

ENCLOSURE 5 GLOSSARY OF TERMS

Abiotic -- pertaining to the non-living parts of an ecosystem, such as soil particles, bedrock, air, water.

Active nest -- a goshawk nest known to have contained an egg. A nest need not have successfully produced fledglings.

Active nest area -- a goshawk nest area containing an active nest.

Alternate nest area -- goshawk home ranges often contain two or more nest areas, only one of which will be active in a given year. Alternate nest areas are normally historical nest areas. When historical nest areas cannot be located to serve as an alternate, designated alternates will contain habitat attributes common to the active nest area.

Canopy Closure -- expressed as a percent, canopy closure is the amount of vegetative cover as measured vertically over a point and averaged for a forested area. To date, no consistent method of measurement has emerged as the norm. Methods include ground-based ocular estimations and aerial estimations. To comply with Standards and Guidelines the recommended method is to use a spherical crown densiometer and estimate canopy closure based on forest vegetation greater than 15 feet in height.

Composition -- the constituent elements of an ecosystem, e.g., the species that constitute a plant community. In the northern goshawk project information, vegetative composition is a component of a coarse filter used as an indicator of ecosystem function.

Connectivity -- pertaining to the extent to which conditions exist or should be provided between separate forest areas to ensure habitat for breeding, feeding, or movement of wildlife and fish within their home range or migration areas.

Decadent tree -- a tree that has reached that stage of development when it is declining in vigor and health and reaching the end of its natural life span.

Down woody debris -- any piece(s) of dead woody material, e.g., dead boles, limbs, and large root masses, on the ground in forest stands or in streams.

Ecological process -- see function.

Effects -- the environmental consequences of a proposed action. Included are direct effects, which are caused by the action and occur at the same time and place; and indirect effects, which are caused by the action and are later in time or further removed in distance, but which are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and are related effects on air, water and other natural systems, including ecosystems.

Effects and impacts as used in this statement are synonymous. Effects include ecological (such as the effects on natural resources and on the components, structures and functioning of affected ecosystems), aesthetic quality, historic, cultural, economic, social or health whether direct, indirect or cumulative. Effects may also include those resulting from actions that may have both beneficial and detrimental effects, even if on balance the agency believes that the effects will be beneficial.

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Foraging area -- areas where prey are searched for, pursued by, and captured by goshawks.

Forest cover type -- a category of forest usually defined by its vegetation, particularly its dominant vegetation as based on percentage cover of trees, e.g., spruce-fir, aspen, Douglas-fir.

Forested area -- One capable of supporting $\geq 10\%$ canopy cover under the natural disturbance regime and within the historic range of variation.

Guideline -- in Forest Plans, guidelines represent a preferred or advisable course of action that is generally expected to be carried out. Deviation from compliance with a guideline does not require a Forest Plan amendment, but the rationale for such a deviation must be documented in the project decision document.

Habitat -- the place (including climate, food, cover, and water) where an animal, plant or population naturally or normally lives and develops.

Historic range of variation (HRV) -- refers to ecosystem composition, structure, and function for a specified area and time period (generally 200-500 years prior to current, or prior to European settlement). HRV is our best estimate of the natural range of variation (NRV). Ecosystems change over time. It is assumed that native species have adapted over the last several thousands of years to natural change and that change outside of NRV may affect composition and distribution of species and their persistence.

Historical nest -- an intact nest known to have been active in the past.

HUC -- Hydrologic Unit Code. A standardized hierarchical classification scheme in which the lower 48 states are divided into 18 regions and each region is further subdivided resulting in a unique number for each watershed. A 5th order HUC ranges from 40,000 to 250,000 acres (60 to 400 square miles). A 6th order HUC ranges from 10,000 to 40,000 acres (15 to 60 square miles).

Home range -- the area that an animal habitually uses during nesting, resting, bathing, foraging, and roosting. A nesting home range contains nest areas (active and historical), the post-fledgling family area, and the foraging area.

Indicator -- an organism or an ecologic community that is so strictly associated with particular environmental conditions, that its presence (or absence) is a fairly certain sign or symptom of the existence of these conditions.

Issue -- A point, matter or question of public discussion or interest to be addressed or decided through the planning process.

Preliminary issue is an issue identified early in the scoping phase and is sometime referred to as a tentative issue.

Significant issue is an issue within the scope of the proposed action which is used to formulate alternatives in an Environmental Assessment (EA) or Environmental Impact Statement (EIS).

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Landscape -- a 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 grain analysis.

Landscape assessment -- an evaluation of ecosystem conditions and trends on a large land area taking in to consideration the biotic, abiotic, and social influences upon ecosystems within the subject landscape. This includes consideration of ecosystem processes such as disturbance, succession, recolonization, fluxes of various ecosystem elements, and (depending on time scale) evolution and natural extinction. To assess landscape elements addressed in Forest Plans, 4th to 6th order watersheds or equivalent ecological units (10's to 100's thousands of acres) need to be used.

Native Processes -- the processes through which ecosystem elements interact, such as succession, the food web, fire, weather, other disturbance events, and the hydrologic cycle. Vegetative composition and structure are indicators of ecosystem function.

Native species -- those species that occupied a landscape during the period of time used to determine the historic range of variation (HRV). It is believed that native species adapted to and, in part, evolved with the ecological processes of the preceding several thousand years.

Naturally occurring ecosystems -- ecosystems present in a landscape during the period of time used to determine historic range of variation (HRV).

Nest area -- the nest tree and stand(s) surrounding the nest that contain prey handling areas, perches, and roosts. Nest areas are often on mesic sites (northerly facing slopes, along streams).

Nest stand -- the stand of trees that contains the nest tree.

Non-native species -- a species outside its historic range. The presence of a non-native species could impose environmental pressures upon an ecosystem that may not have been part of historic range of variation (HRV).

Old forest structure -- the size and/or age of the trees in an area. See structure.

Old growth forest -- the (usually) late successional stage of forest development. 1. old-growth forests are defined in many ways; generally, structural characteristics used to describe old-growth forests include (a) live trees: number and minimum size of both seral and climax dominants, (b) canopy conditions: commonly including multi-layering, (c) snags: minimum number of specific size, and (d) down logs and coarse woody debris: minimum tonnage and numbers of pieces of specific size 2. old-growth forests generally contain trees that are large for their species and site and sometimes decadent (overmature) with broken tops, often a variety of tree sizes, large snags and logs, and a developed and often patchy understory 3. stand age, although a useful indicator of old growth, is often considered less important than structure because (a) the rate of stand development depends more on environment and stand history than age alone, and (b) dominants are often multi-aged 4. due to large differences in forest types, climate, site, quality, and natural disturbance history (e.g., fire, wind, and disease and insect epidemics), old-growth forests vary extensively in tree size, age classes, presence and abundance of structural elements, stability, and presence of understory 5. the minimum area needed for an old-growth forest to be a functional ecological unit depends on the nature and management of surrounding areas; small areas often do not contain all old-growth elements 6. an old-growth forest is commonly perceived as an uncut, virgin forest with very little

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human-caused disturbance; some believe that the time taken for stands to develop old-growth structure can be shortened by silvicultural treatments aimed at producing the above characteristics.

Post fledgling area -- area of concentrated use by the goshawk family after the young leave the nest. May also be called the post fledgling family area.

Reference condition -- reference conditions ideally are based on undisturbed, functioning ecosystems where natural ecosystem structure, composition, and function are operating without human intervention. Historic range of variation (HRV) is used to determine our best estimate of "natural" conditions and functions. Current ecosystem conditions are compared to reference conditions to understand change over time.

Replacement nest area -- forest areas with physiographic characteristics and size similar to suitable goshawk nest areas. Replacement areas can have young to mature forests that can be developed into suitable nest areas.

Seral species -- a plant or animal species that will be replaced over time through forest succession.

Seral stage (may also be referred to as successional stage) -- any stage of development of an ecosystem from a disturbed, unvegetated state to a climax plant community. Forest seral stages are often referred to as early, mid, or late dependent upon the mix of species present and/or the conditions of the stand. Early seral stages are normally dominated by shade intolerant species, and late seral stands by shade tolerant species, with mid-seral stands in transition. In systems where a single tree species dominates, such as lodgepole pine or aspen, forest seral stages are more commonly equated to vegetative structural stages. Concurrent with a change in overstory composition as forests move from early to mid to late seral stages, is a change in understory species. With early seral stands typically containing shade intolerant ground plants and late seral stands typically containing more shade tolerant ground species.

Shade tolerance -- the capacity of a tree or plant species to develop and grow in the shade of, and in competition with, other trees or plants.

Skid trail -- narrow path on which logging equipment travels when moving logs from the forest to a designated landing location.

Snag -- a standing dead tree.

Standard -- in Forest Plans, standards describe a condition, normally a maximum or minimum, that is measurable. A Standard can also be expressed as a constraint on management practices or activities. Deviation from compliance with a standard requires a Forest Plan amendment.

Structure -- the horizontal and vertical arrangement of ecosystem components. Vegetation patches, edge, canopy layers, snags, down wood, steep canyons, rocks in streams, and roads may be arranged in some pattern or mosaic, or the structure may totally random.

Succession -- the gradual supplanting of one community of plants by another, the sequence of communities being termed a sere and each stage seral.

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Vegetative Structural Stage -- A generalized description of forest growth and aging stages based on the size of the majority of trees in the subject stand. VSS-1 is referred to as the grass-forb or grass-forb-shrub stage; VSS-2 is referred to as the seedling/sapling stage; VSS-3 is the young forest stage; VSS-4 is the mid-aged forest stage; VSS-5 is the mature stage; and VSS-6 is the old stage of stand development.

Viable population -- a number of individuals of a species sufficient to ensure the long-term existence of the species in natural, self-sustaining populations adequately distributed throughout their regions.