal land retaining its primeval character and influence without permanent improvements or human habitation. Management is intended to retain these characteristics.

Wilderness Condition – Describes the environment of a wilderness area that may or may not be designated for wilderness area management.

Wilderness Permit – Authorization in writing by a Forest Officer to enter and be in wilderness.

Wilderness Study Area – One of the areas selected by Congress from an inventory of unroaded and undeveloped National Forest System lands as having apparent high quality for wilderness. The area will be studied to determine whether it should be recommended for addition to the National Wilderness Preservation System.

Wild River – Wild and Scenic Rivers Act Usage - Those rivers or sections of rivers that are free of impoundments and generally inaccessible except by trail, with watersheds or shorelines essentially primitive and waters unpolluted.

Wildfire – Any fire that requires a suppression response.

Wildland Fire Use – Prescribed natural fire is a fire burning under specified conditions, to accomplish certain planned objectives; the fire may result from either planned or unplanned ignitions. A prescribed natural fire plan is one that permits certain fires to burn in a manner that duplicates natural conditions as much as possible. The policy allows for fire ignited by lightning

to burn under pre-planned, specific conditions and objectives.

Wildland Urban Interface – The line, area or zone where structures and other human development meet or intermingle with undeveloped wildland or vegetative fuels.

Wildlife and Fish User Day – A 12-hour day of hunting, fishing, trapping or observing wildlife. This may be one person for 12 hours, two people for 6 hours, or any combination that totals 12 hours.

Wildlife Habitat – The sum total of environmental conditions of a specific place occupied by a wildlife species or a population of such species.

Wildlife Structure – A site-specific improvement of a wildlife or fish habitat. For example, spring development or dugout to provide water, brush pile for cover, nest box for birds, or rock and log placement in a stream for fish cover and pool creation.

Windthrow – Trees uprooted by wind.

Winter Road – Roads only used during frozen roadbed conditions and closed in other seasons. They usually are constructed to reduce ground disturbance, often without removal of existing topsoil and utilizing snow and ice as part of the road surface. They are typically Operational Maintenance Level 1 roads when not maintained for winter use, and move up to an Operational Maintenance Level 2 road when used.

Woody Debris – Dead, natural woody material greater than 4 inches diameter and longer than 3.2 feet, usually composed of poles and large branches. Various terms, such as large woody debris, coarse woody debris, and large organic debris, have been used to describe this material.

Yard – A place where logs are accumulated. Also describes the act of moving logs or trees to a landing; for example, by dragging with a cable or wheeled skidder.