

Glossary of Forestry Terms and Acronyms

Abney level – An instrument used to determine slopes, elevations, and heights. Replaced by **clinometers**.

aspect – The direction a landscape slope faces, expressed as a cardinal direction or compass direction.

best management practice (BMP) – A practice or combination of practices that is determined by a state to be the most effective, practicable means of preventing or reducing the amount of pollution generated by point and nonpoint sources (such as forests, farms) to a level compatible with water quality goals.

BLM – see Bureau of Land Management.

BMP – see Best Management Practice.

BOF – California State Board of Forestry & Fire Protection. Develops rules and regulations for management on private forestlands.

Bureau of Land Management (BLM) – An agency of the US Dept. of Interior. Manages 15 million acres in California for multiple uses, today primarily recreation and watershed/environmental protection but formerly for cattle grazing. Manages some forested land in northern California. Formerly the Grazing Service and the General Land Office, responsible for disbursing public lands under the Homestead Act.

cambium – a layer of cell tissue between the inner bark (phloem) and the wood (xylem) that generates new cells annually for the inner bark and wood.

cat – A caterpillar tractor that runs on steel treads. Used to move soil for road construction and maintenance, logs to a **landing**, vegetation for site preparation and planting, or fuels and vegetation for fire suppression.

cat ex – categorical exclusion from having to prepare an environmental assessment or an environmental impact statement. See discussion under **environmental impact statement**.

CDF – California Department of Forestry and Fire Protection. Primary agency responsible for review and approval of **THP** & **NTMP**.

CDF & G – California Department of Fish and Game. Reviews timber harvest plans (**THPs**) for protection of threatened and endangered species.

CEQA – California Environmental Quality Act, the California equivalent of the federal **NEPA**, National Environmental Policy Act.

chipper – A machine for chipping **logs**, tree tops, and **slash** into chips, consisting of infeed conveyor, debarker (sometimes), and chipper, with the chips being blown into a chip truck or a pile.

choker – a short length of wire cable or chain that forms a noose around the end of a **log** to be skidded or yarded.

choker setter – A person whose job is to wrap a **choker** around the end of the log so that the **yarder** or **skidder** can drag the **log** to the **landing**.

clinometer – An instrument that measures angles of elevation or depression, used to determine slopes, elevations, and heights.

commercial forest land – land deemed suitable for and capable of producing timber crops, usually 20 cubic feet wood production per acre per year. In California, 18.5 million acres of forest (18.5% of the state's area) is classified commercial forest; 50% of that is managed by the Forest Service; 25% by industrial forest companies; and 25% by non-industrial private forest owners.

conservation – Gifford Pinchot, a turn of the century forester closely associated with President Teddy Roosevelt, applied the word to describe a natural resource philosophy. It meant “wise use.” Through the years it has taken on an extended meaning of “wise use over a period of time.” The time factor forces us to consider the consequences of current use compared to future use.

coppice – A stand of forest produced from sprouts from stumps or roots of trees previously cut. Many hardwood species sprout and readily coppice when young. Few conifers will sprout from the stump, with coast redwood being a notable exception.

cover – the area occupied by vegetation or foliage; vegetation that protects the soil and provides shade to the ground or stream. Usually expressed as a percent.

crown – the part of a tree or woody plant bearing the live branches and foliage.

crown class – a category of tree based upon its crown position relative to those of adjacent and competing trees.

dominant – Trees with crowns that extend above the average of the tree crowns and receives light from directly above and some from the sides. The most competitive trees.

co-dominant – Trees with crowns that form the general level of the crown cover and receive full light from the top, but very little from the sides. Less competitive than the dominant trees.

intermediate – Trees that are shorter than the two preceding classes but with some branches extending into the general crown cover. Receives little light from above and none from the sides.

suppressed – Trees with crown entirely below the general crown level and receiving no direct light either from above or below. The least competitive trees in a forest.

crown fire – a fire that spreads across the tops of trees or shrubs independently of a surface fire. Crown fires cannot be effectively or safely fought until the fire drops to the ground.

cull – Any item e.g. tree, log, lumber, seedling, rejected because it does not meet specifications or standards. Often refers to logs that are rejected because of defects – rot, breakage.

cut to length – A system in which harvested trees are cut into log lengths at the stump before they are yarded to the **landing**; an alternative whole-tree logging

DBH – Diameter of a tree at breast height or 4 ½ feet above ground. The standard tree diameter measure.

deck – Stack of logs – either in the mill or on a **landing**. Usually sorted by species and size.

defensible fuel profile zone (DFPZ) – A shaded fuelbreak from a few hundred feet to a ¼ mile wide, where the canopy and cover of the larger trees has been retained but the ladder and ground fuels have been removed or treated; defensible in the sense that firefighters can safely take a stand in the DFPZ to fight an oncoming fire.

DFPZ - see **defensible fuel profile zone**

DMG – Division of Mines & Geology (Department of Conservation). Participates in review of **THPs** for landslides, debris flows, and other geological hazards.

duff – the partially decomposed organic matter of the **forest floor** beneath the litter of freshly fallen twigs, needles, and leaves.

EA – Environmental assessment. See discussion under **environmental impact statement**.

EIS – Environmental impact statement.

endangered species – any species of plant or animal defined through the Endangered Species Act of 1976 as being in danger of extinction throughout all or a significant portion of its range, and published in the Federal Register.

environmental impact statement (EIS) – a detailed statement of a federal project’s environmental consequences, including adverse environmental effects that cannot be avoided, alternatives to the proposed action, the relationship between local short-term uses and long-term productivity, and any irreversible or irretrievable commitment of resources. An EIS is one of four classes of documentation under the National Environmental Policy Act of 1969 (**NEPA**). An **environmental assessment (EA)** is a concise, public document containing a federal agency’s analysis of the significance of potential environmental consequences of an action, used to determine whether the more comprehensive EIS is required or a “finding of no significant impact” is warranted. A **categorical exclusion (Cat Ex)** is an exemption for federal agencies from requirements to prepare an EIS or EA for categories of action that have been determined not to involve significant environmental impacts. A conformance determination record exempts federal agencies from having to prepare an EIS or EA for actions that have already been covered in existing EISs or EAs. A **programmatic EIS** is a document that discloses the environmental consequences of a program or plan of actions rather than disclosure of the environmental consequences of every site-specific project of that program or plan.

EPA – (also USEPA) – Environmental Protection Agency.

erosion – The wearing away of the land surface by rain, running water, wind, ice, gravity, or other natural or management actions.

ESA – Endangered Species Act.

feller-buncher – A harvesting machine that cuts a tree with a shear or saw, gathering one or more cut trees in hydraulic arms before placing them on the ground. Usually limited to 24 in. DBH or smaller trees. Bunching facilitates efficient handling of small, low value trees.

felling crew – One or more tree fallers and falling boss. They do the felling, limbing, and bucking (cut logs to specific length). Fellers are also referred to as “cutters” or “choppers.”

fiberboard – a wood product manufactured from wood fibers combined with synthetic resins or other binders, and compressed into panels in a hot press.

forest – an ecosystem characterized by a more or less dense and extensive tree cover, often consisting of stands varying in characteristics such as species composition, structure, age class, and associated processes, and commonly including meadows, streams, fish, and wildlife. Forests include special kinds such as industrial forests, non-industrial private forests, public forests, urban forests, and parks and wilderness. Forests differ in their biological composition, management goals and objectives, and the laws and regulations governing them.

Forest Practice Act (FPA) – The law that governs private forest management in California. Division 4, Section 8, of the Public Resources Code that declares the policy of the state “to encourage prudent and responsible forest management”. Authorized by the Z’Berg-Nejedly Forest Practice Act of 1973.

forest practice rules – Rules and regulations developed and promulgated by the State Board of Forestry pursuant to the Forest Practice Act. Most rules address protection of water quality, wildlife habitat, and archaeological sites and artifacts.

Forest Service – An agency of the Dept. of Agriculture (USDA). The Forest Service manages 20 million acres in 18 **national forests** in California, for watershed and wildlife habitat protection, recreation, and timber and grazing.

forest type – a category of forest defined by its vegetation, particularly the dominant vegetation as based on percentage **cover** of trees.

fuelbreak – a generally wide (60 to 1000 ft.) strip of land on which native vegetation has been permanently modified so that a fire burning into it can be more readily controlled. See shaded fuel break, DFPZ.

germination – the beginning of growth of a mature seed, spore, or pollen grain; the development of a seedling from a seed.

girdle – to make continuous incisions around a living stem, through the bark and cambium, generally with the object of killing the tree to thin the forest and/or create **snags** for wildlife habitat.

GIS – Geographic Information System.

GPS – Global Positioning System.

harvest – The removal of marketable products or materials from the forest.

HCP – Habitat Conservation Plan; an agreement between the Secretary of Interior and either a private party or state, specifying the conservation measures that will be implemented in exchange for a permit that would allow **taking** (harassing or killing) of a **threatened** or **endangered species**.

helicopter logging – using a helicopter to yard or move logs from the harvest area to a landing. Used where landscape sensitivity, steepness, or landslides, precludes the use of ground-based yarding equipment or where no access roads are available.

industrial forests – forest land owned by a company or individual managed primarily for wood products. Owner may or may not operate sawmills or other wood-using plants.

ladder fuels – Combustible material that provides vertical continuity between vegetation strata and allows fire to climb into the crowns of trees or shrubs with relative ease. Ladder fuels help initiate and sustain crown fires.

landing – a cleared area in the forest where logs skidded or yarded for loading on to trucks for transport.

landing crew – Loader operator, may have landing person or knot bumper who trims knots off the logs before loading.

legacy trees – Usually large trees left to be examples of the size and characteristics of trees in the original stand. They also fulfill the role of future wildlife trees and snags.

log – the stem of a felled tree, trimmed of limbs, cut to preferred lengths for final products. e.g. 16.5 ft or 33 ft for lumber that will eventually be sold in 8 ft lengths. The extra 0.5 or 1.0 ft is called trim allowance and compensates for log end damage and sawmill processing.

log decks at the mill – May be watered to reduce both fire hazard and checking (surface cracks or splits) on the ends of logs which results in loss of valuable material.

LTO – Licensed Timber Operator, licensed by the state of California.

lumber – the sawn product from a tree; solid-wood dimension lumber as opposed to peeled for plywood, or chipped for reconstituted wood products like **oriented-strand board** or **fiberboard**.

mature tree – A tree that has reached its maximum growth or height or has reached merchantable product size.

merchantable height – the marketable length of a tree to a minimum diameter top, **merchantable top diameter**.

merchantable top diameter – the inside-bark diameter above which a stem is considered nonmerchantable for a particular product. Usually 6 to 10 inches dib, diameter inside bark.

MOU – memorandum of understanding, a formal, written agreement between two or more organizations or agencies that presents the relationship between the entities for purposes of planning and management.

multiple land use – the management of land and forests for timber, wildlife, water, and recreation in an integrated and comprehensive program.

national forest – a federal forest, range, or wildland reserve, managed by the US Department of Agriculture, Forest Service, for multiple uses - timber, water, wildlife, recreation, and grazing. National forests differ from

National Parks in that recreation is not their only use. Recreation may be a primary use in some part of the national forest. For example, there are more acres of wilderness areas in national forests than national parks. Nationwide, the national forest system administers 154 forests and 19 grasslands.

National Park Service – an agency of the Dept. of Interior (USDI). Manages national parks to conserve the scenery and natural and historical objects and wildlife, and to provide recreation in and enjoyment of the parks.

national parks – The National Park Service was established by Congress to promote and regulate the use of national parks, monuments, and reservations and to conserve the scenery and the national and historical objects and wildlife therein for the public in perpetuity. The Park Service administers 295 units, primarily for historical or recreational uses. Each of the 35 national parks was established to preserve a unique natural area for our and future generation's enjoyment and study.

NEPA – National Environmental Policy Act of 1969. See environmental impact statement.

NIPF – Non-industrial private forest.

NMFS – National Marine Fisheries Service, an agency of the National Oceanic and Atmospheric Administration (NOAA). Pronounced “nymphs”. Responsible for the protection of endangered fish like the coho salmon.

NOAA – National Oceanic and Atmospheric Administration.

non-industrial private forest – forest land that is privately owned by individuals or companies other than the forest industry and where management may include objectives other than timber production. In California, 25% of the total commercial forest land is owned by NIPF landowners; 25% is owned by industrial forest landowners; and 50% is in public ownership, US Forest Service, National Park Service, Bureau of Land Management, state parks and forests.

NPS – see National Park Service.

NTMP – Non-industrial timber management plan (limited to ownerships of 2,500 acres or less). A long-term (100 year) timber harvest plan.

nursery log – A fallen tree that provides habitat for fern, fungi, insects, etc.

old growth forest – the late successional stage of forest development, usually characterized by large, old trees; standing dead trees, snags; closed or dense canopy conditions; and down logs and coarse woody debris. Old growth forest is commonly perceived as uncut, virgin forest with very little human-caused disturbance.

overstory – That portion of the trees, in a forest of more than one story, forming the upper or upper-most canopy layer.

partial cut – removal of only part of a stand for purposes other than regenerating a new age class of trees.

plane surface – lumber that has a smooth surface from being run through a planer or surfacing machine. Surfaced lumber is lumber that has been planed. It can be either green (undried) or dried. Dried lumber is often air dried for a while then placed in a kiln to bring lumber moisture down to a specified amount and thus stabilizing its shrinkage and twisting.

pole timber – A small tree that is 3 to 12” in DBH.

prescribed burn – to deliberately burn wildland fuels under specified environmental conditions (a burn prescription), which insures the fire will be confined to a predetermined area and intensity. Air temperature, humidity, wind speed and direction, fuel moisture, and soil moisture are taken into consideration.

preservation – to protect an area from treatment or management. The meaning stems from 19th century land reserves wherein areas and resources were set aside for limited or restricted use and development. Preservation often restricts land uses to recreation or scientific study.

processor head – A saw and delimiting machine mounted on a tractor or boom that cuts the tree stem, delimits and cuts it into logs, leaving slash at the stump.

PSW – Pacific Southwest Research Station. The research branch of the Forest Service for California, Hawaii, and the Pacific Islands.

public trust resources – natural resources which the public owns. Air, water, wildlife. Protection of public trust resources is often a control or limitation on private property rights and activities, and is the basis of our environmental protection laws and regulations.

QLG – Quincy Library Group, Plumas county, which developed and proposed a shaded fuel break program to protect communities from wildfire, improve the condition of the forest, produce economic return to the community, and minimize the extent and intensity of wildfire. See DFPZ.

RCD – Resource Conservation District.

registered professional forester (RPF) –A person licensed by the state of California to practice forestry. Requires 7 years of education and experience to qualify for the exam. See THP.

reproduction – tree seedlings or sprouts 0-1” DBH.

residual stand – the portion of trees remaining after any partial cut or thinning.

rough surface – lumber surface resulting from the saw cut.

sanitation cutting –the removal of dead, damaged or insect and disease susceptible trees; essentially to prevent the spread of pests or pathogens and so promote forest health.

sapling – a young tree less than 3” DBH. The minimum size is usually placed at 1 in. DBH.

seedling – A tree grown from seed, less than 3 ft. tall or 1 in. DBH.

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

site – the area in which a plant or stand grows, considered in terms of its environment, particularly as this determines the type and quality of the vegetation the area can support.

site class – a classification of site quality and productivity, usually expressed as dominant tree heights at a standard reference age (50 or 100 years) or annual wood production.

skidder –usually a rubber-tired machine which moves the log from the felling site to the landing or deck. A track machine (cat) may sometimes be referred to as a skidder in that both are used to drag (skid) logs to the landing.

slash – the residue, branches, bark, tops, chunks, cull logs, uprooted stumps, and broken or uprooted trees left on the ground after logging; also large accumulations of debris after wind-throw or fire.

slope position – A particular location on a slope as upper, middle, or lower slope; ridge top; or bottom land. A specific topographic location.

snags - standing dead trees, which provide wildlife habitat. They also will provide large organic debris (LOD) or large woody debris (LWD) when they rot and fall. The “LOD” retains moistures and provides habitat to many species of insects, fungi, and plant life.

sprout – A tree originating from a root or stump.

stocking – A measure of the proportion of an area occupied by trees.

stream classes – California state classification for regulatory purposes.

Class 1 – Fish always or seasonally present in streams that flow year round. Includes habitat to sustain fish migration spawning.

Class 2 – Within 1,000 feet up stream from a class one stream. Aquatic habitat for non-fish species – amphibians. May be a seasonal stream.

Class 3 – No aquatic life present. Capable of sediment transport to a class 1 or 2 under normal water flow conditions. Usually flows only in response to storms.

Class 4 – Man-made water course, ditch, diversion.

streamside management zone (SMZ) – A strip of land adjacent to a water body or stream channel where soils, organic matter and vegetation are managed to protect the physical, chemical and biological integrity of surface water adjacent to and downstream from forestry operations. An SMZ also may be called a “filter strip “ or “buffer zone.”

surface fuels – The loose surface litter on the soil surface, e.g., fallen leaves or needles, twigs, bark, cones, branches, grasses, shrub and tree reproduction, downed logs, stumps, seedlings, and forbs interspersed with or partially replacing the litter.

Sustainable Forestry Initiative (SFI) – A comprehensive set of forestry and conservation practices designed to ensure that future generations of Americans will have the same abundant forests and wildlife that we enjoy today. SFI is sponsored by the American Forest & Paper Association (AF&PA). AF&PA member companies have agreed to use sustainable forestry practices on the forestland they manage and to promote sustainable forestry of the forestlands of others from whom they buy timber.

sustainable forestry – forest management which meets the forest resource needs and values of the present without compromising the similar capability of future generations. The stewardship and use of forests and forest lands in a way and at a rate that maintains their biodiversity, productivity, regeneration capacity, and vitality now and in the future. Sometimes pitted against timber management, casting the latter as single purpose and unsustainable.

sustained yield – Management of a forest stand to provide a continuing supply of timber and revenue while protecting public trust resources of water, watersheds, wildlife, air quality, soil productivity.

SWRCB – California State Water Resources Control Board.

threatened species – a plant or animal species likely to become endangered throughout all or a significant portion of its range within the foreseeable future.

timber – forests and stands containing timber; wood, other than fuelwood, potentially usable for lumber.

timber harvest plan (THP) –An environmental review document required by the California Forest Practices Act, laying out the conditions of a logging operation. The functional equivalent of a **CEQA** environmental impact statement.

timber stand improvement (TSI) –an intermediate treatment made to improve the composition, structure, condition, health, and growth of a stand; usually a thinning of competing trees or release from competing shrubs and plants.

TMDL – Total Maximum Daily Load of pollutants in a watercourse, including sediment and water temperature.

tree – a woody perennial plant, typically large with well defined stem or stems carrying a definite crown of branches and leaves.

understory – The layer formed by grasses, shrubs, and small trees under the canopy of larger trees and plants.

USDA – U.S. Department of Agriculture, administers the Forest Service, Natural Resources Conservation Service.

USDI – U.S. Department of the Interior, administers the National Park Service, Bureau of Land Management, Bureau of Indian Affairs, US Fish and Wildlife Service.

US Fish and Wildlife Service (USFWS) – An agency of the Dept. of Interior, it develops rules for protection of federally listed threatened and endangered species. e.g. northern spotted owl, bald eagle.

USFS – Forest Service.

Wain -



The corners or edge of the board that are missing due to the curvature of the log.

Water Course and Lake Protection Zone (WLPZ) – Stream or lake side area specified for protection measures by the California Forest Practice Rules.

Water Quality Control Board (WQCB) – Reviews timber harvest plans for compliance with the Clean Water Act, Porter-Cologne Water Act.

WHR – Wildlife Habitat Relationship system. lists species likely to be found in specific vegetation types. Can be used to determine the effects of timber harvest and other actions on wildlife habitat.

wildfire – Fires burning out of control regardless of how or why they were started.

wilderness – In the strictest sense, this means that an area that has never been developed by man. In 1964 Wilderness Act defined it thus: “A Wilderness, in contrast with those areas where man and his own works dominated landscape, is hereby recognized as an area where the earth and its community of life are untrammelled by man, where man himself is a visitor and does not remain.” In common use the word is associated with these undeveloped areas and those set aside with a little development. In some cases man-made items are dismantled to reduce the area to a primitive state. Under these broader uses some roadless areas are considered wilderness when the access is limited to hiking, canoeing, or horseback riding and the use is set aside for recreation. To most of the general public, wilderness experiences are gained in a number of settings involving wild but not necessarily true Wilderness areas.

wolf tree – a dominant tree with a broad, spreading crown, that occupies more growing space than its more desirable neighbors.

yarder – A machine equipped with a tower and cable wound on winches which is used to drag (yard) logs from felling site to the landing. The tower provides lift, which makes the log easier to move with less damage to the soil. It is like an “old fashion” clothes line, which was on a pulley and went around in a circle. The operator is directed by the “choker setter” in the woods using a signal system called a talkie-tooter. The choker setter can blow a whistle on the yarder by pushing a button on a radio control signal device. The number and length of toots signals the yarder operator to pull the line in, slack the line, or stop the line.

yarding crew – Two or more choker setters, yarder operator, and/or skidder operator(s). Depending on the crew size, there may be a separate side rod or crew foreman.

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